The Lost Chapel & Holy Well of St Cador

A community-based archaeology project

S.Northcott, FdSc (Plymouth)
2013

© S.Northcott, 2013

© Videoblocks, 2012
The Lost Chapel and Holy Well of St Cadoc

The Lost Chapel and Holy Well of St Cadoc, Harlyn Bay, Cornwall

Clearance and Recording
A Community – Archaeology Project

Word Count 6011

<table>
<thead>
<tr>
<th>Report Number</th>
<th>2013R002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>May 2013</td>
</tr>
<tr>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>Report Author</td>
<td>Steve Northcott (FdSc)</td>
</tr>
<tr>
<td>Checked by</td>
<td></td>
</tr>
<tr>
<td>Approved by</td>
<td></td>
</tr>
</tbody>
</table>

Archaeology Dept, Truro & Penwith College
College Road, Truro, Cornwall, TR1 3XX
tel (01872) 323603 fax (01872) 323811 E-mail SN121596@ghs.truro-pewith.ac.uk

www.monumental3d.com/stcadoc
Acknowledgments
This study was undertaken following the author being contacted by Cornwall Council’s Historic Environment Service in his capacity as Cornwall Archaeological Society Area Representative for Padstow and contiguous parishes.

The clearance and recording work was carried out by the author, local volunteers and current and former students of Truro and Penwith College. Thanks go especially to Brian Woodman and his team, the West Penwith Dowsing Group, David Edwards, Adi Huntington, Alex Dwyer and Martin Andrewes.

Invaluable assistance was also provided by Emma Trevarthen, Jane Powning and Carl Thorpe of Cornwall Council’s Historic Environment Service, Ann Preston-Jones of English Heritage and Andrew Langdon; Old Cornwall Society recorder and Cornish cross specialist, for their valuable input to the project.

The views and recommendations expressed in this report are those of the author and are presented in good faith on the basis of his judgement and on information currently available.

© S. Northcott 2013
The Lost Chapel and Holy Well of St Cadoc

Contents

Acknowledgments ......................................................................................................................... 2
List of Figures ................................................................................................................................. 5
List of Tables .................................................................................................................................. 5
Abstract .......................................................................................................................................... 6
1.0 Introduction ............................................................................................................................... 7
2.0 Aims and Objectives .................................................................................................................. 8
3.0 Project Background .................................................................................................................... 8
   3.1 Present Management .............................................................................................................. 8
   3.2 Location and Setting .............................................................................................................. 8
   3.3 Geology and Soils .................................................................................................................. 8
   3.4 Risk Assessment .................................................................................................................... 8
4.0 History of St Cadoc’s Chapel .................................................................................................... 8
5.0 Earlier Study of St Cadoc .......................................................................................................... 9
   5.1 Early Site Plans ...................................................................................................................... 10
6.0 Phenomenology and Contextual Considerations ..................................................................... 11
7.0 Methodology ........................................................................................................................... 11
   7.1 Resources ............................................................................................................................. 11
   7.2 Site Preparation ..................................................................................................................... 12
   7.3 Survey Techniques ................................................................................................................ 12
   7.4 Site Recording ....................................................................................................................... 12
   7.5 Landscape Interpretation ...................................................................................................... 12
   7.6 Geomatics – Close Range Photogrammetry ......................................................................... 13
   7.7 3D Data Acquisition & Object Reconstruction ....................................................................... 13
   7.8 Volunteer Engagement and Feedback ................................................................................... 14
   7.9 Archive .................................................................................................................................. 14
8.0 Results ....................................................................................................................................... 14
   8.1 Digital Plan – Google SketchUp ............................................................................................. 14
   8.2 Desk Based Assessment .......................................................................................................... 15
   8.3 Site Preparation ..................................................................................................................... 15
   8.4 Walkover Survey .................................................................................................................... 16
   8.5 Baseline Offset and Levels survey ...................................................................................... 17
   8.6 Dowsing Prospection ............................................................................................................ 18
The Lost Chapel and Holy Well of St Cadoc

8.7 Close Range Photogrammetry .............................................................................. 18
8.8 Cloud Export and Object Reconstruction ................................................................. 20
9.0 Website and Social Media .......................................................................................... 22
10.0 Volunteer Feedback .................................................................................................. 22
11.0 Conclusion ................................................................................................................. 22
12.0 Recommendations .................................................................................................... 22
12.1 Geophysical Survey .................................................................................................. 22
12.2 Monthly ..................................................................................................................... 23
12.3 Every Six Months ....................................................................................................... 23
12.4 Yearly ......................................................................................................................... 23
13.0 Project archive .......................................................................................................... 23
14.0 References ............................................................................................................... 24
15.0 Bibliography ............................................................................................................. 26
APPENDIX I: Site Photographic Record ........................................................................... 29
APPENDIX II: Finds Photographic Record ...................................................................... 35
APPENDIX III: Henderson’s original notes on St Cadoc’s .............................................. 36
APPENDIX IV: E-Mail Correspondence ............................................................................ 38
  Historic Environment Initial Correspondence .............................................................. 38
  Geophysics Correspondence .......................................................................................... 40
  English Heritage Initial Correspondence ....................................................................... 41
  Old Cornwall Society Correspondence ........................................................................ 43
  Padstow Enterprise Youth Group Correspondence ..................................................... 44
  English Heritage Correspondence II – Tithe Maps & Apportionment ......................... 48
APPENDIX V: Stone Recording Pro Forma ...................................................................... 50
APPENDIX VI: Apportionment for St Cadoc 1840 ......................................................... 52
APPENDIX VII: HER for St Cadoc’s Chapel and Wider Locale ....................................... 53
APPENDIX VIII: Google SketchUp Plan of the Chapel site ........................................... 54
APPENDIX IX: Conjectural Sketches by Martyn Jope, 1937 ........................................... 55
APPENDIX X: Baseline Offset results – Wall 1 ............................................................... 56
APPENDIX XI: Risk Assessment ...................................................................................... 57
APPENDIX XII: Health and Safety Policy ....................................................................... 59
APPENDIX XIII: Site Management Recording Form ....................................................... 60
APPENDIX XIV: Volunteer Feedback Form ..................................................................... 62
APPENDIX XV: IfA Standards and Guidance ................................................................. 65
  Standards Guidance for Historic Environment Desk-Based Assessment ..................... 69

Wednesday, 22 May 2013
The Lost Chapel and Holy Well of St Cadoc

Standards Guidance for Archaeological Field Evaluation ................................................................. 84
Standards Guidance for Archaeological Investigation and Recording of Standing Buildings or Structures ........................................................................................................................................ 92
INDEX .................................................................................................................................................. 102

List of Figures
Figure 1 St Cadoc Site, 2006
Figure 2 St Cadoc OS MAP 1881
Figure 3 Gateway to Prideaux Place
Figure 4 Carved stonework, Garden of St Cadoc Farm
Figure 5 Henderson’s plan of St Cadoc’s and wider area circa 1930
Figure 6 Satellite image of St Cadoc’s site
Figure 7 Plan of St Cadoc’s Chapel site of 1937
Figure 8 Google SketchUp model of St Cadoc’s chapel site
Figure 9 Tithe map of St. Cadoc’s - 1840
Figure 10 Volunteers undertaking initial clearance work of the Chapel
Figure 11 Post hook located in wall perpendicular to Wall 6
Figure 12 Slate arch feature A1
Figure 13 Granite window tracery at base of Wall 5
Figure 14 Catacleuse stone incorporated into cemetery wall
Figure 15 Baseline offset and levelling exercise area
Figure 16 Dowsing for the Holy Well – West Penwith Dowsing Group
Figure 17 Photosynth of Chapel
Figure 18 Photosynth of Holy Well site HW1 as identified by Doble
Figure 19 Photosynth point cloud of Chapel extant walls as seen from overhead
Figure 20 LEIOS2 processed point cloud of the Chapel
Figure 21 LEIOS2 processed point cloud of stone S1
Figure 22 LEIOS 2 mesh model generation of stone S1
Figure 23 Autodesk 123DCatch model of stone S1
Figure 24 Autodesk 123DCatch model of stone S2
Figure 25 Autodesk 123DCatch model of stone S3
Figure 26 Chapel site looking east, pre-clearance September 2012
Figure 27 Chapel site looking east post-clearance April 2013
Figure 28 Packhorse bridge area looking north, pre-clearance, September 2012
Figure 29 Packhorse bridge area looking north, post-clearance, April 2013
Figure 28 Packhorse bridge looking south, April 2013
Figure 30 Exposed slate arch feature A1
Figure 29 Potential site of Holy Well (HW1) in NE of Chapel
Figure 31 Granite window tracery positioned at base of Wall 5
Figure 32 Catacleuse building stone re-used for cemetery wall building
Figure 33 Loose catacleuse stone S3 lying close to Wall 4
Figure 34 Loose catacleuse stone S1
Figure 35 Loose Catacleuse stone S2
Figure 36 Section of medieval roof tile
Figure 37 Apportionment information
Figure 38 HER Record for St Cadoc’s

List of Tables
Table 1 Levelling exercise results
The Lost Chapel and Holy Well of St Cadoc

Abbreviations
CAS – Cornwall Archaeological Society
EH – English Heritage
GIS – Geographical Information System
HBSMR - Cornwall and the Isles of Scilly Historic Buildings Sites and Monuments Record
HE - Historic Environment, Cornwall Council
NGR - National Grid Reference
NMP – National Mapping Project
OS – Ordnance Survey
PRN - Primary Record Number in Cornwall HER
RIC- Royal Institution of Cornwall
SM – scheduled monument

Abstract
Situated in a small river valley near Harlyn Bay in North Cornwall are the ruins of a chapel, purportedly being the remains of St Cadoc's chapel; the only structure of its type dedicated to the Saint in Cornwall. Following the reformation and under new secular ownership the structure had been desecrated to such an extent that it cannot be said today, with confidence, where the Chapel and Holy Well were located at their time of construction. With local concern being raised over the continuing decline in condition of the site the author, in his capacity as Area Representative for the Cornwall Archaeological Society, was contacted to undertake initial recording as part of their Monument Watch program. Following on from the preliminary visit it was decided that a rolling program of work be undertaken, with the assistance of volunteers, to gain a better understanding of the archaeological resource and to promote local heritage assets.

Limited empirical study had been undertaken of the site during the 1930’s and it was decided the work should take a more holistic approach and include the complimentary technique of dowsing alongside more mainstream archaeological methods of survey. The application of geomatics was also employed at this stage of the work by way of close range photogrammetry for later 3D data extraction and object re-construction. Throughout this phase of the program thought was given to interpretation of the landscape in both prehistoric and medieval contexts with a view to later combining the phenomenological experience with computer modelling using GIS methods of experimentation and reconstruction.

The results from the first stage of clearance and recording work that took place in a series of events from September 2012 to April 2013 are documented within this report.
The Lost Chapel and Holy Well of St Cadoc

1.0 Introduction

The site of St Cadoc’s chapel and holy well (NGR SW 8848 7493) is situated in the parish of Padstow, approximately 1 mile south east of Harlyn Bay, on the coast of North Cornwall. The site is historically significant (PRN 21854) as there are no other structures of this type dedicated to St Cadoc in Cornwall. The wider medieval settlement of St Cadoc was first recorded in 1302 when it was known as "Villa Sancti Codoci" (Heritage Gateway, 2012). Figures 1 and 2 show a recent satellite image of the wider site together with an OS map of 1881 respectively. The Chapel is clearly marked on the latter map. The structure is currently in a ruinous state with some walls suffering recent collapse.

As well as being heavily overgrown the site is also prone to episodic and in areas has been subject to silt accumulation. There is also some doubt that the extant walls accurately reflect the layout of the 11th century Chapel; it is possible that material was re-used for later farming practice. It is probable, however, that substantial subterranean remains survive beyond those that are visible today. A geophysical survey is planned for the summer of 2013 which, it is hoped, will provide evidence on the location of earlier structures. For the purposes of this dissertation the surviving structure, as historically documented, will continue to be termed “the Chapel” until proven otherwise.

First reference to the site was made in Lifris of Llancarfan’s 11th Century work Vita Cadoci (LLGCNLW, 2009). It is further mentioned in the writings of William of Worcester on visiting Cornwall in 1478 where it was commented that the well was virtuous against intestinal worms (Worcester et al, 1969.72).

Also of interest near the site (NGR SW 8844 7492) is a rare style of packhorse bridge, dating to the medieval period (PRN MCO56735) which is constructed in a single arch of killas slate blocks. The bridge survives intact and spans the stream which forms a boundary between St Cadoc’s and Polmark farm to the south.
2.0 Aims and Objectives
The primary aim of this project is to undertake clearance and recording work of the Chapel site in order to improve understanding and management of the archaeological resource. Secondly, local community volunteers will be engaged to participate in the project to both support the work as well as to raise public awareness of local heritage assets.

With regard to the material remains, a desk-based assessment will be undertaken prior to site clearing and survey activities. Baseline offset and levelling exercises will also be carried out together with geomatic methods of survey to gather data within the field. Throughout the work thought will also be given to interpreting the landscape in both prehistoric and medieval contexts.

In order to meet the community focussed aim of this project a number of local groups and directors of other heritage focussed community-based groups will be engaged for assistance and guidance. To assist in collaborative working and information dissemination for both volunteers and professionals alike use of a website and the social media will be employed.

The final report will be submitted to Cornwall Council’s Historic Environment Service and English Heritage in order it be added to their Monuments at Risk Survey (MARS) project.

3.0 Project Background
In 2012 the Rev. Brian Woodman (retired), of St Merryn parish, contacted Cornwall Council’s HE service with regard to the clearance and preservation of the site. The author, in his capacity as CAS area representative for the parishes of Padstow and St Merryn, was contacted by the HE service (Trevarthen, 2012) to attend a meeting with a view to progressing matters. The initial HE correspondence can be read in Appendix IV. It was agreed that a preliminary project should be undertaken as part of a wider rolling program of work which would address the initial clearance and recording of the Chapel site. This dissertation is a record of the first phase of the proposed work as undertaken by the author and project team.

3.1 Present Management
The site of St Cadoc’s chapel is currently owned by the Prideaux-Brune family of Padstow, and has done so since 1545 after the Chapel and surrounding land were granted to Nicholas Prideaux following the reformation (Taylor, 1925). Aside from the clearance activities in 2012 there has been little or no management of the site in recent times.

3.2 Location and Setting
The site lies on land at a height close to sea level with a fast moving stream in close proximity to the south. The land rises sharply to the north to St Cadocs farm, but more gently both south to the village of St Merryn and east to the town of Padstow. The surrounding area is rich in archaeology; to the north of the Chapel and in the field immediately to the west of the farm there is evidence of an Iron Age enclose (PRN 50289). In the near locale there is also an Iron Age cemetery (PRN 21700) located at Harlyn Bay itself in addition to a further 22 HER entries in the Bay area.

3.3 Geology and Soils
The bedrock geology of the area is composed of Devonian slate and siltstone of the Trevose Slate Formation and Rosenum Formation (BGS, 2012). Deposits of alluvium have accumulated on the site during episodic flooding from the stream, whilst run off from the fields to the north has led to further accumulations of re-deposited soil.

3.4 Risk Assessment
A risk assessment and health and safety policy were written for the project (see Appendices XI and XII respectively).

4.0 History of St Cadoc’s Chapel
It is thought the Chapel was founded in the 11th Century, followed by a period of building improvement during the 15th Century, as the result of an Indulgence of 40
days being granted to contributing penitents by a Bishop Lacy in 1445 (Doble, 1937. 33).
In 1537, at the time of the dissolution of the monasteries’ the Chapel became the property of the Crown which later transferred ownership to the Prideaux family of Padstow. Under the new secular ownership, the Chapel was desecrated and fell into ruin.

It is likely that whilst still standing the Chapel ruins were extensively robbed for its masonry with the remains being used for later farming practice. Anecdotal evidence indicates re-use of the Chapel stone elsewhere, such as its pinnacles, which allegedly adorn the nearby church tower of Little Petherick (Penaluna, 1838. 148) and the main entrance gateway of Prideaux Place (figure 3); the residential family home of the Prideaux-Brune’s (McCarthy, 2013).

Henderson’s work, *Ecclesiastical History of the Four Western Hundreds*, was published posthumously in 1955 however his sketches of the site were omitted from the publication. His original notes are, fortunately, held by the RIC and copies were obtained (see Appendix III). Of the Chapel itself Henderson observed that there was a small ruined rectangular building near the pond on the site, although there was little authority to substantiate it as being the Chapel. He further discusses the location of the Chapel cemetery being in the northern, higher and dryer area of the ruins in a tithe free area (Henderson, 1955. 380). This postulation is further supported by an entry in the PastScape database where it was reported to a field investigator that on the 6th of September 1954 a Mrs Brewer, wife to the tenant farmer, advised that a burial ground lay some distance to the north east of the Chapel site where a grave had been found 50 years previously (English Heritage, 2011). Henderson further commented on the abundance of carved stonework in the vicinity and the impressive pieces in the farmhouse garden. These may well be those that are now incorporated into the garden wall as an ornamental feature (figure 4).

**5.0 Earlier Study of St Cadoc’s Chapel**

St Cadoc’s chapel has been little studied with the only documented and published work being undertaken by Charles Henderson, circa 1930, and the Canon G.H. Doble in 1937. Brief mention is also made in Jack Meyrick’s book *Holy Wells: A Pilgrims Guide to the Holy Wells of Cornwall and Their Saints* published in 1982.

*Doble undertook a more thorough study of the site which was published in his 1937 work *Saint Cadoc in Cornwall and Brittany*; part of his ‘Cornish Saints’ series. Doble makes comment on an:
"old roadway passing alongside the Chapel, and crossing the old bed of the stream by a small over-grown stone bridge" (Doble, 1937. 35).

He is likely to be referring here to the packhorse bridge. With regard to the Chapel building itself Doble comments that its location was likely to be in a small orchard that was tithe-free (Doble, 1937. 33).

Of the extant remains he remarks that:

"...the plan of the original Chapel appears to be obscured by some later building on the site, as the N.E. plastered angle wall does not possess the correct orientation, and is not in a position in which it could form part of the Chapel. The old enclosure wall joins it in a very curious fashion, and it may be that here, in the corner of the enclosure, was the Holy Well" (Doble, 1937. 39).

For this particular work Doble collaborated with Martyn Jope, of Oriel College, Oxford, who produced a series of sketches representing fragments of worked stone found on the site conjecturally restored to their original position. These can be seen in Appendix IX. Little further study has been made of the site, however, on visiting the Chapel in 1980 Meyrick makes comment on the swift flowing stream which lies to the south of the site and the chapel outlines being traceable but standing only a few feet high (Meyrick, 1982. 115).

5.1 Early Site Plans
The plans of the site drawn by Henderson (figure 5) and Doble (figure 7) are of great interest as they are the only known historical plans of the site. Unfortunately, the scale of Henderson’s drawing is so small it shows little detail of the chapel itself. It does, however, give some indication of the location of the cemetery as is seen by the annotation; "bones found." A satellite image of the same area (Google Earth, 2013) is shown in figure 6 with selected annotated features from Henderson’s plan.
It is seen that Doble’s plan offers more detail of the Chapel itself and its more immediate surroundings. A scale is present and areas of potential interest have also been marked including the extant walls of the chapel, the possible position of the eastern wall of the chapel and the pack horse bridge to the south west. The cemetery, absent from the plan, reportedly lies on higher ground to the north beyond the track way.

6.0 Phenomenology and Contextual Considerations

It is planned that both medieval and potential prehistoric contexts of the site will be studied using the more experiential approach of phenomenology; this being the study of ‘things’ as they appear in our experience or the ways we experience them, and therefore what they represent in our experience (Smith, 2008). Although phenomenological approaches to landscape interpretation are typically undertaken with regard to prehistoric contexts (Hamilton et al, 2006. 33), thought will be given to the more recent medieval period. Moreland comments on the lack of development of a medieval context stating that “there is no coherent and structured theory to match that rapidly being assembled by the prehistorians” (Moreland, 1991. 18). This thinking may be justified in that there was little documentation of the thoughts or even existence of rural peasantry at the time of the Chapels construction or use. It was not until the series of Tudor ordinances from 1538 onwards which established a system of provincial registration of births, marriages and deaths (Gibbens, 1994), that this information became more readily available. It can be seen, therefore, that there is a case for classifying the medieval rural poor as effectively prehistoric, albeit a prehistory outside of that which is typically understood and accepted.

7.0 Methodology

The methods by which the work was carried out in order to meet the project aims and objectives are listed below.

7.1 Resources

Resources examined included early modern pictorial and surveyed maps and pre- and post-war Ordnance Surveys. Aerial and terrestrial photographs and historical documents were also examined, together with appropriate archaeological journals and books. Digital resources such as Cornwall Council’s HER were also queried.
7.2 Site Preparation
An orchard had been planted at an unrecorded point in the past and was now well established over the entire site. The presence of the orchard along with extensive and dense vegetation necessitated much clearance in order that recording of the site could be undertaken. Clearance by the project team volunteers and author initially focussed on and around visible above ground archaeological remains with loose stone and vegetation being removed. Where feasible areas of the orchard where also cleared, particularly in those areas targeted for further survey, using hand tools such as loppers and saws.

7.3 Survey Techniques
In conjunction with the desk-based assessment an unsystemic walkover survey was undertaken to establish the character and condition of the site. Features, both those identified by the desk based assessment and those that were not, were recorded during this exercise.

To confirm the accuracy of Doble's plan of the site, dimensions were taken using a 50m tape measure; an activity that could be undertaken with little additional clearance. As clearance progressed this allowed for further surveying techniques to be undertaken including baseline offset and levelling exercises. Close range photogrammetry was also undertaken once the site had been suitably cleared.

By way of complimenting the more mainstream methods of archaeological recording dowsing prospection was undertaken by the West Cornwall Dowsing Group. There is an awareness that there is no scientific explanation acknowledging the process by which dowsing operates (BSD, 2006) and some external scepticism due to those who practice dowsing tending to have their own theories outside of accepted hydrogeological concepts (Schwalbaum, 1997.61). Regardless of these statements the group have a proven record of success, most recently seen at an archaeological excavation near Troon in Mid Cornwall. As well as giving a much valued contribution to surveying the site their work also aided in fulfilling the community aspect of the project.

7.4 Site Recording
An initial record of the surface of the site was undertaken to examine the architectural features contained therein and determine if they had undergone modification. Further features of interest such as isolated, dressed stones were plotted and the details entered onto pro forma recording sheets (see Appendix V).

Colour digital photographs were taken using a Sony Alpha 330 10.2 megapixel DSLR camera. Lenses of appropriate focal length were used when necessary and difficulties of back-lighting were dealt with by the use of flash. A photographic record of the site was undertaken and included both general and feature specific photographs. These may be viewed in Appendix I.

Registers of photographs, drawings, finds and contexts were maintained throughout the fieldwork as a matter of best practice (Gossip and Allan, 2011: 12-13) and in accordance with IfA guidelines (Appendix XV)

7.5 Landscape Interpretation
To aid in understanding phenomenology further, as discussed in section 6, Montgomery describes this approach as a way of seeking to unite activity, event, and space. It is thus connected with practice theory as well as matters of memory, agency and place (Montgomery, 2010. 1).

How to apply a phenomenological approach to this project is not without challenge however for as Budd stated in 2001 phenomenology was:

“not a method (or set of methods), nor is it a set of problems to be addressed. Rather, it is a description of a mental state and the public expression of that state” (Budd, 2001. 246)

Taking note of study undertaken by Eve in 2012 it has been decided that an augmented reality approach will be carried out to assist
in understanding past perception and social behaviour in relation to the landscape. The method undertaken will combine phenomenology, by way of sensory experience within the field with computer based techniques for experimentation and reconstruction using GIS and other technologies such as soundscape analysis (Eve, 2012.582-583).

This study is out of scope of this stage of the project but will be developed during the next phase in summer 2013.

7.6 Geomatics - Close Range Photogrammetry

Advancement in technology has allowed for new methods of survey and recording to be undertaken on a small budget. One such example is that of close range photogrammetry; the correct execution of which can allow for later digital object reconstruction. This method offers a means in which reliable information about physical objects and the environment through processes of recording, measuring and interpreting photographic images and patterns are obtained (RSPSOC, 2009) In essence it may also be described as obtaining a 3D image from a 2D source or as the practice of determining the geometric properties of objects from photographic images (Photomapping Services, 2011). Common points from two or more photographs allow for the creation of three-dimensional coordinates of points, provided they are taken from different positions. This allows for a line of sight to be constructed from the camera location to a point on the object. The triangulation of these lines can then determine the three-dimensional location of the point (Ramesh et al, 1995). Ultimately a point ‘cloud’ can be produced from this process which can be meshed into a model of the subject.

7.7 3D Data Acquisition & Object Reconstruction

Once a sufficient number of photographs had been taken by both the author and volunteers they were processed by Microsoft’s Photosynth application which created a three dimensional image (or synth) and point cloud from the digital photographs (Microsoft, 2011). In essence Photosynth exercises the principles of photogrammetry as described in section 7.6 where photographs taken of the site are processed using common point detection and matching algorithm. This then allows for specific features to be identified and thus matched with the same features in the other photographs. As a result the software can recognise where the photographs should be placed in relation to each other. Analysis of the slight changes in the relationships between the features also permits the software to identify the 3D position of each feature, as well as the position and angle at which each photograph was taken. This process is known technically as bundle adjustment. (Geodetic Systems, 2010) It can also be described as a number of vertices in a three-dimensional coordinate system defined by X (to the left), Y (to the right) and Z (to the front) coordinates (Knill, 2006). It is recommended that the number of photographs for a typical ‘synth’ should number between 20 and 300 (Photosynth, 2011). For each area ‘synthed’, however it was decided to take a minimum of 300 photographs to allow for a more concentrated point cloud.

To digitally reconstruct the object for 3D visualisation specialised software is needed. Autodesk 123D catch and LEIOS 2 were selected as the software of choice due to their effective data handling and stability. Autodesk 123DCatch is a free Cloud based CAD and modelling tool that uses patch-based multiview stereo to generate a fly through visualisation. Little user action is required other than to upload the photographs to the Autodesk servers for processing. The technology is limited, however, in that it is unsuited for high resolution requirements and does not allow for manual manipulation of the model. Nevertheless 123DCatch does produce effective imagery for presentations and was therefore used as one method for digitally recording dressed stones.

For higher definition visualisation and manual manipulation of data the software
product LEIOS2 was used. LEIOS2 is an advanced 3D mesh processing application with a good reputation for 3D development and data handling. It can be utilised as both a complete package or as a library for input into other 3D software. The point cloud was extracted from the synth and saved in ply format; a commonly supported format understood by LEIOS2. The results can be seen in section 8.8

### 7.8 Volunteer Engagement and Feedback

Volunteer engagement was initiated at an early stage of the project with appropriate members of the Padstow Youth Enterprise Group, the Cornwall Archaeological Society and the Old Cornwall Society being contacted (see Appendix IV). At the finish of this stage of the project volunteers were asked to fill out questionnaires (see Appendix XIV) in order that qualitative data could be collected and analysed. It is hoped that in doing so it might be understood which activities proved to be the most successful and also what benefit the project offered the community (Little & Shackel, 2007: 209-210). This feedback may also identify areas in the program that might need improving (Impetus, 2012).

### 7.9 Archive

All work carried out on site at this stage of the project was added to the project archive. This included digital colour photographs, completed dressed stone records and other site registers.

### 8.0 Results

Having followed IfA guidelines, when possible, for both desk based assessment and archaeological field evaluation (Appendix XV) the following subsections detail the results from application of the methods described in section 7.

#### 8.1 Digital Plan – Google SketchUp

Measurements manually taken on site using a 50 metre tape measure were entered into Google SketchUp to create a contemporary digital plan of the site (figure 8). Cumulative errors were avoided when measuring larger surfaces by taking them in one continual span. It is seen when compared to Doble’s earlier plan, as seen in section 5.1 (figure 7) and the digital plan below there is indeed some variance. These are discussed further in section 8.4. A larger version of the map can be viewed in Appendix VIII.

---

**Legend**

- **W** - Wall under study.
- **HW** - Potential holy well site.
- **S** - Site of loose dressed stone.
- **A** - Architectural feature
- **B** - Packhorse bridge.
- **EC** - Possible earlier chapel site.

**Figure 8** Google SketchUp model of the St Cadoc’s Chapel site (Northcott, 2013)
8.2 Desk Based Assessment
Utilising the departments GIS system, the HE service made available a HER for the area which displayed information from a number of sources including the HBSMR, NMP and HLC (Appendix VII). This showed the area to possess a predominantly medieval development with the prehistoric sites close to the site, as mentioned in section 3.2, also being marked on the map. It should be noted, however, that the Chapel site possesses an alternate nomenclature than that detailed within the Heritage Gateway database and is given as MCO10184.

A tithe map of the area dating to 1840 (see figure 9) and apportionment information (see Appendix VI) was provided by English Heritage (Preston-Jones, 2013).

The state of cultivation given in parcels 18, 19 and 20 read as 'Orchard' which corresponds with the earlier study's' detailed in section 5. Parcel 18 may well have contained the cemetery if Henderson's plan of the site is correct. According to both Doble and Henderson, however, the cemetery was located in a tithe free parcel, which parcel 18 was not. This makes things a little unclear as the apportionment information marks the only possible tithe free areas as being parcels 15a and 17 which are further north and west. It may be surmised that taphonomic processes such as animal action (badger burrows are much in evidence on the site) in conjunction with hydrological processes may have led to the bones being carried further down slope to parcel 18.

8.3 Site Preparation
Due to the scale of the work it was decided that three areas be initially targeted for clearance; the alleged site of the Chapel itself, the possible location of the holy well as identified by Doble and the packhorse bridge; the latter two features being marked on figure 8 as HW1 and B1 respectively. Initial clearance work of the Chapel being undertaken by local volunteers can be seen in figure 10.

The tops and sides of the extant walls were cleared of loose stone and vegetation with further clearance being undertaken at the

Figure 9 Tithe map of St. Cadoc’s - 1840 (Preston-Jones, 2013)

Following the results of the dowsing exercise described in section 7.3 it was decided that further clearance should also be undertaken at two other areas; one area identified as being an alternative location for the holy well (HW2) and the other being the possible site of an earlier chapel (EC) than that of the 11th century structure.

The tops and sides of the extant walls were cleared of loose stone and vegetation with further clearance being undertaken at the
targeted areas. Pre and post clearance pictures can be seen in Appendix I.

In addition to the general clearance work selective small scale excavation was undertaken on several pieces of dressed stone that had become obscured by soil or vegetation. This allowed for clearer recording and improved data acquisition for later 3D visualisation; the results of which are seen in section 8.9

8.4 Walkover Survey

The walkover survey revealed some discrepancy in the structure of the Chapel when compared with Doble’s earlier plan of the site. Of most note was that the southern wall of the chapel, running parallel to Wall 5, as identified and drawn by Doble, was no longer present. An east to west aligned wall (Wall 6) was in evidence to the far west of the site however, possibly indicating that site modification had continued into the mid or later 20th century. The presence of a post hook (A2) fixed to a wall that runs perpendicular to Wall 6 (figure 11) adds further weight to the thinking that the site had indeed been modified for later farming practice with Wall 6 possibly constructed as part of a later penning area.

A previously unrecorded stone arch (A1) was discovered towards the east of the site near ground level. It is unknown at this time whether it is in situ and was partially buried by later silt accumulation, to the level it is seen at today, or whether it fell as a complete unit during the desecration of the site (see figure 12).

There were also, three isolated pieces of dressed catacleuse and granite stones discovered (S1-3). A further 2 pieces of worked stone were further seen to be incorporated, in what appeared to be a random fashion, into walls dating from a later period of construction. One of these is possibly a remnant of granite window tracery lying horizontally at the base of Wall 5 (see figure 13).

Jope’s sketch of a granite window (see Appendix IX) may represent the original position of this piece. A further piece of catacleuse stone had been incorporated into a rebuilt section of what is thought to be the cemetery wall (see figure 14).
The Lost Chapel and Holy Well of St Cadoc

Very little of the extant walls looked to have been constructed to support a structure such as the Chapel with most being of herringbone design. The exceptions to this were Walls 4 and 5, which looked to be the most ancient of the walls and a small section of Wall 1 which all displayed substantial horizontal tiers of slate.

A small number of unstratified finds were discovered during the walkover survey consisting of 3 modern pottery sherds and a section of medieval roof ridge tile (Thorpe, 2013) which can be seen in Appendix II. All finds were marked with the relevant site code of SC01, plotted on the plan and allocated a GPS reading.

![Figure 15 Area used for baseline offset and levelling exercises (Northcott, 2013)](image)

**8.5 Baseline Offset and Levels survey**

With assistance from volunteers a baseline with a NE-SW alignment was setup parallel to Wall 1 with offsets being recorded at regular points of 50cm along the feature. This was plotted on tracing paper in the field and later transferred to graph paper (see Appendix X). Level readings were also taken for this area at 2m intervals following the yellow line marked in figure 15. As we were in the middle of a heavily wooded area a temporary bench mark was used. Station A was located at the eastern most point with station F being at the western most. Table 1 shows the results for this exercise. It is seen that there is a reduced level of 85cm; a reading not unexpected due to the more northerly part of the survey area being subject to soil re-deposition from the steep fields leading to the farm to the north.

<table>
<thead>
<tr>
<th>Stations</th>
<th>Distance (M)</th>
<th>Back Sight (M)</th>
<th>Fore Sight (M)</th>
<th>Rise (M)</th>
<th>Fall (M)</th>
<th>Reduced Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>0.45</td>
<td>0.75</td>
<td>0.30</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>0.15</td>
<td>0.25</td>
<td>0.10</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>0.15</td>
<td>0.30</td>
<td>0.15</td>
<td>0.55</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>2</td>
<td>0.20</td>
<td>0.30</td>
<td>0.10</td>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td>0.25</td>
<td>0.45</td>
<td>0.20</td>
<td>0.85</td>
<td></td>
</tr>
</tbody>
</table>

*Table 1 Levelling exercise results (Northcott, 2013)*
8.6 Dowsing Prospection
It was arranged that the West Penwith Dowsers Group would visit the site on Tuesday the 26th of March. Following prospection the group advised they had identified the site of the Holy Well with further comment being made that there was also a sub-surface stone feature, running from the well, in a north-south orientation. There was however inconsistency as Doble had described the holy well as being to the north east of the site (HW1), whilst the dowsers had identified it as being to the south (HW2). A GPS reading of 50°32’08.60N 4°59.10.48W was taken for area HW2 in order that the next clearance event could be focussed in that area.

8.7 Close Range Photogrammetry
At this stage of the project sufficient clearing had been undertaken to identify two areas of the site as being suitable for close range photogrammetry work; these being the west faces of Walls 3 and 4, which are thought to be near the location of the Holy Well, as described by Doble, and the area containing much of the extant walls of the Chapel including Walls 1 and 5. 320 photographs were taken of the Holy Well site and 420 were taken of the Chapel. During photography a change in angle of no more than 15 degrees was made between each location in order that a high level of synthy (how well the photographic components parts of the synth match) was achieved over the site. The resulting synth's of the Chapel and Holy Well site are shown in figure 17 and 18 respectively. If viewing an electronic copy of this report ctrl clicking on the images will activate the Photosynth viewer. The point cloud generated by Photosynth of the Chapel site is shown in figure 19.
The Lost Chapel and Holy Well of St Cadoc

Figure 18 Photosynth of Holy Well site HW1 as identified by Doble (Northcott, 2013)

Figure 19 Photosynth point cloud of the Chapel extant walls as seen from overhead (Northcott, 2013)
8.8 Cloud Export and Object Reconstruction

Figure 20 shows the point cloud of the Chapel extant walls after being imported into LEIOS2 following cleaning of noise and redundant points in readiness for mesh modelling.

All loose, dressed stones (S1-S3) were processed using this method; the results of which can be seen in figure 21 when applied to stone S1. Figure 22 shows the final 3D polygonal mesh model and overlay post application of filters to remove duplicated and unreferenced vertices.

As discussed in section 7.7 Autodesk 123D was used to create 3D models of all loose dressed stones. Video’s showing 3D models of stones S1-S3 may be seen if viewing the electronic version of this report by ctrl clicking on each of the stone images in figures 23, 24 and 25 representing stones S1, S2 and S3 respectively.
The Lost Chapel and Holy Well of St Cadoc

Figure 23 Autodesk 123D Catch model of stone S1 (Northcott, 2013)

Figure 24 Autodesk 123D Catch model of stone S2 (Northcott, 2013)

Figure 25 Autodesk 123D Catch model of stone S3 (Northcott, 2013)
The Lost Chapel and Holy Well of St Cadoc

9.0 Website and Social Media
A webpage has been created (www.monumental3d.com/stcadocs) to act as a digital repository for information on work both undertaken and that planned. A Facebook group has also been created in order for improved collaborative working. Metrics will be exported from the page as the project progresses in order that its performance can be measured as well as providing a method to review how people discover the page and engage with the content.

10.0 Volunteer Feedback
At this time several volunteers have completed their questionnaires. Those that have been returned can be seen in Appendix XIV. Feedback is currently positive however further forms need to be returned before a detailed review will be possible.

11.0 Conclusion
Although the Chapel’s extant walls are correctly aligned for a building that may have served as such it is unlikely that the ruins represent the original 11th century chapel. The reasoning here is twofold. Firstly, there is very little evidence by way of the existence of walling that could support such a structure. This is evident in that most of the site walling is of herringbone design which would not offer the support strength required. Secondly, material, such as the granite window tracery and catacleuse building stone, have been re-incorporated into later construction as is seen in Wall 5 and the cemetery wall. That there was a chapel on the site however is highly likely given the quality and quantity of moulded and dressed pieces within the wider area, particularly in the farmhouse garden.

It has been difficult to establish levels and determine the original Chapel flooring at this point in the project although levelling survey shows there is a north-south fall in gradient in the north of the site. This gives a strong indication that indeed material is being carried down to the site through hydrological processes from the steep fields to the north. Together with silt accumulation, occurring during periods of episodic flooding, from the stream south of the site it is seen that further clearance and silt removal is needed to record the site more fully and accurately.

It is evident that there is much in the way of both existing and emerging technologies that will aid in accurate digital recording of heritage assets. Use of this technology provides recording methods that were simply not possible previously for those on a small budget and due to the intuitiveness of the software used it is seen to provide an enjoyable experience which encourages volunteer engagement as is seen by their feedback in Appendix XIV.

This initial work has been successful in engaging people from different disciplines including archaeologists, historians and local volunteers and the supportive professional and community response has given confidence in progressing to the next stage of the project in the summer of 2013.

Further, with an effective site management plan in place it is hoped that the Chapel site ruins will be enjoyed by the people of Padstow and its visitors into the foreseeable future.

12.0 Recommendations
Recommendations as determined by the work carried out for this phase of the project are made below.

12.1 Geophysical Survey
It is desirable that a geophysical survey be undertaken in three areas:-

a) The Chapel site itself in order to determine what, if any, subterranean features exist. This is to include the potential earlier chapel (EC) as identified by the dowsing group.

b) Both potential Holy Well areas (HW1) and (HW2)
The Lost Chapel and Holy Well of St Cadoc

23

Wednesday, 22 May 2013

The field as marked on the tithe map in section 8.2 that encompasses parcels 15, 15a, 17,18 and 19 in an effort to locate the cemetery.

It would be desirable to run both magnetometry and resistivity techniques in order to detect thermoremanent magnetism and near-surface archaeological features respectively. It is hoped this exercise will be undertaken in summer 2013. Correspondence regarding this can be seen in Appendix I.

12.2 Monthly

Vegetation cutting
Clearance of vegetation on the site e.g. nettles and ivy to be cut monthly. This may necessitate more cutting during summer months and less during the winter months.

12.3 Every Six Months

Removal of intrusive vegetation from stonework.
Vegetation growing into the upstanding fabric has the potential to do further damage to the structures. Such vegetation should be carefully controlled through cutting in order to protect the fabric. The vegetation must be cut, not pulled out, as this could damage the archaeological remains.
Plants that need to be controlled include woody species with invasive root systems such as bramble, ivy and saplings.
Low vegetation growing on the banks of the stream and packhorse bridge will need regular strimming/cutting back but this is likely to be needed less frequently than vegetation clearance of the main areas.

12.4 Yearly

Regular inspections of fabric
In order to protect the remains St Cadocs Chapel it is desirable that regular inspections be taken by designated persons to carry out inspections and record any areas of damage or concern. This can be undertaken as part of the CAS Monument Watch program using their standard monitoring form (see Appendix XIII).

13.0 Project archive

The project's documentary, photographic and drawn archive is housed in the author's office at 16 Drake Road, Padstow, Cornwall, PL28 8ES.

The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and including stone recording sheets (File no 20130522)

2. Electronic drawings stored in the directory:
   D:\TCARC308\Sites\DWG\StCadoc Phase 1

3. Digital photographs stored in the directory:
   D:\TCARC308\Sites\Img\StCadoc Phase 1

4. This report held in digital form as:
   D:\TCARC308\Sites\Docs\StCadoc Phase 1

5. 1 x box finds — unstratified artefacts retrieved during the project are also stored at 16 Drake Road, Padstow, Cornwall, PL28 8ES. These comprise:
   - Sherd of roof medieval tile X1.
   - Sherd of modern pot x3.

The project's documentary, photographic and drawn archive is housed in the author's office at 16 Drake Road, Padstow, Cornwall, PL28 8ES.

The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and including stone recording sheets (File no 20130522)

2. Electronic drawings stored in the directory:
   D:\TCARC308\Sites\DWG\StCadoc Phase 1

3. Digital photographs stored in the directory:
   D:\TCARC308\Sites\Img\StCadoc Phase 1

4. This report held in digital form as:
   D:\TCARC308\Sites\Docs\StCadoc Phase 1

5. 1 x box finds — unstratified artefacts retrieved during the project are also stored at 16 Drake Road, Padstow, Cornwall, PL28 8ES. These comprise:
   - Sherd of roof medieval tile X1.
   - Sherd of modern pot x3.
14.0 References


Cornwall Council. jpowning@cornwall.gov.uk. Cornwall & Scilly Environment Record SMR No. 21854 - MCO10184. 23rd January 2013.


The Lost Chapel and Holy Well of St Cadoc


Preston-Jones, A. Ann.PRESTON-JONES@english-heritage.org.uk. TA maps and mill site not on TA.jpg, TA maps.jpg. 17th April 2013.


Thorpe, C. cthorpe@cornwall.gov.uk. St Cadoc Sherd. 17th May.
The Lost Chapel and Holy Well of St Cadoc

Trevarthen, E. etrevarthen@cornwall.gov.uk. St Cadoc’s Chapel. 17th July 2012.


15.0 Bibliography


Cornwall Council jpowning@cornwall.gov.uk. Cornwall & Scilly Environment Record SMR No. 21854 - MCO10184. 23rd January 2013.

Doble, G.H (1937) Saint Cadoc in Cornwall and Brittany, ‘Cornish Saints’ Series, No. 40. Truro: Chapter of Truro


Jope, M (1937). *Plan of St Cadoc's Chapel* [Sketch] In: Doble, G.H (1937). *Saint Cadoc in Cornwall and Brittany*. Truro: Chapter of Truro. 40


Penaluna, W (1838). *An historical survey of
The Lost Chapel and Holy Well of St Cadoc


preston-jones, a. ann. preston-jones@english-heritage.org.uk. TA maps and mill site not on TA.jpg, TA maps.jpg. 17th April 2013.


taylor, t (1925). The Life of St. Samson of Dol. London: SPCK.

thorpe, c. cthorpe@cornwall.gov.uk. St Cadoc Sherd. 17th May.

trevathen, e. etrevathen@cornwall.gov.uk. St Cadoc's Chapel. 17th July 2012.


The Lost Chapel and Holy Well of St Cadoc

APPENDIX I: Site Photographic Record

Figure 26 Chapel site looking east pre-clearance, September 2012 (Northcott, 2012)

Figure 27 Chapel site looking east post-clearance, April 2013 (Northcott, 2012)
The Lost Chapel and Holy Well of St Cadoc

Figure 28 Packhorse bridge area looking north, pre-clearance, September 2012 (Northcott, 2012)

Figure 29 Packhorse bridge area looking north post-clearance, April 2013 (Northcott, 2013)
The Lost Chapel and Holy Well of St Cadoc

Figure 28 Packhorse bridge looking south, April 2013 (Northcott, 2012)

Figure 29 Potential site of Holy Well (HW1) in NE of Chapel (Northcott, 2013)
The Lost Chapel and Holy Well of St Cadoc

Figure 30 Exposed slate arch feature A1 (Northcott, 2013)

Figure 31 Granite window tracery positioned at base of Wall 5 (Northcott, 2013)
The Lost Chapel and Holy Well of St Cadoc

Figure 32 Catacleuse building stone re-used for cemetery wall building (Northcott, 2013)

Figure 33 Catacleuse stone S3 lying close to Wall (Northcott, 2013)
The Lost Chapel and Holy Well of St Cadoc

Figure 34 Loose catacleuse stone S1 (Northcott, 2013)

Figure 35 Loose catacleuse stone S2 (Northcott, 2013)
APPENDIX II: Finds Photographic Record

Figure 36 Section of medieval roof tile (Northcott, 2013)
APPENDIX III: Henderson's original notes on St Cadoc's

There is abundant evidence to show that a Chapel existed at St Cadoc's, but the description that the Chapel was of considerable beauty may have been of the Countess's own giving. Nevertheless, there is some doubt as to the exact site of the building. Now down in the orchard near the fine is a small rectangular building or a ruins containing three stones, one of which may have been done off the locality. Conclusion: The Chapel had been.

On the other hand, the orchard above - on the other side of the lane - there lie skeletons. These are very poor, and they have a feature of the Chapel may have been. It is not sure that the site is the most probable. Consequently, part of the site might be the orchard, and there may well be the hall of the building and its ancient state of about the right length.

As to the Countess's work, it is obvious. In the form, there is a garden and some splendid pieces. There was a fine canoe down the way very similar to that at Sideaux Place - a fact of the house. There was also a small window (15 cent) of three lights made out of stone, an unusual material.
The Lost Chapel and Holy Well of St Cadoc

Revised here - the cloister and also the presumed arch of at least two other parts and was probably another. Then we have to remember that once there were little shrines and once a holy well in the carmelite place of St Cadoc's Place.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

Certain references in medieval documents make it appear that St Cadoc was known a parish. In 1225 William de las Bigues, bishop of Hereford, erected the monastic of St Cadoc. It was later held by Richard FitzRoy, Earl of Cornwall. The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.

The name of St Cadoc is a very old one and it is used in early 17th century with the millenial ceremonies. As a man or woman, it is a good symbol of preservation.
APPENDIX IV: E-Mail Correspondence

Historic Environment Initial Correspondence

From: Trevarthen Emma <etrevarthen@cornwall.gov.uk>
To: Steve Northcott <sten969@yahoo.com>
Sent: Thursday, 6 September 2012, 11:03
Subject: RE: St Cadocs chapel

Hi Steve,
We’re meeting Brian at 12pm on Saturday, at St Cadoc Farm. I hope that’s OK. Look forward to seeing you there.

Best wishes
Emma

From: Steve Northcott [mailto:sten969@yahoo.com]
Sent: 04 September 2012 15:49
To: Trevarthen Emma
Subject: Re: St Cadocs chapel

Hi Emma,

Great! Yep, I’ll be able to make this as I’ve the day off work.

I’ll make sure the day's kept free so I can come along whenever's good for you.

Cheers
Steve

From: Trevarthen Emma <etrevarthen@cornwall.gov.uk>
To: Steve Northcott <sten969@yahoo.com>
Sent: Tuesday, 4 September 2012, 15:02
Subject: RE: St Cadocs chapel

Hello Steve,
I don’t suppose you’re free on this coming Saturday, 8th September? My husband (another archaeologist) is also interested in visiting the site, and it’s the only day for a while that we’re both free! I haven’t spoken to Brian about dates yet - I thought I’d check with you first.

Best wishes

Emma

Senior Archaeologist
Cornwall & Scilly Historic Environment Record
Cornwall Council
t: 01872 323606
f: 01872 323811
e. etrevarthen@cornwall.gov.uk
The Lost Chapel and Holy Well of St Cadoc

w. www.cornwall.gov.uk/her

Kennall Building, Old County Hall, Station Road, Truro, TR1 3AY, Cornwall

Historic Environment, Cornwall Council, is a registered organisation with the Institute for Archaeologists

Please let us know if you need any particular assistance from us, such as facilities to help with mobility, vision or hearing, or information in a different format.

Please consider the environment before printing this e-mail

From: Trevarthen Emma <etrevarthen@cornwall.gov.uk>
To: Steve Northcott <sten969@yahoo.com>
Sent: Tuesday, 17 July 2012, 18:22
Subject: St Cadocs chapel

Hello Steve,
How are you? Hope you are well.
I have heard from a chap called Brian Woodman, retired priest-in-charge at St Merryn, who is very interested in the (unscheduled) remains of the chapel of St Cadoc in the woods below St Cadoc farm (NGR 188494 074923). I have copied his e-mail in below. Mr Woodman has done a lot of historical research but apart from some shrub clearance a few years ago the site has not been archaeologically surveyed for almost a century. I’m keen to arrange a site visit at some point soon, and I wondered if you would be interested in coming along? You may in fact already know the site well – some local knowledge would be really useful. Let me know what you think.

Best wishes

Emma

HER Officer
Cornwall & Scilly Historic Environment Record
Cornwall Council
t: 01872 323606
f: 01872 323811
e. etrevarthen@cornwall.gov.uk
w. www.cornwall.gov.uk/her

Kennall Building, Old County Hall, Station Road, Truro, TR1 3AY, Cornwall

Historic Environment, Cornwall Council, is a registered organisation with the Institute for Archaeologists

Please let us know if you need any particular assistance from us, such as facilities to help with mobility, vision or hearing, or information in a different format.

Please consider the environment before printing this e-mail
The Lost Chapel and Holy Well of St Cadoc

Dear Historic Monuments Officer,

I have been advised to get in touch with you by Jane Marley, the Curator of Archaeology at Truro Museum.

The vicar of Padstow, Canon Chris Malkinson, has asked me to see what can be done about getting the ruins of the ancient Chapel of St Cadoc, which is in his parish, noted, studied and, hopefully, suitably preserved before any further deterioration occurs.

A certain amount is known about the chapel since Canon Gilbert Doble wrote one of his forty-six monographs on the subject and Charles Henderson visited the site in 1936 and made a useful ground plan of the remains of the chapel.

Cadoc’s birth is given as 495AD (Peter Bartram: “A Welsh Classical Dictionary”). He established a monastery at Llancarfan (modern Llantwit Major just south of Cardiff) and it is thought that monks from his monastery were responsible for building this chapel. At the time, in the sixth century, it is almost certain that the site could be reached by water. Canon Chris has been in touch with his opposite number, Archdeacon Peggy Jackson, who is in charge of the present Church of Llancarfan, Vale of Glamorgan.

Yours sincerely, Brian Woodman.

Geophysics Correspondence

From: Leslie Dodd <dodd.leslie@gmail.com>
To: Steve Northcott <sten969@yahoo.com>
Cc: "les.dodd@cornisharchaeology.org.uk" <les.dodd@cornisharchaeology.org.uk>
Sent: Monday, 7 January 2013, 22:39
Subject: Re: Geophysical Survey Query - St Cadocs Chapel

Hi there,
Brave soul aren’t you?
:-)

BTW, the email address is ldodd@cranog.net (one n) or dodd.leslie@gmail.com

I am about to go away for a day or two but as a first pass...

What I’s suggest is just walking the site and working out where the possible sites for any building could be. Look at the oldest maps you can find and an AP’s you can get as well, the AP’s might not show the immediate site but will give you the overall view of the landscape. with the geophysics
If that suggests targets that’s good, if they don’t its down to prospecting with the geophysics kit. We usually start with the magnetometer because its quick, The resistivity will also be a strong contender as it should show any foundations well. Careful inspection og walls and buildings might help, we have found large parts of a Jacobean mansion embedded in field boundaries. That needs you to be able to recognise worked masonry and to be able to estimate (guess!) at its period.

I think the main problem you will have is that the site appears to have been pretty much re-cycled, there might not be much left in the ground.

I will be available next weekend if you want to have a chat about it.
The Lost Chapel and Holy Well of St Cadoc

TTFN
Les

On 7 January 2013 15:57, Steve Northcott <sten969@yahoo.com> wrote:
hmmm..am getting mail bounce backs. Hopefully this'll get to you.

----- Forwarded Message -----  
From: Steve Northcott <sten969@yahoo.com>  
To: Les Dodd <ldodd@crannog.net>; Les Dodd <ldodd@crannog.net>  
Sent: Monday, 7 January 2013, 15:48  
Subject: Geophysical Survey Query - St Cadoc's Chapel

Hi Les,

I hope you had a great Christmas and suitably boozy New Year.

If you don't mind I was hoping to get your advise, if time permits (apologies for the lengthy essay below).

I'm currently trying to bang into shape my 3rd year dissertation which involves putting together a written scheme of investigation for a ruined chapel and holy well (C12th?) at Harlyn Bay and subsequent investigation. One of the issues I expect to encounter is that as the construction material has been re-used over time the actual current structure may not reflect that of the original building. The only work that has been carried out on the site was undertaken in the 1930’s (and that's pretty inconclusive). The chapel was supposed to have been quite a substantive building and was the only one dedicated to St Cadoc in Cornwall. It is uncertain where the main tower was located (other than "to the west") and there is little evidence where the cemetery and holy well may have been. As you can see from the Facebook page I've created here [https://www.facebook.com/groups/514310128592932/](https://www.facebook.com/groups/514310128592932/) it's a bit of a mess right now. I'm currently trying to arrange a number of clearance events comprising of local groups, students from Truro College and hopefully CAS members to help out prior to survey work using equipment available from college.

At some point over the next couple of months I'm hoping that I'll also be able to arrange for a geophysical survey to be carried out and thought to drop you a line as I have little understanding of the processes involved.

With the very limited info I've provided here Les would you be able to give me an idea of considerations that need to be addressed prior to any geophysical work of the site?

I know this is a quite a lot to respond to but any info would be really appreciated.

Regards
Steve (Northcott)

**English Heritage Initial Correspondence**

From: Steve Northcott <sten969@yahoo.com>  
To: "PRESTON-JONES, Ann" <Ann.PRESTON-JONES@english-heritage.org.uk>  
Sent: Wednesday, 28 November 2012, 12:01  
Subject: Re: Clearing St Cadoc’s Chapel and 1 other thing

Awesome!
The Lost Chapel and Holy Well of St Cadoc

Thanks Ann. This will really help with my assignment. Many thanks for sending this on. I owe you some fudge!

I don't know if Andrew has spoken to you yet about St Cadoc's? I spent a morning with him at the Chapel followed by a trip out to Rosemary Ingram's to see the stone. Great input from him with some catacleuse worked stone uncovered. It was nothing compared to the great examples the farmers son showed us behind the main farm mind. Looks to have been quite a substantial building at one time. He also gave some great pointers for my dissertation. Typically, my camera died on me but Andrew took a fair few snaps.

I'll be trekking out again this weekend weather permitting to take some snaps at the Chapel and then out to take some of the stone. Will trek out there around 12:30 as this looks to be the best time for the sun to enhance the key-pattern for a more effective 3D model.

James G has offered to loan me some clearance equipment which is fab so am now cracking on getting some dates for further clearance events.

Cheers!
Steve

From: "PRESTON-JONES, Ann" <Ann.PRESTON-JONES@english-heritage.org.uk>
To: 'Steve Northcott' <sten969@yahoo.com>
Sent: Monday, 19 November 2012, 20:38
Subject: RE: Clearing St Cadoc's Chapel and 1 other thing

Hi Steve,

Re tools - difficult! When LAN is operating on the Lizard, they use tools supplied by NE. CASPN has a collection of tools, but they are located in St Just in Penwith, so rather a long way away. On Bodmin Moor, we have help from BTCV (well we pay them £200 a day to help, in fact) and they come armed with plenty of tools and do a risk assessment. I have a small stash of my own tools: but not much and mainly hooks, no efficient saws or loppers, which I imagine is what you need. Perhaps you could ask CAS for a small grant? I suppose they might be willing on the condition that you invite CAS members along? So sorry, that's not really very helpful....

Good to hear you have Andrew coming out. I would still like to look at St Cadoc's but think I may need to go into the office on Friday morning.

All the best

Ann

Ann Preston-Jones  | Historic Environment Field Advisor
Direct line: 01872 277290
Mobile phone: 07889 808 161

English Heritage | 29 Queen Square
Bristol | BS1 4ND

www.english-heritage.org.uk
The Lost Chapel and Holy Well of St Cadoc

Please note: I normally work Tuesday, Wednesday and Thursday only, so may not respond immediately to emails and phone calls.

From: Steve Northcott [mailto:sten969@yahoo.com]
Sent: 19 November 2012 15:31
To: PRESTON-JONES, Ann
Subject: Clearing St Cadoc's Chapel and 1 other thing

Hi Ann

Hope all's well and things are rosy!

I was hoping to pick your brains on a couple of things that I forgot to mention at the conference on Saturday. First of all I was wondering if you knew of anywhere I might be able to borrow some clearance tools for St Cadocs Chapel. I have volunteers but not enough equipment. I did ask CAS but no joy there unfortunately. I'll be firing off a mail to James Gossip to see if he might have any ideas too.

Also, for info, I'm popping out to the Chapel with Andrew on Friday to get his take on it and also hopefully be visiting Rosemary at Trecurus to record the stone.

Cheers!
Steve

This e-mail (and any attachments) is confidential and may contain personal views which are not the views of English Heritage unless specifically stated. If you have received it in error, please delete it from your system and notify the sender immediately. Do not use, copy or disclose the information in any way nor act in reliance on it. Any information sent to English Heritage may become publicly available.

Portico: your gateway to information on sites in the National Heritage Collection; have a look and tell us what you think.
http://www.english-heritage.org.uk/professional/archives-and-collections/portico/

Old Cornwall Society Correspondence

From: J BUCKINGHAM <jebucki@btinternet.com>
To: Steve Northcott <sten969@yahoo.com>
Cc: DaphneHicks <dalhicks@hotmail.co.uk>
Sent: Tues, 12 March 2013, 19:18
Subject: Re: St Cadoc's Chapel - Clearance

Steve

Thanks for the comments re Grocer John's - glad someone remembers - must show you around sometime.

Would like to help you re St Cadoc's Well. OCS does not meet until 8th May but we could try to spread the word although a lot of our members are perhaps not up to jungle clearance duties.

My computer would not let me print your poster. Not sure why.
The Lost Chapel and Holy Well of St Cadoc

Regards

John

From: Steve Northcott <sten969@yahoo.com>
To: J BUCKINGHAM <jebucki@btinternet.com>
Sent: Tues, 12 March 2013, 11:36
Subject: St Cadoc’s Chapel - Clearance

Dear (Grocer) John,

That is rather a good sign you've put in place over the door. Tourists I've been serving in Buttermilk this Easter break (who have been coming to Padstow over the years) have been commenting on it.

I thought to give you a call in your position as OCS Padstow Chairman. I'm currently trying to round up some troops to assist with ground clearing at St Cadoc’s Chapel near Harlyn Bay (I’m using it as a subject for my archaeology dissertation). Do you think any members might be interested? Unfortunately it is rather short notice and I'm hoping to get out there over the next couple of weeks. The main object is to locate the Holy Well which has been lost (we have a rough idea of where it might be although the structure is likely to be sub-surface and may need excavating).

I've attached a poster which gives more info. Father Chris and the Rev. Brian Woodman (retired) from St Merryn have been sent copies as they originally got the ball rolling.

Hope you’re keeping well!

Steve

Padstow Enterprise Youth Group Correspondence

----- Original Message -----
The Lost Chapel and Holy Well of St Cadoc

- As a youth group do you have public liability insurance to cover yourself and your members? I've been advised it's not expensive if you haven't already.
- Do you have a first aider?

A visit to the site and basic risk assessment might be worth carrying out so safe-guarding guidelines can be put in place and a H&S plan put together. Induction for all starters on the project is probably a good idea with appropriate personal protective equipment made available. Goggles, gloves and sensible footwear come to mind in the first instance.

The site is quite hidden and very little is known about it (even though it is very close to Harlyn Bay). Perhaps a prep talk might be worth giving to the club about the significance of local heritage and why it's important to care for sites and impress upon them their valued community role and contribution? ....as well as safety aspects of unattended visits.

Would there be a better time during the week to ring/meet to discuss further?

Kind regards,

Steve

From: Trev1 <info@trev1.com>
To: Steve Northcott <sten969@yahoo.com>
Sent: Wednesday, 17 April 2013, 13:58
Subject: Re: Query - Trevone Iron Age Burial Ground

Hi Steve

Regarding the St Cadoc's chapel, we had a youth club meeting last night and I discussed it with the other leaders. We all agreed that this would be a fascinating project to be involved with and really would like to help to clear the area and see what is going on. Our only fears were:

1) What ages can you allow to help? Our members are 13 - 19. Do we need to be aware of any insurance or H&S restrictions?

2) Is this site visible and known to the public? In other words, if some of our young members found out about this site through working with us, I may worry about some of them returning on their own.

Finally, regarding the mapping. This sounds excellent, but we are not ready in the youth club yet to do any photography or computer work BUT, we are starting a new photography club at Trevone Village Hall on the 22nd May and I think that this would be more on interest to those people?

Perhaps we can have a chat sometime?

All the best

Rob

01841 521132
The Lost Chapel and Holy Well of St Cadoc

----- Original Message ----- 

From: Steve Northcott
To: info@trev1.com
Sent: Saturday, April 13, 2013 12:33 AM
Subject: Fw: Query - Trevone Iron Age Burial Ground

Hi Rob,

Many apologies for taking so long to get back to you regarding the burial ground at Trevone. I've finally discovered that the excavation wasn't undertaken by Exeter University but by the Exeter Archaeological Unit who sadly folded a couple of years ago (hence the delay). I'm trying to locate where the report might be (if it was indeed written) in the meantime.

Also, for info, the St Cadoc's Chapel work is coming along and there will be a clearance event over the next couple of weeks. Certainly, any help would be appreciated as there's quite a bit of work to do. The first phase though is to clear the area where the lost holy well is thought to be. I've attached a doc which gives more info on the site.

Kind regards,

Steve

----- Forwarded Message ----- 

From: Steve Northcott <sten969@yahoo.com> 
To: Trev1 <info@trev1.com> 
Sent: Monday, 4 February 2013, 14:32 
Subject: Re: Query - Trevone Iron Age Burial Ground

Hi Rob,

I've asked contacts at Exeter Uni and the Royal Cornwall Museum to see if they can find out some more on the Cemetery at Trevone.

The websites I often use for information such as the Heritage Gateway [http://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=MCO25837&resourceID=1020](http://www.heritagegateway.org.uk/Gateway/Results_Single.aspx?uid=MCO25837&resourceID=1020) and Archaeological Data Service [http://archaeologydataservice.ac.uk/archsearch/record.jsf?titleId=1094410](http://archaeologydataservice.ac.uk/archsearch/record.jsf?titleId=1094410) sites do mention it but are a bit limited with regards to providing further information.

Certainly, a trek to County Hall may reveal more, I'll be carrying out some finds processing there on Friday so will double check to see if they have something on file (it's all a bit up in the air there at the moment as they are moving office but hopefully they'll be able to tell me one way or the other).

Whilst waiting for the information to come back there are a few things that may be of interest!
The Lost Chapel and Holy Well of StCadoc

Something else that may be of interest is that the ruined chapel, that would have served Trevone up until the reformation, is currently undergoing clearance work in preparation for survey (and possibly later archaeological excavation). I’ve created a facebook page which gives a little more info here https://www.facebook.com/groups/514310128592932/

Any help with the clearance work would be very much appreciated!

Perhaps we could get together to chat further on what we’ve discussed so far?

Regards

Steve

From: Trev1 <info@trev1.com>
To: Steve Northcott <sten969@yahoo.com>
Sent: Thursday, 31 January 2013, 17:02
Subject: Re: Query - Trevone Iron Age Burial Ground

Hi Steve

Thanks very much for taking the time to reply.

The Trevone Youth Photography Club has sort of been absorbed into the new Padstow Enterprise Youth Club that I started in November last year. Some of the members are keen on photography. We have acquired some darkroom equipment and will be doing a project with that hopefully next month. We use the Forum next to the library and I have been upgrading the equipment, connecting to the internet and sorting the network out. We have a wallmounted projection screen so I hope to get a projector so that we can do more computer work

Your 3D images are incredible... that would definitely be a project that some of the members would be keen to explore I am sure.

Look forward to hearing any ideas and suggestions you may have!

All the best

Rob

01841 521132

----- Original Message -----
The Lost Chapel and Holy Well of St Cadoc

I’ve been asked to contact you by Jenny Beale regarding research information pertaining to the Iron Age burial ground at Trevone. I thought to check with you first to confirm whether it was the Trevone site you needed further information on or the burial ground at Harlyn Bay?

The reason I ask is that the Trevone site is more Romano-British, although a singular Iron Age burial was uncovered there when it was excavated in 1954. There is little (if anything) remaining now unfortunately and it is located on private land. Harlyn Bay on the other hand has a lot more information regarding the Iron Age burial ground located there and I have reports from the excavation carried out in the 1970’s as well as images of the finds.

If it is Trevone that you are after however I will find out what I can for you. Perhaps we could also take a trip to Cornwall Council’s Archaeology Unit at County Hall and see what they have there?

I note that the Trev1 website is the official site for the Trevone Youth Photography club. Perhaps you might like to have a think about using photo’s to create 3D imagery of the local heritage sites? I’ve been having a play with it myself recently and have had some ok results. Here’s my website if you’d like to have a look www.monumental3d.com.

Hopefully, I’ll catch up with you soon,

Kind regards

Steve Northcott

English Heritage Correspondence II – Tithe Maps & Apportionment
From: "PRESTON-JONES, Ann" <Ann.PRESTON-JONES@english-heritage.org.uk>
To: 'Steve Northcott' <step969@yahoo.com>
Cc: 'Andrew Langdon' <aglangdon@btinternet.com>
Sent: Wednesday, 17 April 2013, 16:54
Subject: FW: Emailing: TA maps and mill site not on TA.jpg, TA maps.jpg

Hi Steve,

Tithe maps of the St Cadix chapel site for you - Padstow and St Merryn. Padstow is dated 1840; sorry, I forgot to check St Merryn but it will be the same sort of date. The third attachment is the apportionment for Padstow. Let me know if you would like me to check the field names/nos for the St Merryn side of the river as well.

I noticed that a leat arising near the chapel site heads downstream towards the site of a mill which is no longer extant in 1880 but strangely is not shown on either Tithe map...I wonder why?

Thanks very much for helping on Sunday. I hope your pics were OK. Mine are great! We’re off out again to Clowance tonight and St Erth on Friday....Yummy fudge, thanks very much. I didn’t expect to but rather liked the sea salt one. I took the left-overs from one box into work and it
The Lost Chapel and Holy Well of St Cadoc

was very much appreciated! Just what you need on a Monday morning!

All the best

Ann

This e-mail (and any attachments) is confidential and may contain personal views which are not the views of English Heritage unless specifically stated. If you have received it in error, please delete it from your system and notify the sender immediately. Do not use, copy or disclose the information in any way nor act in reliance on it. Any information sent to English Heritage may become publicly available.
### APPENDIX V: Stone Recording Pro Forma

<table>
<thead>
<tr>
<th>Historic Environment Service</th>
<th>01 Site/Property name/Address</th>
<th>02 Project Number</th>
<th>03 Site Code</th>
<th>04 Planning Authority</th>
<th>05 Stone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cornwall County Council</td>
<td>St Cadoc's Farm, Hayle</td>
<td>2014.89</td>
<td>SC801</td>
<td>North Cornwall</td>
<td>SC8/081</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>06 Site Type</th>
<th>07 Statutory Designations</th>
<th>08 NGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapel</td>
<td>NONE</td>
<td>SU3826487493</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>09 Length (m)</th>
<th>10 Width (m)</th>
<th>11 Breadth (m)</th>
<th>12 Architectural origin (window/door/vault/fireplace etc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.42</td>
<td>0.32</td>
<td>0.29</td>
<td>Door</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13 Geology of stone</th>
<th>14 Finish of stone</th>
<th>15 Any mouldings?</th>
<th>16 Any marks (mason's/inscriptions etc)?</th>
<th>17 Any bonding material present? (describe)</th>
<th>18 Other comments/notes/interpretative comments</th>
<th>19 Sketch (continue overleaf if necessary) Include any mason's marks/other marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Càte/Cause stone/Quartz Portland</td>
<td>Rough - Grooved</td>
<td>Possible mouldings</td>
<td>Corrugated - Difficult to determine</td>
<td>Not seen</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

![Sketch of stone](Sketch.png)
The Lost Chapel and Holy Well of St Cadoc

### Historic Environment Service
**Cornwall County Council**

### Historic Building Analysis: stone recording form

<table>
<thead>
<tr>
<th>01 Site/Property name/Address</th>
<th>Stone Recording Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>St Cadoc from Harrow Bay</td>
<td>SC502</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>02 Project Number</th>
<th>03 Site Code</th>
<th>04 Planning Authority</th>
<th>05 Stone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 89</td>
<td>SC031</td>
<td>North Cornwall</td>
<td>SC3/002</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>06 Site Type</th>
<th>07 Statutory Designations</th>
<th>08 NGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapel (Rural)</td>
<td>None</td>
<td>SS58848 7493</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>09 Length (m)</th>
<th>10 Width (m)</th>
<th>11 Breadth (m)</th>
<th>12 Architectural origin (window/door/vault/fireplace etc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.44</td>
<td>0.39</td>
<td>0.32</td>
<td>Column</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13 Geology of Stone</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANTREUSE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14 Finish of Stone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rough</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15 Any mouldings?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes - Architectural reveal specialist</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16 Any marks (mason's/inscriptions etc)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>None seen</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17 Any bonding material present? (describe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18 Other comments/notes/interpretative comments</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>19 Sketch (continue overleaf if necessary) Include any mason's marks/other marks</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Sketch" /></td>
</tr>
</tbody>
</table>

51
Wednesday, 22 May 2013
APPENDIX VI: Apportionment for St Cadoc 1840

<table>
<thead>
<tr>
<th>LANDOWNERS.</th>
<th>OCCUPIERS.</th>
<th>No. referring to the Plan.</th>
<th>Name and Description of Lands and Premises.</th>
<th>State of Cultivation.</th>
<th>Quantities in Statute Measure.</th>
<th>Amount (less Charge apportioned up to the several lands, not being payable).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Allport,..........</td>
<td>William Giles,..........</td>
<td>973</td>
<td>Warren, Pasture</td>
<td></td>
<td>1 0 18</td>
<td>£11 13 0 £18 5 9</td>
</tr>
<tr>
<td>Robert Avery,...........</td>
<td>Himself and others,........</td>
<td>929</td>
<td>Waste,</td>
<td></td>
<td>1 1 1</td>
<td></td>
</tr>
<tr>
<td>Charles Prichard, Esq.</td>
<td>John Whitfield,</td>
<td>940</td>
<td>Houses, Gardens, and Yards,</td>
<td></td>
<td>2 27</td>
<td>20 3 9</td>
</tr>
<tr>
<td>ST. CADOC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Warren,</td>
<td>Pasture</td>
<td>1 0 18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1x</td>
<td>Part of Warren,</td>
<td>Pasture</td>
<td>1 1 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Cliff Park,</td>
<td>Arable &amp; Pasture</td>
<td>26 0 10</td>
<td>1 19 0</td>
<td>1 1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Lower Field,</td>
<td>Arable</td>
<td>1 2 11</td>
<td>2 3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Cliff Park Moor,</td>
<td>Arable &amp; coarse Pasture</td>
<td>1 2 11</td>
<td>2 3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4a</td>
<td>Occupation Road,</td>
<td>Arable</td>
<td>3 36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Parcells Close,</td>
<td>Arable</td>
<td>2 0 29</td>
<td>3 9</td>
<td>7 10</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Moor Parcells,</td>
<td>Meadow</td>
<td>1 2 21</td>
<td>6 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Hilly Park,</td>
<td>Arable</td>
<td>1 2 11</td>
<td>2 3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Great North Park,</td>
<td>Arable</td>
<td>15 0 21</td>
<td>1 3</td>
<td>2 12 3</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Common Park,</td>
<td>Arable</td>
<td>7 2 22</td>
<td>13 6</td>
<td>1 13 3</td>
<td></td>
</tr>
<tr>
<td>9a</td>
<td>Occupation Moor,</td>
<td>Arable</td>
<td>2 1 24</td>
<td>12 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9b</td>
<td>Occupation Moor,</td>
<td>Arable</td>
<td>4 3 12</td>
<td>6 9</td>
<td>16 9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Long Moor,</td>
<td>Meadow</td>
<td>1 2 21</td>
<td>6 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Higher Field,</td>
<td>Arable</td>
<td>12 1 4</td>
<td>17 6</td>
<td>2 3 0</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Higher Field,</td>
<td>Arable</td>
<td>1 2 21</td>
<td>6 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Higher Moor,</td>
<td>Meadow</td>
<td>1 2 21</td>
<td>6 9</td>
<td>1 10</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Great New Park,</td>
<td>Arable</td>
<td>15 2 25</td>
<td>15 9</td>
<td>1 19 0</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Waste,</td>
<td>Pasture &amp; Waste,</td>
<td>2 2 24</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Little New Park,</td>
<td>Arable</td>
<td>3 2 26</td>
<td>5 5</td>
<td>13 3</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Green Close,</td>
<td>Arable &amp; Meadow</td>
<td>7 2 1</td>
<td>11 6</td>
<td>18 9</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Four Close,</td>
<td>Arable</td>
<td>7 2 1</td>
<td>11 6</td>
<td>18 9</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Meadow,</td>
<td>Arable</td>
<td>2 7</td>
<td>1 4</td>
<td>2 6</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Town-place, Mowhay, &amp;c.</td>
<td>Orchard,</td>
<td>2 7</td>
<td>1 4</td>
<td>2 6</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Orchard,</td>
<td>Orchard</td>
<td>1 1 16</td>
<td>2 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Orchard,</td>
<td>Orchard</td>
<td>1 1 16</td>
<td>2 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Orchard,</td>
<td>Orchard</td>
<td>1 1 16</td>
<td>2 0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Orchard,</td>
<td>Meadow</td>
<td>7 2 1</td>
<td>11 6</td>
<td>18 9</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Orchard,</td>
<td>Meadow</td>
<td>7 2 1</td>
<td>11 6</td>
<td>18 9</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Orchard,</td>
<td>Pasture</td>
<td>2 3 19</td>
<td>1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ST. CADOC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15a</td>
<td>Part of Meadow,</td>
<td>Arable</td>
<td>3 1 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16a</td>
<td>Garden,</td>
<td>Meadow</td>
<td>3 1 7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Part of Meadow,</td>
<td>Arable</td>
<td>3 1 7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Figure 37 Apportionment information (Preston-Jones, 2013)
APPENDIX VII: HER for St Cadoc's Chapel and Wider Locale

Figure 38 HER Record for St Cadoc's (Powning, 2013)
APPENDIX VIII: Google SketchUp Plan of the Chapel site.

The Lost Chapel and Holy Well of St Cadoc

Legend

W- Wall under study
HW - Potential holy well site
S - Site of loose dressed stone
A - Architectural feature
B - Packhorse bridge
EC - Possible earlier chapel site
APPENDIX IX: Conjectural Sketches by Martyn Jope, 1937.
APPENDIX X: Baseline Offset results – Wall 1
## APPENDIX XI: Risk Assessment

### TRURO AND PENWITH COLLEGE
**RISK ASSESSMENT – MINOR WORKS**

<table>
<thead>
<tr>
<th>Description of risk</th>
<th>Likelihood (/6)</th>
<th>Severity (/6)</th>
<th>Risk Rating (/36)</th>
<th>Control Measures</th>
<th>Action</th>
<th>Revised Risk Rating (/36) RL x RS = RRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>3</td>
<td>4</td>
<td>12</td>
<td>High vis set route ways for access through farmyard, engender awareness, speed restrictions</td>
<td>Wear high vis and use set route ways at all times, park in designated farmyard parking area, keep to speed limits of 5mph as advised</td>
<td>1x3=3</td>
</tr>
<tr>
<td>Slips and trips</td>
<td>5</td>
<td>4</td>
<td>20</td>
<td>Tidy site, Steel Toe boots, awareness, marking</td>
<td>Keep tools off walkways, minimize use of tapes and string, keep away from edges of excavation.</td>
<td>3x2=6</td>
</tr>
<tr>
<td>Weil’s Disease</td>
<td>2</td>
<td>6</td>
<td>12</td>
<td>Soap, gloves, awareness</td>
<td>Wash hands before eating/drinking. Gloves in high risk areas. Report to doctor if any flu like symptoms appear on site or immediately afterwards.</td>
<td>1x6=6</td>
</tr>
<tr>
<td>Exposure</td>
<td>4</td>
<td>3</td>
<td>12</td>
<td>Breaks, appropriate protection and remedies, awareness</td>
<td>Wear appropriate clothing. Regular breaks out of hot/cold as appropriate. Hot/cold drinks as appropriate. Use of sun-block.</td>
<td>3x2=6</td>
</tr>
<tr>
<td>Manual handling</td>
<td>4</td>
<td>4</td>
<td>16</td>
<td>Training, help, PPE</td>
<td>Adopt correct methods, avoid turning with loads, assess loads/tasks and seek assistance as required. Wear high vis steel toe cap/midsole boots and hard hat at all times. Regular breaks.</td>
<td>3x2=6</td>
</tr>
</tbody>
</table>

Truro and Penwith College  
Tel: 01872 267000  
E-mail: enquiry@truro-penwith.ac.uk

---

57  
Wednesday, 22 May 2013
<table>
<thead>
<tr>
<th>Event Description</th>
<th>2</th>
<th>4</th>
<th>4</th>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls from height</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>Awareness. PPE, access restrictions, built appropriately.</td>
<td>1x3=3</td>
</tr>
<tr>
<td>Sand/dust in eye</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>Awareness. PPE. Positioning</td>
<td>1x2=2</td>
</tr>
<tr>
<td>Lyme disease resulting from tick bites</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>Awareness. PPE.</td>
<td>1x6=6</td>
</tr>
<tr>
<td>Abrasion from brambles and thorns</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>Awareness. PPE.</td>
<td>1x2=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Restricted access to designated staff. Batter edges of spoil heaps at 45 degrees</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Face downwind for working where possible. Consider wind direction when throwing spoil. Wear goggles if necessary.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Appropriate footwear and clothing to be worn to minimize risk of contact.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>First aid kit to be carried. Appropriate clothing and PPE to be worn.</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX XII: Health and Safety Policy

The organiser recognises his responsibilities for the Health and Safety (HS) of volunteers and others who may be affected by field activities.

It is recognised that all work should be undertaken in accordance with current Health and Safety legislation. Attention is therefore drawn to the Health and Safety Executive’s publication Successful Health and Safety Management HS(G)65, which points out the need for all employers, to have in place an effective Health and Safety policy.

Any complaint will be treated regarding non-fulfilment of Health and Safety obligations as a potential breach of contract, and will act accordingly.

Although the majority of the clearance work will be carried by volunteers they may be called upon to assist in additional field work as required.

A HS assessment has been made for field environment work and its recommendations will be implemented as appropriate. This assessment will be updated as appropriate and augmented with site specific assessments as necessary. Specific written risk assessments will be undertaken for each fieldwork project.

The implementation of the recommendations of the HS assessment will be adhered to at all times to ensure appropriate standards of HS and welfare.

It is the responsibility of all volunteers to advise management of inadequacies and breaches of HS as well as the reporting of all accidents. Such advice must be reported to the event organiser, who will be the designated HS Officer, or other designated officer in their absence to enable suitable investigation and recording"
APPENDIX XIII: Site Management Recording Form

CAS AREA REPRESENTATIVES

SCHEDULED MONUMENT MONITORING FORM

Site number:
Site name:
Parish:
Current management
Eg: Pasture (sheep, cattle, ponies, or silage/hay?), arable (crop if known), heathland, roadside verge, well managed churchyard, coastal rough ground, woodland etc

Any problems
Eg stock erosion, footpath erosion, overgrown, hidden under scrub,
### Condition

<table>
<thead>
<tr>
<th></th>
<th>Optimal (very good)</th>
<th>Satisfactory with minor localised problems (good)</th>
<th>Satisfactory with major localised problems (fair)</th>
<th>Unsatisfactory with major localised problems (Poor)</th>
<th>Extensive significant problems (very poor)</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Condition Trend

<table>
<thead>
<tr>
<th></th>
<th>A - Improving</th>
<th>B - Declining</th>
<th>C - Stable</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Vulnerability

<table>
<thead>
<tr>
<th>Agriculture</th>
<th>Arable ploughing</th>
<th>Arable clipping</th>
<th>Drainage/dewatering</th>
<th>Stock Erosion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Localised</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extensive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural processes</th>
<th>Animal Burrowing</th>
<th>Coastal Erosion</th>
<th>Collapse</th>
<th>Flooding</th>
<th>Localised Natural Erosion</th>
<th>Moderate Natural Erosion</th>
<th>Plant Growth</th>
<th>Rain Entry</th>
<th>Fat</th>
<th>Scrub/Tree growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Localised</td>
<td>Moderate</td>
<td>Extensive</td>
<td></td>
<td>Localised Natural Erosion</td>
<td>Moderate Natural Erosion</td>
<td>Plant Growth</td>
<td>Rain Entry</td>
<td>Fat</td>
<td>Scrub/Tree growth</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Development</th>
<th>Permitted development</th>
<th>Public Utilities</th>
<th>Road Construction</th>
<th>Roadworks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td>Permitted development</td>
<td>Public Utilities</td>
<td>Road Construction</td>
<td>Roadworks</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Forestry</th>
<th>Mineral extraction</th>
<th>Subsidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forestry</td>
<td>Mineral extraction</td>
<td>Subsidence</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>Digging</th>
<th>Dumping/Fly Tipping</th>
<th>Neglect</th>
<th>Gardening</th>
<th>Levelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitor Erosion</td>
<td>Localised</td>
<td>Moderate</td>
<td>Extensive</td>
<td>Localised</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Vandalism | Vehicle Damage/Erosion

<table>
<thead>
<tr>
<th>Vandalism</th>
<th>Vehicle Damage/Erosion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localised</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Signed  
Date of visit

Wednesday, 22 May 2013
St Cadoc’s Chapel Volunteer Feedback Form

We would very much like your help in assessing your experience of the first phase of the clearance and recording program recently undertaken at St Cadoc’s. Your hard work was very much valued.

We would be very grateful if you could complete this feedback form for the activities you attended. The more detail you can provide the more useful it will be for forward planning, but don’t worry if you can’t complete every section fully - all information will be welcome.

1. How Many Days did you spend volunteering? __

2. Before getting involved with the work at St Cadoc’s had you previously undertaken any volunteer work?
   YES/NO

3. If yes, was it with another heritage based or cultural organisation?
   YES/NO

4. Had you previously received training that aided with the activities on site?
   YES/NO

5. Would you say that you have improved your skills or knowledge in any of the below through your work on site. Please tick all that apply.
   Desk based assessments __
   Digital photography & recording techniques __
   Sherd identification __
   Other, Please describe below
6. One a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree please tell us what effect volunteering at St Cadoc’s had on the following aspects of your life.

   My communication skills
   My ability to work as part of a team
   My ability to make decisions
   My willingness to try new things

7. Do you think volunteering at St Cadoc’s will be useful for you in the Future?
   YES/NO

8. One a scale of 1 to 5 where 1 is strongly agree and 5 is strongly disagree please tell us whether you agree or disagree with the following statements: “My volunteering at St Cadoc’s has....”

   Increased my enjoyment of the historic environment
   Made no difference to my knowledge about the heritage of my local area
   Enabled me to meet like minded people
   Helped me to make useful contacts
   Increased my sense of making a useful contribution
ABOUT YOU

9. Are you....? Male/Female

10. What age group do you belong to?
   15-19  20-24  25-34  45-54  55-64  65+

11. To which ethnic group do you belong to?
   Asian  Black-African  Black-Caribbean  Chinese  White
   Mixed  Other

12. Do you have a long-term illness, health problem or disability which limits daily activities or work?

   YES/NO

13. What is your post code?__________________
APPENDIX XV: IfA Standards and Guidance

INSTITUTE FOR ARCHAEOLOGISTS

POLICY STATEMENTS

The Institute for Archaeologists is a trading name of the Institute of Field Archaeologists, a company limited by guarantee. It is registered in England, no 1918782. The address of the Registered Office is:

SHES
University of Reading
Whiteknights
PO Box 227
Reading
RG6 6AB

Contents

Equal opportunities in archaeology 2
Health and safety 2
The use of volunteers and students on archaeological projects 2
- Introduction 2
- Glossary of terms 2
- Guidelines 3
Environmental protection 3
- Introduction 3
- Model policy for organisations and individuals 3
The Lost Chapel and Holy Well of St Cadoc

POLICY STATEMENT

EQUAL OPPORTUNITIES IN ARCHAEOLOGY

Equal opportunities is an issue integral to every aspect of archaeological work. It is an aspect of human resource management concerned with the provision of equal access in staff recruitment, selection, training, promotion and retention, and equal opportunity for a positive work experience and environment. While structural inequalities are not specific to archaeological practice, the Institute for Archaeologists takes responsibility for formulating policy on archaeological standards, and thus equity issues are implicit in its Code of conduct.

1.1 The Institute for Archaeologists is committed to a policy of equal opportunities in archaeology, and its implementation through a programme of positive action.

1.2 This policy aims to heighten awareness of equity issues amongst the membership of the Institute, and to encourage employers to adopt guidelines ensuring that no job applicant or employee receives less favourable treatment or access to opportunities for training and development on the grounds of age, gender, marital status, disability, race, religious belief, ethnic or national origins, sexual orientation, or any other grounds not relevant to employment practice.

1.3 The Institute will observe this policy in relation to its own employees, and will consider the policy applicable to its membership. According to the Institute’s Code of conduct, all members must practice ethical and responsible behaviour in archaeological affairs (Principle 1), and in dealing with employees and colleagues (Principle 5). Appropriate professional conduct includes refraining from racial and sexual discrimination and harassment. Such behaviour may lead to allegations of improper conduct requiring an investigation conducted in accordance with the provisions of the Institute’s Disciplinary regulations.

1.4 The Institute is committed to equality of opportunity for representation on its committees, working parties and Council, and in the validation process leading to membership.

1.5 Henceforth, the Institute will observe a policy of non-sexist and non-discriminatory language in its by-laws, administration, publications, presentations and annual conference.

1.6 Though its Equal opportunities and Career development and training committees, the Institute is committed to a programme of positive action to make this policy fully effective.

POLICY STATEMENT

HEALTH AND SAFETY

The Institute for Archaeologists recognises its individual members’ responsibilities as regards Health and Safety. This is reinforced in the note on Rule 5.2 of the Code of conduct, as ratified and adopted as a by-law by Annual General Meeting in 1985. Responsibilities are further defined in individual Standard and guidance documents.

It is recognised that all archaeological work should be undertaken in accordance with current Health and Safety legislation. The IFA accepts that both employing/organising bodies and individual employees/workers have a duty of care to those working for them, to each other, and to the general public. Archaeologists’ attention is therefore drawn to the Health and Safety Executive’s publication Successful Health and Safety Management HS(G)68, which points out the need for all employers, regardless of the size of the organisation, to have in place an effective Health and Safety policy.

The IFA will treat any complaint against a member regarding non-fulfilment of Health and Safety obligations as a breach of the Code of conduct, and will act accordingly.

POLICY STATEMENT

THE USE OF VOLUNTEERS AND STUDENTS ON ARCHAEOLOGICAL PROJECTS

1 INTRODUCTION

1.1 In the face of differing opinions on the role of volunteers and students in professional archaeology, IFA wishes to offer guidance to ensure that opportunities exist for public involvement in archaeology while at the same time promoting the highest standards of ethical and responsible behaviour.

1.2 Through its Code of conduct and published standards, IFA insists that inter alia archaeologists shall only undertake work for which they are adequately qualified (Rule 1.4); shall comply with all applicable laws (Rule 1.6); shall have due regard for terms of employment and career development (Rule 5.6); and have a duty, not only to observe the code but to encourage others to do likewise (Rule 1.12).

1.3 At the 1986 Annual General Meeting a resolution was passed which regarded the system of ‘paid volunteers’, under which full-time archaeologists were employed without reasonable pay and in disregard of their individual statutory rights, as unethical and contrary to IFA’s professed professional standards.

1.4 IFA acknowledges the continuing, invaluable contribution made to archaeology by volunteers and recognises the necessity for students to gain experience in field techniques. Furthermore, it believes that the following guidelines offer a framework for the involvement of such individuals in such a way as to avoid misunderstanding and accusation of unfair practice.

2 GLOSSARY OF TERMS

2.1 Volunteer

someone who by agreement does not receive either a wage or salary.

2.2 Student

someone who is pursuing an organised course of tuition in archaeology.

2.3 Employee

an individual who works under contract (implied, oral or written) with an employer, and who normally receives proper remuneration for work done.

2.4 Professional

pertaining to the standards of work promulgated by IFA and confirmed through its validation procedures.

2.5 Personal research

investigations which do not normally result from the requirements of a development control authority. Such research may be sponsored or grant-aided.

2.6 Development-led projects

work which is a direct consequence of planned landuse change, such work may be in compliance with government guidance (eg Environmental Impact Assessment, Planning Policy Guidance 16 etc) or may be required by a controlling authority.
The Lost Chapel and Holy Well of St Cadoc

2.7 Commercial work work undertaken as part of the business of a client or contractor and for which payment is usually axiomatic.

3 GUIDELINES

3.1 IFA wishes to encourage the participation of as many people as possible in archaeology and recognises the need to give students practical experience in fieldwork. However, this cannot be done at the expense of professional standards or risk to the limited archaeological resource.

3.2 When landuse change (for example development, road construction, forestry, public utility services etc) is proposed, any requirement by a statutory advisor or authority for archaeological response, in which suitably qualified and experienced employees will be used, is appropriate for development-led projects.

3.4 It is normally inappropriate for organisations to bid for contracts to carry out the excavation that they will use staff who will not be paid a proper wage or be appropriately contacted.

3.5 Employers will not use volunteers and students in place of employed staff when funding is agreed for the latter, as this would be tantamount to exploitation.

3.6 There may be occasions when timescales are more relaxed and the required professional standard of work can be achieved outside normal commercial pressures. Subject to agreement by the site owner, developer and curator, such situations may provide suitable opportunities for the participation of volunteers or for the training of students. Similarly, there may be opportunities for such participation or training aspects of a site’s archaeology which are outside the scope of the controlling authority’s requirements, but which could enhance the overall results of the project.

3.7 So as to avoid misunderstandings, IFA recommends that on every occasion on which volunteers or students are to be used, and especially when competitive tenders are sought for a commercial contract, the full extent of their activities in respect of the services offered must be declared and included in the submitted written project proposals. The implications (for example financial, timetable, insurance, competence etc) must be full explained so that both the site and curator can satisfy themselves that requirements can be discharged satisfactorily.

3.8 Personal research should also be conducted to the highest standards and in accordance with published IFA standards. With prior agreement of the sponsors or grant-aiding agency, it may offer opportunities for voluntary or student participation.

3.9 All archaeological work, especially where there is the likelihood that the resources will be eroded, must be adequately supervised to ensure that professional standards are met whatever the funding arrangements.

3.10 It will be the responsibility of the relevant curators to monitor and control archaeological work to ensure that professional standards are attained, and of the IFA to investigate alleged cases of breaches of the Code of conduct.

3.11 Organisations working with voluntary and student participants are encouraged to develop suitable policies with due regard to IFA’s Code of conduct and 1986 resolution, to recognise the positive contribution made by them, to offer reassurance that their efforts form an integrated component of the organisation’s overall activities and goals, and to clarify working arrangements.

3.12 No archaeologist will denigrate valuable contributions made by volunteers and students.

POLICY STATEMENT

ENVIRONMENTAL PROTECTION

1 Introduction

1.1 The archaeologist has a responsibility for the protection of the archaeological heritage (Code of conduct, principle 2). Our environment has been shaped over millennia by human activity, and the Institute for Archaeologists recognises that its members’ professional responsibilities to the built heritage extend to the ‘natural’ environment.

1.2 The archaeologist shall adhere to the highest standards of responsible and ethical behaviour in the conduct of archaeological affairs (Code of conduct, principle 1). Archaeological activities have the potential to affect the environment, and the IFA recognises its members’ ethical responsibilities to care for the environment.

1.3 All archaeological work should be undertaken in accordance with current environmental protection legislation.

1.4 This policy aims to heighten awareness of environmental protection issues amongst the membership of the Institute, and to encourage archaeological organisations and individuals to adopt and implement environmental protection policies. A model policy is appended for the use of IFA members: the IFA does not

1.5 require its members or registered organisations to use this form of words

1.6 The Institute will observe this policy in relation to its own activities.

1.7 The IFA will treat any complaint against a member of non-compliance of environmental protection obligations as an allegation of a breach of the Code of conduct, and will act in accordance with the provisions of the Institute’s Disciplinary regulations.

2 Model policy for organisations and individuals

- Conscientious protection of people and the environment is an integral part of this Company’s working practice.
- It is this Company’s intention that all work be carried out in accordance with the relevant statutory provisions and that all reasonably practicable measures will be taken to avoid and/or ameliorate potential damage or nuisance to people and impact on the environment.
- Avoidance of nuisance or damage is the first objective. Where this is not practicable, the second objective is to ameliorate the impact by appropriate methods.
- This organisation’s management and supervisory staff are responsible for implementing environmental policy throughout the Company, and must ensure that, subject to requirements of Health and Safety, environmental protection has a high priority in planning and day-to-day supervision of work.
- All employees, sub-contractors and visitors are expected to cooperate with the Company in carrying out this Policy, and
The Lost Chapel and Holy Well of St Cadoc

INSTITUTE FOR ARCHAEOLOGISTS

- ensuring their own work, in so far as is reasonably practicable, is undertaken without risk or nuisance to themselves or others, or to the wider environment.

- X has particular responsibility for environmental matters, and reference should be made to that person in the event of any difficulty arising in the implementation of this Policy. Appropriate external advice will be sought where necessary.

- The operation of this Policy will be monitored by the management and staff of the Company at all permanent and temporary workplaces.

- This statement of Company Policy will be displayed prominently at all sites and work places and all staff will be issued with a copy.

Signed .................................................................

Dated .................................................................

Position .............................................................
STANDARD AND GUIDANCE

for historic environment desk-based assessment

The standard and guidance for archaeological desk-based assessment was formally adopted as IfA approved practice at the Annual General Meeting of the Institute held on 14 October 1994. This revision reflects changes in planning policy in England published in March 2010 for the investigation and management of archaeology and the historic environment generally. The current Standard and guidance was formally adopted as a working draft at the Annual General Meeting of the Institute on 08 October 2012.

Published October 1994
Revised September 2001
Revised April 2009
Revised November 2011
Revised November 2012

Contents

INTRODUCTION

STANDARD

The Standard

Definition of desk-based assessment

Purpose and context

GUIDANCE

1 Application

2 Principles: the Code of conduct and other by-laws of the IFA

3 Procedures

3.1 Project identification

3.2 Briefs/project outlines, specifications and project designs

3.3 Sources and data collection

3.4 Assessment of significance

3.5 Reports

3.6 Monitoring

3.7 Other considerations

Annex 1 Sources of information

Annex 2 Report contents

Annex 3 Recommendations for digital archives

Acknowledgements
STANDARD AND GUIDANCE

for historic environment desk-based assessment

INTRODUCTION

This guidance seeks to define good practice for the execution and reporting of desk-based assessment, in line with the by-laws of the IFA; in particular the Code of conduct and Code of approved practice for the regulation of contractual arrangements in archaeology. It seeks to expand and explain general definitions in the Codes.

The key section of this document is the Standard. It is only a few lines long, and deliberately lacks detail. In part this is because it is impossible to foresee every circumstance and prescribe for each an investigative method. Nor does the Institute seek to dictate to its members in detail the means by which projects are conducted, but to outline procedures by which outcomes or products can be attained and against which performance can be monitored. The historic environment expert is left free to make a considered selection of appropriate established techniques and to develop new methods.

If the project has failed to determine the nature, extent and significance of the historic environment within a specified area because of the way in which it was conducted, the Standard has not been met. It is a ‘sub-standard’ project. The caveat is as far as is reasonably possible, because there may be good reasons why a well-conducted assessment stood no chance of success.

Defining ‘reasonably possible’ relies on shared professional judgement and values. This is where the Guidance section comes in. It is not binding per se, but advises on what the profession presently considers good practice. Departures from the guidance should be undertaken with caution, and it is advisable to document the reasons.

So the Standard defines a required outcome and the guidance advises in broad terms how the profession currently anticipates that the end product will be reached. This document contains more detailed guidance on the legal, policy and practice requirements of the United Kingdom, Channel Islands and Isle of Man, and complements government or practitioner guidance; but it applies to IFA members’ work universally and would benefit from additional sections from those able to draft them. Professional practitioners are likely to produce their own yet more detailed handbooks and procedures documents on how they interpret and implement the IFA guidance.

The Standard and guidance has many potential applications, but is principally used by

- those involved in commissioning archaeological work, be they developers and their agents, planning archaeologists, or archaeologists designing their independent research, to define the quality required
- those undertaking the work, to assist in their own quality management and to show clients and peers that they are attaining a certain quality

The Standard and guidance applies equally to paid or unpaid archaeologists. For IFA members and Registered Organisations compliance with the Standard is an obligation of membership/Registration: failure to meet the standard may be judged to be in conflict with the bylaws through the Institute’s disciplinary or complaints procedures.

Professional practice is changing. New methods are being developed, and the circumstances in which archaeological work is commissioned and conducted are subject to changing legal, administrative and ideological perspectives. Comments and recommendations on this document are welcome at any time.
STANDARD

Desk-based assessment will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. Desk-based assessment will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of conduct, Code of approved practice for the regulation of contractual arrangements in field archaeology, and other relevant by-laws of the IfA. In a development context desk-based assessment will establish the impact of the proposed development on the significance of the historic environment (or will identify the need for further evaluation to do so), and will enable reasoned proposals and decisions to be made whether to mitigate, offset or accept without further intervention that impact.

GUIDANCE

Definition

Desk-based assessment is a programme of study of the historic environment within a specified area or site on land, the inter-tidal zone or underwater that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets and, in England, the nature, extent and quality of the known or potential archaeological, historic, architectural and artistic interest. Significance is to be judged in a local, regional, national or international context as appropriate.

Purpose and context

The purpose of a desk-based assessment is to gain an understanding of the historic environment resource in order to formulate as required

1. an assessment of the potential for heritage assets to survive within the area of study
2. an assessment of the significance of the known or predicted heritage assets considering, in England, their archaeological, historic, architectural and artistic interests
3. strategies for further evaluation whether or not intrusive, where the nature, extent or significance of the resource is not sufficiently well defined
4. an assessment of the impact of proposed development or other land use changes on the significance of the heritage assets and their settings
5. strategies to conserve the significance of heritage assets, and their settings
6. design strategies to ensure new development makes a positive contribution to the character and local distinctiveness of the historic environment and local place-shaping
7. proposals for further archaeological investigation within a programme of research, whether undertaken in response to a threat or not.

Such assessment may be undertaken
The Lost Chapel and Holy Well of St Cadoc

1 Application

1.1 The guidance applies to all types of non-intrusive assessment of the historic environment (above or below ground, inter-tidal and underwater) however generated.

1.2 This document provides more detailed guidance on working in the legislative and practice framework of the UK, Channel Island and Isle of Man, and seeks to amplify directions given in appropriate national planning policy (see Appendix 6), and be compatible with current guidelines issued by regulatory authorities. IFA members and Registered Organisations must comply with the Standard and should follow the guidance wherever they work: they are additionally responsible for making sure that they are aware of and comply with local requirements.

1.3 The terminology used primarily follows PPS5: Planning for the Historic Environment, and its supporting practice guide (PPS5 Planning for the Historic Environment: Historic Environment Planning Practice Guide) in England, with amplifications where necessary. It also seeks to take account of differences in terminology, legal and administrative practice in different parts of the United Kingdom, Channel Islands and Isle of Man. A glossary of terms used can be found in Appendix 1.

2 Principles: the Code of conduct and other by-laws of the IFA

2.1 An archaeologist undertaking desk-based assessment must adhere to the five principles enshrined in the IFA’s Code of conduct and the rules governing these principles, see http://www.archaeologists.net/codes/if).

2.2 The Code of approved practice for the regulation of contractual arrangements in archaeology specifically addresses professional conduct in situations where work is sponsored or commissioned on a contractual basis, especially as part of development controlled by the planning process. It provides guidance on professional behaviour where more than one individual or body is competing for the same work, and seeks to ensure that the terms for all work are clearly defined, normally by contract.

3 Procedures

3.1 Project initiation

3.1.1 The historic environment varies greatly from place to place, and its survival or form is often due to very localised conditions. Consequently it is good practice to consult historic environment information
and regional research agenda at the outset of any new study in order to establish appropriate investigation criteria.

3.1.2 In the United Kingdom, Channel Islands and Isle of Man the conservation of the historic environment is a material consideration in the planning process.

3.1.3 Within the planning framework the local historic environment record and the local authority’s historic environment advisers should be consulted to determine whether further information is required. In Northern Ireland developers are advised to undertake their own appraisals prior to submission of a planning application (PPS 6 para 3.12).

3.1.4 Certain developments fall within special regulations or statute differing from or additional to the standard planning process (eg some projects initiated by public utilities, statutory undertakers, Crown Commissioners, Ministry of Defence etc). Desk-based assessment undertaken for such developments should aim to follow the procedures set out above.

3.1.5 Environmental Impact Assessment (EIA) applies to proposed projects that are considered to have significant environmental effects (as defined in EC Directive 85/337), and requires a systematic analysis of such effects before a decision to permit or prevent the project is taken. Applicants are required to provide information for the decision-making process, and further give bodies with relevant environmental responsibilities an opportunity to set the scope of the required impact assessment and to comment on its conclusions before consent is given. EIA is mandatory in relation to certain projects and may be extended to others. Appraisal and desk-based assessment are integral elements of EIA. Non-intrusive and intrusive fieldwork may also be required. Careful consideration should be given to the overlap with landscape and visual assessments, and with the assessment of the setting of historic environment assets whether designated or not. See Appendix 1 for definitions and IIA Standard and guidance for field evaluation.

3.1.6 It is imperative that the scope, aims and methodology of desk-based assessment be discussed with the local authority’s historic environment adviser prior to the commencement of the EIA, and tailored to the specific needs of the site or development.

3.1.7 Where EIA does not apply, consultation with the local authority’s historic environment advisers in advance of research to seek to agree the aims and methodology will ensure that unnecessary work is avoided and that the results are useful and properly able to inform the planning process. Confidentiality issues should be accommodated by all parties involved.

3.2 Briefs/project outlines, specifications and project designs

3.2.1 Desk-based assessment should be carried out according to a written specification or to a project design agreed by all relevant parties, so that performance and fitness for purpose can be measured.

3.2.2 A brief (or project outline in Scotland) is an outline of the circumstances to be addressed. It does not provide sufficient detail to be a measurable standard but it could form the basis for a specification or a project design which sets out a schedule of work in sufficient detail for it to be quantifiable, implemented and monitored, ie a measurable standard. A project design may also include additional information which covers contractual details such as staffing levels or cost relevant to the commissioning but not necessarily the monitoring body. A project design may be prepared in response to a brief/project outline or it may be a research proposal independent of the planning framework (see Appendix 2, English Heritage 2006, Appendix 2, Historic Scotland 1996b, 7).

3.2.3 Any archaeologist undertaking desk-based assessment should use all appropriate sources and expertise. In the case of projects affecting complex or multi-faceted heritage assets special
consideration should be given to the role of the archaeologist in either leading or contributing to a historic environment team also including other experts in built heritage or historic landscape. The archaeologist should seek to contribute to inter-disciplinary assessment and should not ignore or downplay the significance of other historic, architectural or artistic interests of the heritage asset.

3.2.4 For desk-based assessment within the planning framework, a brief/project outline will usually be prepared by the planning archaeologist or curator and issued by the commissioning body or their agents. The brief/project outline or a specification may be prepared by the commissioning body or their agents, but should be agreed in advance with the planning archaeologist.

3.2.5 The specification or project design should set out the scope of the end report and should identify relevant data standards for record organisation and content that will be used in information recording systems employed by the project.

3.3 Sources and data collection (including field visits)

3.3.1 All work should conform to the specification and/or project design and be agreed by all relevant parties before work commences. Any variations should be agreed in writing by all relevant parties.

3.3.2 Sufficient and appropriate resources (staff, equipment, accommodation etc) must be used to enable the project to be completed within the timetable and to an acceptable standard. Any contingency elements must be clearly identified and justified. It is the role of the archaeologist undertaking the work to define appropriate staff levels. All staff, including subcontractors, must be adequately briefed and aware of the work required under the specification, and must understand the aims and methodologies of the project.

3.3.4 All staff, including subcontractors, must be competent for their project roles, and employed in line with relevant legislation and IFA by-laws (see Appendix 6). The author and/or manager should preferably be a corporate member of the IFA. IFA Registered Organisations have undertaken to comply with the Code of Conduct, have been quality assured by the IFA within the last two years and are subject to a complaints process. Because of the complexity and sensitivity of most commercial work, those commissioning or specifying such work are recommended to seek to ensure it is undertaken by an IFA Registered Organisation.

3.3.5 Full and proper records (written, graphic, electronic, and photographic as appropriate) should be made for all work. Digital records created as part of the project should comply with specific data standards.

3.3.6 The archaeologist undertaking desk-based assessment should consider all appropriate sources of information and give an assessment of their relevance and reliability. All sources consulted should be listed in the report, whether or not they have been productive. All other potentially relevant sources which have not been consulted should be listed and the reasons for not consulting them given. The report should contain a full discussion of the implications of the choice of sources consulted in relation to the reliability of the conclusions reached.

3.3.7 The range of sources containing potential information which need to be consulted in undertaking desk-based assessment will vary according to a number of factors

- the size and location of land
- the nature and quality of existing information
- the exact purpose and scope of the study
A list of sources of potential sources is provided in Annex 1, but this is by no means exhaustive.

The archaeologist should also contact the relevant HER before undertaking the assessment in order to check

- what digital images and cartographic resources are available within the HER which could potentially be used for DBA, subject to appropriate copyright and licence arrangements (eg. scanned tithe maps, aerial photographs)

- if there are any other DBAs for the study area or adjacent areas that are available or being produced

- the sources that may have been already used by the HER as part of any HER appraisal for the development or land-use change that DBA aims to address.

3.3.8 Unless access is restricted the archaeologist undertaking desk-based assessment should visit the study area in order to assess its character, identify visible historic features and assess possible factors which may affect the survival or condition of known or potential assets. All assessments should include an explicit statement as to whether or not a visit has taken place and, if so, a description of the procedures used and any constraints to observation encountered.

3.3.9 Health and Safety regulations and requirements cannot be ignored no matter how imperative the need to record archaeological information; hence Health and Safety will take priority over archaeological matters. All archaeologists undertaking fieldwork (eg a site visit) must do so under a defined Health and Safety policy. Archaeologists undertaking fieldwork must observe safe working practices; the Health and Safety arrangements must be agreed and understood by all relevant parties before work commences. Risk assessments must be carried out and documented for every field project, in accordance with the Management of Health and Safety at Work Regulations 1992.

3.3.10 All equipment must be suitable for the purpose and in sound condition and comply with Health and Safety Executive recommendations. It should be noted that diving equipment in particular is subject to statutory controls under the Diving Operations at Work Regulations, over and above suitability for purpose and sound condition.

3.3.11 The archaeologist undertaking desk-based assessment should ensure that he or she has adequate insurance policies, public and employer’s liability, and some relevant form of civil liability indemnity or professional indemnity.

3.4 Assessing significance

3.4.1 An assessment of the significance of historic assets should include consideration, in England, of the archaeological, historic, architectural and artistic interests pertaining to the heritage asset, their significance, and the extent to which that significance relates to different elements of the asset’s fabric. More information on assessing significance can be found in PPS5 Planning for the Historic Environment: Historic Environment Planning Practice Guide (EH 2010).

3.4.2 Assessment should include where appropriate evidence of the potential reduction of significance due to truncation or the erosion of deposits, or alterations to buildings, etc.

3.4.3 Assessment should also identify the potential impact of proposed or predicted changes on the significance of the asset and the opportunities for reducing that impact. It should consider how the significance of the asset might be enhanced, and might suggest how loss of significance of one interest might be offset by enhancing that of another (eg through increased knowledge and public appreciation).
3.5 Reports

3.5.1 All reports should be written in a clear, concise and logical style; technical terms should be explained. Reports submitted in support of planning applications are public documents which need to be easily understandable by a non-specialist audience.

3.5.2 The content of desk-based assessment reports will vary according to the scope of the proposals and the complexity or otherwise of the information available from existing sources; presentation may also be determined by the requirements of the body or person commissioning the work.

3.5.3 Reports should contain as a minimum:
- non-technical summary
- statement of research and/or conservation objectives and how they have been addressed by the study
- clear map of study area
- aims and purpose of assessment including the context of development or other land use change
- methodology including sources consulted (see 3.3.7)
- identification of existing heritage or archaeological site management plans that may be in operation in the locality, and where sufficient information about the proposed development is available an assessment of the impacts that new development may have on them
- description of the heritage assets and archaeological potential of the study area
- an assessment of the interest and significance of each asset and its setting, focussing on those aspects which will be affected by any proposed or predicted changes
- assessment of the nature of the effects and options for reducing or mitigating harm. Opportunities for positive effects should be identified as well as negative impacts and mitigation options.
- a description of the area’s historic character and the effect of proposed development upon it (where appropriate, this should include options for conserving or enhancing local character)
- conclusion, including a confidence rating and the extent to which the aims and purpose have been met
- supporting illustrations at appropriate scales
- supporting data, tabulated or in appendices
- index to and location of archive
- references

The contents are discussed in more detail in Appendix 5.

3.5.4 Where the project is carried out within the planning process, the report should contain sufficient objective data to enable ‘an informed and reasonable decision to be made’, including a decision to require further evaluation of the site. Non-compliance with the agreed specification or project design should be pointed out by the local authority historic environment adviser to the archaeologist undertaking the work, and their client if appropriate, at the earliest opportunity.

3.5.5 Subject to any contractual requirements on confidentiality, copies of the report should be submitted to the appropriate Historic Environment Record and national monuments record, where appropriate, and
an OASIS form should be completed to notify and provide information to the relevant local and national authorities, within six months of the completion of the report or earlier as may be specified by contractual or grant conditions. This should contain sufficient detail to help researchers to find and access the project archive.

3.6 Other considerations

3.6.1 Desk-based assessment may be undertaken before development proposals are in the public domain. The archaeologist undertaking this type of work has a duty of confidence to the client but must emphasise their professional obligation to make the results of work available to the wider community within a reasonable time.

3.6.2 It is advisable for desk-based assessment to be governed by a written contract to which the specification or project design may be attached. Such contracts or agreements should include reference to the defined area of study outlined on a map; to the brief/project outline, specification or project design (see 3.2); to conditions for access; programme, method and timetable for payment; copyright arrangements (Darvill and Atkins 1991).

3.6.3 All project archives should meet the requirements of the IFA Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives and comply with the best practice outlined in AAF (2007).

3.6.4 It is advisable to include statements on ownership and copyright in a written contract or agreement. It is normal practice for both the copyright and ownership of the paper and digital archive from archaeological work to rest with the originating body (the archaeological organisation undertaking the work). The originating body deposits the material with the recipient museum or repository on completion of the contracted works, and normally transfers title and/or licenses the use of the records at this stage.

3.6.5 Material copied or cited in reports should be duly acknowledged and all copyright conditions (such as those for Historic Environment Records, national monuments/historic environment records or Ordnance Survey maps and the National Grid) observed.

3.6.6 All aspects of publicity must be agreed at the outset of the project between the commissioning body, and the archaeologist undertaking the project.

3.6.7 Any costs to be charged by the local authority historic environment advisers must be agreed in writing at the outset of the project.
ANNEX 1
Sources of historic environment information

Archaeological databases

Source type

Historic Environment Records, archaeological excavation and survey records, Archaeological Data Service, national monuments records, national buildings records, Listed Building lists, Scheduled Monuments lists, regional inventories, public and private collections of artefacts and ecofacts, Internet.

Source location

National heritage bodies, Royal Commissions, local authorities Historic Environment Records, museums, archaeological trusts and units, universities, Ordnance Survey, local archaeological and historical societies.

Online sources

Archaeology Data Service
Heritage Gateway
CANMORE
Cofflein
Intute
PastScape

Historical documents

Source type

Charters, registers, manuscript collections (secular and ecclesiastical), deeds, wills, estate papers, electoral rolls, contemporary published accounts (eg county and agricultural surveys), industrial investigations.

Source location

The National Archives, parish records, estate collections, museums, national and local libraries, county and district archives, study centres, press libraries, Ordnance Survey, British Library.

Online sources

Access 2 Archives

Cartographic and pictorial documents

Source type

Early maps, prints and paintings, tithe maps, Ordnance Survey maps, estate plans, Admiralty charts.

Source location

The National Archives, parish records, estate collections, museums, national and local libraries, county and district archives, Ordnance Survey, press libraries, private collections, Ministry of Defence hydrographic office, local archaeological and historical societies.
The Lost Chapel and Holy Well of St Cadoc

INSTITUTE FOR ARCHAEOLOGISTS

Online sources
Access 2 Archives
MAGIC

Aerial photographs

Source type
Aerial photographs. Satellite images

Source location
National registers of aerial photographs (including RAF and Ordnance Survey flights), museum collections, national heritage bodies, Sites and Monuments Records, university collections, private collections (in some instances a flight may be commissioned as part of the study). Online sources such as Google Earth or Microsoft MSN Virtual Earth

Geotechnical information

Source type
Borehole and test pit logs, site surveys, geological maps, offshore surveys.

Source location
Client geosurvey records, Ordnance Survey, British Standards Institute, British Geological Survey publications, commercial offshore survey companies, universities.

Secondary and statutory sources

Source type
Regional and period archaeological studies, landscape studies, local knowledge, dissertations, policy statements and research frameworks, legislative documents, European directives, local development plans, unitary development plans, Constraints Maps.

Source location
Libraries, local landowners, local and national museums, universities, academic journals, monographs and other publications, local archaeological and historical societies.

Online sources:
HEREIN

ANNEX 2
Report contents

Non-technical summary

This should outline in plain, non-technical language, the principal reason for the work, its aims and main results, and should include reference to authorship and commissioning body.

Introduction

This should set out the circumstances leading to the commission of the report, any restrictions on reporting or access to relevant records, size, surface geology and topography of the study area.

Aims and objectives

These should reflect or reiterate the aims set in the project design or specification.

Methodology

The methods used and an outline of sources consulted, including any variation to the agreed project design or specification, should be set out carefully and explained as appropriate. The methodology for assessing significance should be explained.

Summary of archaeological results

This should outline, as a series of objective statements organised clearly in relation to the methods used, the known and potential archaeological interests by period and/or type. Their significance with reference/inclusion of supporting evidence should be indicated.

Development or other impact (if appropriate)

This should outline the likely impact(s) of the development and other factors on the known or potential archaeological resource. If the precise impact cannot be evaluated, this should be stated.

Conclusions

It is appropriate to include a section which summarises and interprets the results, and puts them into context (local, national or otherwise). Other elements should include a confidence rating or statement on the reliability of sources used, or limitations imposed by particular factors. Recommendations on further work may also be required, but in most circumstances within the planning framework this will be the responsibility of the relevant planning archaeologist or curator.

Appendices

These should consist of essential technical and other detail to support the above. They may consist of a copy of the brief/specification for the work, summaries of sources of evidence consulted with reference to location, catalogue numbers etc, transcripts or copies of documents (where copyright permissions exist or are attainable), project archive catalogue, list of consultees, index to site codes.

Illustrations

Most desk-based assessment will need the inclusion of location plans for the development area, plans of the existing and proposed developments, and at least one figure showing known or potential...
archaeological interests within or affecting the development area. Any figures should be clearly numbered and easily referenced to the National Grid.

References and bibliography
A list of all primary and secondary sources used, as well as potentially relevant sources not consulted must be given.

Other
Contents list, acknowledgements, disclaimers.

ANNEX 3
Recommendations for digital archives
Projects vary in their organisation and implementation, even where standards and best practice are employed. This annexe thus provides a checklist for the types of data to be included in the digital archive of a desk-based assessment. Where those data do not exist they need not be created. Where they are not available in digital format, they need not be digitised. The archive has two components: the minimum archive is the index level record; with other materials as appropriate. Thus, the archive should consist of:

1. Index level record
   An index level record for the investigation conforming to relevant standards. Typically this will be an OASIS entry. The exact content and structure of that record should be developed in consultation with relevant heritage agencies and identified in the project design. Local circumstances will dictate form of delivery though digital supply should be preferred, in order that the record may be appended to existing databases without the need for manual data entry.

2. Other associated data sets
   Other associated data sets as identified in the project design, such as a project specification document, project design document and desk-based assessment report. If other forms of digital data, such as GIS or databases are used, these should also be supplied. The precise composition of the archive will vary with local circumstances.

Data creation
All data created as part of a project design should follow standards and guidelines for good practice. Data that is being deposited in a digital archive and should be supplied in a form consistent with that archive’s deposition guidelines.

Further guidance on the management and archiving of digital data can be obtained from the Archaeology Data Service, summarised in part in the Guide to Good Practices series. “Digital Archives from Excavation and Fieldwork: Guide to Good Practice” is the most immediately relevant volume for desk-based assessment, though others may be more appropriate to the needs of specific projects. Contact details for the Archaeology Data Service are included in Appendix 7.

ACKNOWLEDGEMENTS
This document was originally drafted by Andrew Marvell. Contributions and editing were provided by Gill Andrews, Dave Batchelor, Kate Clark, Sue Davies, Peter Hinton, and Taryn Nixon. This revision has benefited from the input of Sandy Kidd, Stewart Bryant, Dave Barrett, Neil Maylan, Andrea Bradley and members of the IfA Professional Development and Practice Committee.
The Lost Chapel and Holy Well of St Cadoc

Standards Guidance for Archaeological Field Evaluation

INSTITUTE FOR ARCHAEOLOGISTS

STANDARD AND GUIDANCE
for archaeological field evaluation

The standard and guidance for archaeological field evaluation was formally adopted as IFA approved practice at the Annual General Meeting of the Institute held on 14 October 1994.

Published October 1994
Revised September 2001 and October 2008

The Institute for Archaeologists is a trading name of the Institute of Field Archaeologists, a company limited by guarantee. It is registered in England, no. 1918782. The address of the Registered Office is:

SHES
University of Reading
Whiteknights
PO Box 227
Reading
RG6 6AB

Contents

Standard
The Standard 2
Definition of archaeological field evaluation 2
Purpose of archaeological field evaluation 2
Occurrence 2

Guidance
1 Introduction 2
2 Principles: the Code of conduct and other by-laws of the IFA 2
3 Procedures 3
3.1 Project identification 3
3.2 Briefs/project outlines, specification and project designs 3
3.3 Fieldwork 4
3.4 Post-fieldwork analyses and reports 5
3.5 Monitoring 5
3.6 Archives, ownership and deposition 6
3.7 Other considerations 6
Annex 1 Field techniques 7
Annex 2 Report contents 7
Annex 3 Contents of a data structure report 7
Annex 4 Recommendations for digital archives 8

IFA
SETTING STANDARDS IN ARCHAEOLOGY
The Lost Chapel and Holy Well of St Cadoc

STANDARD AND GUIDANCE for archaeological field evaluation

STANDARD

The Standard

An archaeological field evaluation will determine, as far as is reasonably possible, the nature of the archaeological resource within a specified area using appropriate methods and practises. These will satisfy the stated aims on the project, and comply with the Code of Conduct, Code of approved practise for the regulation of contractual arrangements in archaeology, and other relevant by-laws of the IAA.

Definition of field evaluation

The definition of archaeological field evaluation is a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate.

Purpose of field evaluation

The purpose of field evaluation is to gain information about the archaeological resource within a given area or site (including its presence or absence, character, extent, date, integrity, state of preservation and quality), in order to make an assessment of its merit in the appropriate context, leading to one or more of the following:

- The formulation of a strategy to ensure the recording, preservation or management of the resource
- The formulation of a strategy to mitigate a threat to the archaeological resource
- The formulation of a proposal for further archaeological investigation within a programme of research

Occurrence

A field evaluation may arise:

- In response to a proposed development which threatens the archaeological resource
- As part of the planning process (within the framework of appropriate national planning policy guidance notes and/or development plan policy)
- As part of an Environmental Impact Assessment (EIA) (see 3.1.7 below)
- Outside the planning process (e.g. ecclesiastical development, coastal erosion, agriculture, forestry and countryside management, works by public utilities and statutory undertakers)
- Within a programme of research not generated by a specific threat to the archaeological resource
- In connection with the preparation of management plans by private, local or national and international bodies

An archaeological field evaluation may therefore be instigated or commissioned by a number of different individuals or organisations, including local planning authorities, national advisory bodies, government agencies, private landowners, developers or their agents, archaeological researchers, etc.

GUIDANCE

1 Introduction

1.1 This guidance seeks to define best practise for the execution of field evaluation and concomitant reporting, in line with the by-laws of the IAA in particular the Code of Conduct and Code of approved practise for the regulation of contractual arrangements in archaeology. It seeks to expand and explain general definitions in the Codes for the practice of fieldwork and reporting.

1.2 The Standard and guidance apply to all types of preliminary field investigations (land-based, inter-tidal and underwater) whether generated by academic research, by local interest, through the planning process, by management proposals or by any other proposals which may affect the archaeological resource within a specified area.

1.3 In addition, the guidance seeks to amplify directions given in appropriate national planning policy guidelines (see Appendix 6), and be compatible with current guidelines issued by regulatory authorities.

1.4 The terminology used primarily follows PPG 16, PPG 15, PG (Wales) as amended, WO circular 60/96, WO circular 61/96, PP56, NPPG5 and guidance issued by the Association of County Archaeological Officers (ACAO 1993), English Heritage (1991) and Historic Scotland (1996a) with amplifications where necessary. It also seeks to take account of differences in terminology, legal and administrative practise in different parts of the United Kingdom, Channel Islands, and Isle of Man. A glossary of terms used can be found in Appendix 1.

1.5 This document provides guidance for work carried out within the United Kingdom, Channel Islands and Isle of Man. Although general guidance is given, this document cannot be exhaustive, particularly in its treatment of legislative issues. Archaeologists must ensure they are familiar with the specific legislation and common law pertinent to the area of Isle of Man in which they are working. Archaeologists, commissioning bodies and others may find it useful to consult the relevant documents listed in Appendix 6, and can obtain further guidance from the appropriate advisory bodies listed in Appendix 7.

2 Principles: The Code of conduct and other by-laws of the IAA

2.1 An archaeologist undertaking a field evaluation must adhere to the five major principles enshrined in the IAA Code of conduct, and the rules governing those principles.

1 A member shall adhere to high standards of ethical and responsible behaviour in the conduct of archaeological affairs.

2 A member has a responsibility for the conservation of the historic environment.

3 A member shall conduct his or her work in such a way that reliable information about the past may be acquired, and shall ensure that the results be properly recorded.

4 A member has responsibility for making available the results of archaeological work with reasonable dispatch.

5 A member shall recognise the aspirations of employees, colleagues and helpers with regard to all matters relating to employment, including career development, health and safety, terms and conditions of employment and equality of opportunity.

2.2 Further, the Code of approved practise for the regulation of contractual arrangements in archaeology specifically addresses professional conduct in situations where work is sponsored or commissioned on a contractual basis, especially as part of development controlled by the planning process. It provides guidance on professional behaviour where more than one individual or body is competing for the same work, and seeks to ensure that the terms for all work are clearly defined, normally by contract.
The Lost Chapel and Holy Well of St Cadoc

3 Procedures

3.1 Project Identification

3.1.1 Within the planning framework in the United Kingdom, Channel Islands and Isle of Man the desirability of preservation of archaeological deposits is a material consideration, and consequently ‘developers and local authorities should take into account archaeological considerations and deal with them from the beginning of the development control process’ (PPG 16 para 18, WO circular 60/96 para 10, NPPG 5 para 14, PPS 6 para 2.4).

3.1.2 As the desirability of preservation of archaeological remains is a material consideration in the planning process, local authorities can reasonably request an applicant to provide further information on archaeological matters so that ‘an informed and reasonable planning decision can be taken’ (PPG 16 para 21, PPG 15 para 2.11, 2.15, 2.17 and 3.23, WO circular 60/96 para 14, PAN 42 para 24, PPS 6 para 3.13).

3.1.3 Within the planning framework an appraisal (Appendix 1 for definition) of the proposal area will be carried out to determine whether further information is required. This will normally have been undertaken by the planning archaeologists or curator (e.g. county, district or council archaeological offices), but may also have been carried out by the applicant or their agents.

3.1.4 On occasion it may be deemed sufficient to carry out desk-based assessments, in order to provide information to make an informed and reasonable decision; on other occasions it will not. Under this guidance, requests for field evaluation will generally be made by the planning archaeologist or curator.

3.1.5 A field evaluation may be commissioned in advance of submission of a planning application by the applicants or through their agents. It is appropriate in these circumstances for proposals for field evaluation to be agreed with the planning archaeologist in advance of intrusive work, so that the archaeological resource is not needlessly disturbed or damaged, or inappropriate or excessive cost incurred. In such circumstances matters of confidentiality will need to be carefully reviewed by all parties involved. The planning archaeologist may also be able to offer advice to applicants on project design, should the applicants be unfamiliar with archaeological matters.

3.1.6 Certain developments fall within special regulations or require differing from the standard planning processes (e.g. some projects initiated by public utilities, statutory undertakers, Crown Commissioners, Ministry of Defence etc). Certain of these organisations subscribe to codes of practice (e.g. water companies) or agreements (formal or informal) with the lead national archaeological bodies to take into consideration the effects of development proposals on the archaeological resource.

3.1.7 Environmental Impact Assessment (EIA) applies to projects potentially having significant environmental effect (as defined in EC Directive 85/337, and as implemented in the UK via the various Statutory Instruments etc). It requires a systematic analysis of such effects before a decision to permit the project is taken. Developers are required to provide information for the deciding agency to consider in the decision-making process, and further give bodies with relevant environmental responsibilities an opportunity to comment before consent is given. EIA is mandatory in relation to certain projects, and may be extended to others. Appraisal and desk-based assessments of the archaeological element must form part of EIA and field evaluation may also be required (see Appendix 1 for definitions).

3.1.8 In EIA projects field evaluation is usually initiated by the developers or through their advisors, rather than the local planning authority.

3.1.9 In a research context, the area for potential investigation or study for field evaluation will have been identified and selected by an archaeologist based on specific aspects or themes relating to their own defined research interests. This could include work undertaken through universities, central government agencies, local authorities, museums, independent trusts, private companies, groups or individuals.

3.1.10 Management proposals by private landowners or others may also result in field evaluation, to obtain information in order to enhance or protect the environmental or archaeological resource.

3.1.11 However it arises an archaeologist should only undertake a field evaluation which is governed by a written specification or project design (see Appendices 2 and 3), agreed by all relevant parties as this is the tool against which performance, fitness for purpose, and hence achievement of standards, can be measured. In Northern Ireland if an evaluation involves excavation a qualified archaeologist must obtain a licence to undertake work from the EHS.

3.1.12 The specification or project design is therefore of critical importance.

3.2 Briefs/projects outlines, specifications and project designs

3.2.1 The planning and preparation stage of any project is key to its success. This section addresses the initial design stages of a field evaluation, after the appraisal has determined the need for further work, in whatever circumstances.

3.2.2 A brief (or project outline in Scotland) is an outline of the circumstances to be addressed, with an indication of the scope of works that will be required (FAA Code of approved practice for the regulation of contractual arrangements in archaeology, ACAO 1993 Appendix D, 14-15; Historic Scotland 1996a, 2-6). It does not provide sufficient detail to form the basis for a measurable standard; but it could form the basis for a specification or a project design.

3.2.3 A specification sets out a schedule of work in sufficient detail for it to be quantifiable, implementable and monitored (ACAO 1993 Appendix D, 15). It should be sufficient to form the basis for a measurable standard.

3.2.4 A project design also sets out a schedule of works in sufficient detail for the work undertaken to be quantifiable, implemented and monitored, and therefore also forms the basis for a measurable standard. However, a project design may include additional information which covers contractual details such as staffing levels or cost relevant to the commissioning but not necessarily the monitoring body. A project design may be prepared in response to a brief/project outline or specification; or it may be a research proposal independent of the planning framework (see Appendix 3, English Heritage 1991 Appendix 2, Historic Scotland 1996a, 7).

3.2.5 A brief/project outline or a specification may form the basis for a project design. For a field evaluation within the planning framework, the brief/project outline or specification will usually be prepared by the planning archaeologist or curator and issued by the commissioning body, the developers or their agents, to selected tenderers. The brief/project outline or a specification may be prepared by the applicants or their agents, but it is essential that the planning archaeologist has agreed the proposals so that they have been accepted as fit for purpose.

3.2.6 Briefs/project outlines, specifications and project designs must be prepared by suitably qualified and experienced persons, utilising specialist advice where necessary.
The Lost Chapel and Holy Well of St Cadoc

3.2.7 In the case of EIA, the brief/project outline or specification will usually be prepared by the developers or their agents, and issued to tenders. This may also apply to management proposals.

3.2.8 Proposals for field evaluation not prompted by a threat to potential archaeological remains will normally take the form of a project design, prepared by the researching archaeologist, and agreed with any commissioning body. If there is no external commissioner there must nevertheless be a written design so that the validity of any models or questions posed can be properly assessed, or so that legal requirements (e.g. Scheduled Monument Consent) can be properly applied.

3.2.9 A field evaluation should not take place on the basis of a brief/project outline alone, as it could not achieve the appropriate standard, there being nothing to measure performance against.

3.2.10 The specification or project design must be expressed in such detail that it can withstand challenges on archaeological or legal grounds.

3.2.11 In preparing a specification or a project design an archaeologist must give full consideration to all available practicable methods of evaluation (Annex 1), and decide upon the most appropriate and best available to meet the purpose of the work, seeking specialist advice where necessary. An archaeologist preparing a specification or project design must examine all appropriate sources, be fully appraised of all relevant legislation, and abide by it.

3.2.12 The archaeologist must be mindful that the purpose of evaluation is to determine the presence, or not, of archaeological deposits and to assess their nature, extent etc, and must not unnecessarily interfere with archaeological remains. The archaeologist must make every effort to ensure that field evaluation is minimally intrusive and minimally destructive to archaeological remains in both the design and execution of work.

3.2.13 The project design should include an agreed collection and disposal strategy for artefacts and ecofacts (see also 3.3.8).

3.2.14 It follows that some evaluation projects may be properly terminated (as long as the resource is left in a stable condition) before the project design is fulfilled, when some master criterion is met, such as recognition of a significant constraint rendering the proposed development impractical. In such circumstances, the archaeologist should inform the relevant bodies and seek to ensure that appropriate management measures are taken (see also 3.3.1).

3.2.15 The specification or project design must be suited to the project under consideration; any methods advocated must reflect the nature of archaeological remains likely to be found and should not become inflexible irrespective of site. Other considerations include ‘reasonableness’ in relation to scale of threat, presence of buildings, land use, value for money etc.

3.2.16 When preparing a specification or project design consideration should be given to the need to include appropriate contingency arrangements with respect to field procedures and thus often resourcing. In many cases it may prove impossible to conserve the resource and/or to meet the project objectives without a reasonable degree of flexibility to apply professional judgement in the field. Commissioners and curators should be advised that overly rigid requirements might unnecssarily result in a failure to meet archaeological and non-archaeological objectives. Contingency arrangements should not be open-ended but should be properly specified in their own right as a function of prior knowledge of the site, the physical context of the site and the primary objectives of the field evaluation. Contractors must be in a position to justify in detail the eventual implementation of contingency arrangements. The principle of BATNEEC (best available technique not entailing excessive cost), as enshrined in EA guidance, should be used.

3.2.17 The specification or project design should contain, as a minimum, the following elements:
- Non-technical summary
- Site location (including map) and descriptions
- Context of the project
- Geological and topographical background
- Archaeological and historical background
- General and specific aims of fieldwork
- Reference to relevant legislation
- Field methodology
- Collection and disposal strategy for artefacts and ecofacts
- Arrangements for immediate conservation of artefacts
- Post-fieldwork methodology
- Report preparation (method)
- Publication and dissemination proposals
- Copyright
- Archive deposition
- Timetable
- Staffing
- Health and Safety considerations
- Monitoring procedures
- Contingency arrangements (if appropriate).

3.2.18 The contents and different weighting of detail between specification and/or project design are amplified in Appendices 2 and 3. Briefs/projects outlines and specifications are also discussed in detail in ACAO (1993) and Historic Scotland (1996a).

3.2.19 An archaeologist responding to a tender which includes a brief/project outline or specification may refer to these elements in the project design, taking care to include sufficient detail.

3.2.20 In all cases, the local archaeological curator (and where appropriate, the national agency curator) must be informed of fieldwork in his or her area. Unless there are overriding reasons against it, local archaeological societies etc should be informed of fieldwork.

3.2.21 The specification or project design should identify relevant data standards for record organisation and content that will be used in information recording systems employed by the project.

Fieldwork

3.3 The specification or project design must be agreed by all relevant parties before work commences. All work must conform to the agreed specification or project design. Any variations must be agreed in writing by all relevant parties.

3.3.2 Sufficient and appropriate resources (staff, equipment, accommodation etc) must be used to enable the project to be completed successfully, within the timetable, to an acceptable standard, and comply with all statutory requirements. Any contingency elements must be clearly identified and justified. It is the role of the archaeologist undertaking the work to define
appropriate staff levels.

3.3.3 All techniques used must comply with relevant legislation and be demonstrably fit for the defined purpose(s).

3.3.4 All staff, including subcontractors, must be suitably qualified and experienced for their project roles, and employed in line with relevant legislation and I/IA by-laws (see Appendix 6). The site director and/or manager should preferably be a corporate member of the I/IA.

3.3.5 All staff, including subcontractors, must be fully briefed and aware of the work required under the specification, and must understand the aims and methodologies of the project.

3.3.6 All equipment must be suitable for its designated purpose and in sound condition, complying with Health and Safety Executive regulations and recommendations. It should be noted that some items of equipment are subject to specific statutory controls (diving equipment in particular is subject to the Diving Operations at Work Regulations (see Appendix 6)).

3.3.7 Full and proper records (written, graphic, electronic, and photographic as appropriate) should be made for all work using pro forma record forms and sheets as applicable. Digital records created as part of the project should comply with specified data standards. An archaeologist must ensure that digital information, paper and photographic records should be stored in a secure and appropriate environment, and be regularly copied or backed up, and copies stored in a separate location.

3.3.8 Artefact and environmental data collection and discard policies, strategies and techniques must be fit for the defined purpose, and understood by all staff and subcontractors (see also I/IA Standards and guidance for the collection, documentation, conservation and research of archaeological materials, I/IA Finds Group 1992, Historic Scotland 1994).

3.3.9 Health and Safety regulations and requirements cannot be ignored no matter how insensitive the need to record archaeological information; hence Health and Safety will take priority over archaeological matters. All archaeologists undertaking fieldwork must do so under a defined Health and Safety Policy. Archaeologists undertaking fieldwork must observe site working practices; the Health and Safety arrangements must be agreed and understood by all relevant parties before work commences. Risk assessments must be carried out and documented for every field project, in accordance with the Management of Health and Safety at Work Regulations 1999. Archaeologists should determine whether field projects are covered by Construction (Design and Management) Regulations 1994, and ensure that they meet all the requirements under the regulations. In addition they must liaise closely with the principal contractor and comply with specified site rules. Archaeologists are advised to note the various responsibilities of the role of a planning supervisor. For further guidance refer to the bibliography (Appendix 6).

3.3.10 The archaeologist undertaking a field evaluation must ensure that he or she has adequate insurance policies, public or employer’s liability, and some relevant form of civil liability indemnity or professional liability.

3.4 Post-fieldwork analyses and reports

3.4.1 All assessment and analytical work must be carried out by suitably qualified and experienced staff, who must be appraised of the project design before commencing work.

3.4.2 The level of recording and analysis of artefacts and ecofacts should be appropriate to the aims and purpose of the project.

3.4.3 All data generated as a result of assessment and/or analysis should be included in the project archive.

3.4.4 All reports must address the aims and purposes of the project design and/or specification.

3.4.5 All reports should be written in a clear, concise and logical style and technical terms should be explained. Consideration should be given during the preparation of the report to the requirements of public inquiries or courts of law if appropriate.

3.4.6 As a minimum, a site summary (see English Heritage 1991) or data structure report (see Appendix 1 and Historic Scotland 1996a) should be submitted to the appropriate Sites and Monuments Record, the National Archeological Record and, where appropriate, the central government conservation organisation within six months of completion of the fieldwork or earlier, as may be specified by contractual or grant conditions. In Scotland, a summary interim report must be published in an annual, regional or national digest of fieldwork (Historic Scotland 1999, 2). For the United Kingdom, Channel Islands and Isle of Man as a whole, it is considered that fuller publication of the majority of projects is required.

3.4.7 In Scotland the primary product of fieldwork is the data structure report (see Appendix 1 and Historic Scotland 1996b) with a costed assessment or project design for further fieldwork and/or post-excavation and publication. This report does not have a precise equivalent elsewhere in the United Kingdom (see Appendix 1). Copies of the data structure report should be lodged with the local archaeological curator.

3.4.8 Reports should not include recommendations unless required by the planning archaeologist or the specification and/or project design. However, it would be reasonable for a client to seek independently the opinion of archaeological contractors. Contractors should have regard as to whether the provision of such advice is a contractual requirement and the legal implications thereof.

3.4.9 Reports should contain as a minimum:
- Non-technical summary
- Introductory statements
- Aims and purpose of the evaluation
- Methodology
- An objective summary statement of results
- Conclusion, including a confidence rating
- Supporting data, tabulated or in appendices, including as a minimum a basic quantification of all artefacts and ecofacts (number and weight), and structural data
- Index to and location of archive
- References

The contents are discussed in more detail in Annex 2.

Where the project is carried out within the planning process, the report must contain sufficient objective data to enable an informed and reasonable decision to be made (PPG 16 para 21). Further guidance on this is contained in ACAO (1993).

Subject to any contractual requirements on confidentiality, copies of the report must be submitted to the appropriate county Sites and Monuments Records within six months of completion of the report.

3.5 Monitoring

3.5.1 All work must be monitored by the archaeological organisation undertaking the project and if appropriate by the national...
conservation agencies, planning archaeologist and commissioning body, or their nominated representatives. The guidance below is directed in general at monitors from outside the organisation undertaking the work, but many of the points apply equally to internal monitors or managers.

3.5.2 A monitor should be suitably experienced and qualified, or have access to appropriate specialist advice.

3.5.3 Monitoring must be undertaken against the written specification and/or project design.

3.5.4 Monitors, where they are not representing the commissioning body, should bear in mind the need for flexibility, within the stated parameters, in contractual matters such as staff numbers, budgets or timetables.

3.5.5 All monitoring visits must be documented, and agreed by each party.

3.5.6 Non-compliance with the agreed specification or project design must be pointed out by the monitor to the archaeologist undertaking the work, and their client if appropriate, at the earliest opportunity (see ACAA 1993 Appendix E, 17).

3.5.7 Monitors should be aware of their professional duties regarding Health and Safety, in particular advising against and reporting on bad an unsafe practice.

3.5.8 All monitoring arrangements must be agreed at the outset of the project; the archaeologist undertaking fieldwork must inform the planning archaeologist or other monitor of the commencement of work with reasonable notice.

3.5.9 Although monitors may choose to visit at any time, they should normally inform the archaeologist undertaking the work of any intended visits in advance. Monitors must respect reasonable requests from the client commissioning the work to attend only at prearranged times and, if necessary, in the company of the client’s representative.

3.5.10 Any costs for monitoring to be charged by the planning archaeologist or other monitor must be agreed in writing at the outset of the project.

3.6 Archives, ownership and deposition

3.6.1 The requirements for archive preparation and deposition must be addressed at the outset of the project. In Scotland, all fieldwork archives must be deposited in the National Monuments Record for Scotland, which will arrange to copy material to local museums etc.

3.6.2 The proposed recipient museum or other repository must be contacted at the project planning stage, and arrangements for the deposition of the project archive should be detailed in the specification and/or project design.

3.6.3 The archive, including all retained artefacts and ecocasts, must be treated and packaged in accordance with the requirements of the recipient museum/repository and national guidelines (Museums and Galleries Commission 1992, Society of Museum Archivists 1983, 1984, 1988 and 1990, Ferguson and Murray 1997). The treatment of human remains is governed by the relevant legislation and government regulations (see Historic Scotland 1997a).

3.6.4 In England, Wales, Northern Ireland and the Isle of Man ownership of objects rests with the landowner, except where other law overrides this (e.g. Treasure Act 1996, Burial Act 1977). The archaeologist undertaking the fieldwork or the planning archaeologist must make this clear at the inception of the project (in the brief/project outline, specification or project design).

3.6.5 It should be noted that different countries have, inter alia, differing reporting procedures for Treasure and differing requirements for finds deposition. Material cannot be exported from the Isle of Man without a licence. In Scotland all finds of archaeological objects must be reported to the Crown, normally via the Treasure Trove Advisory Panel or the Finds Disposal Panel. Archaeologists are advised to seek specific advice on excavation and export procedures as in some instances licences are required (see Appendix 7).

3.6.6 Except in Scotland, it is the responsibility of the archaeologist undertaking the fieldwork to endeavour to obtain the written consent of the landowner for finds donation and deposition with the recipient museum.

3.6.7 Except in Scotland, in the event that the landowner is unwilling, for whatever reason, to donate the finds to the appropriate recipient museum, the archaeologist undertaking the fieldwork must endeavour to ensure all artefacts are recorded, safely packaged and conserved where appropriate before transfer to the owner, and that their location and ownership are stated in the site archive and public record. It should be noted that the owner’s explicit (written) permission is required before entering such personal information in the public record (see inter alia the Data Protection Act 1984).

3.6.8 In Scotland all archaeological artefacts, irrespective of raw material, may be claimed on behalf of the Crown under common law. This applies no matter where, or on whose property, artefacts are found. As noted in paragraph 3.5.3 of the IFA Standard and guidance for the collection, documentation, conservation and research of archaeological materials, all finds must be reported to the Treasure Trove Advisory Panel or, in the case of artefacts from fieldwork funded by Historic Scotland, to the Finds Disposal Panel. Ownership in either case is passed to the museum which receives the finds at the end of the allocation process.

3.6.9 The rules of ownership applicable to material which has come from a vessel (i.e. all those classified as â€œwreckâ€) are dealt with under the Merchant Shipping Act 1995 (see Appendix 6). In cases of wreck material the Receiver of Wrecks, in the Maritime and Coastguard Agency should be contacted.

3.6.10 Subject to confidentiality arrangements specified for the project, the archaeologist, either during fieldwork or as soon as possible after its conclusion, should prepare a structured description of the project suitable for publication or inclusion in national and local data archives.

Other considerations

It is advisable for field evaluation projects to be governed by a written contract or agreement to which the specification or project design may be attached. Such contracts or agreements should include reference to the defined area of study outlined on a map; to the brief/project outline, specification or project design (see 3.2); to conditions for access: programme, method and timetable for payment (including any retentions); copyright arrangements; and be signed and dated by all parties (Darvill and Atkins 1991).

It is normal practice for both the copyright and ownership of the paper and digital archive from the archaeological work to rest with the originating body (the archaeological organisation undertaking the work). The originating body deposits the material with the recipient museum or repository on completion of the contracted works, and normally transfers title and/or licences the use of the records at this stage. These arrangements may be varied by contract, and for the avoidance of doubt it is advisable to include statements on ownership and copyright in a written contract or agreement.

Material copied or cited in reports should be duly acknowledged and all copyright conditions (such as those for Ordnance Survey maps and the National Grid) observed.

All aspects of publicity must be agreed at the outset of the project between the commissioning body and the archaeological organisation or individual undertaking the project.

6
3.7.5 The archaeologist undertaking the work must respect the requirements of the client or commissioning body concerning confidentiality, but the archaeologist must emphasise his or her professional obligation to make the results of archaeological work available to the wider archaeological community within a reasonable time.

Annex 1:
Field techniques

There is a wide range of archaeological techniques available for field evaluation. In many instances several techniques may be valid for the requirements of the brief/project outline, and it will be necessary to explain the selection criteria. Wherever possible the first considered option should be for non-destructive survey, though in most instances this will probably not produce the necessary level of confidence in the information gained, nor result in data which can be verified at, for example, public inquiry or court of law. The methods selected must be fit for the purpose defined.

This Standard covers the following methods of field evaluation:

a) Non-destructive
   - geophysical survey
   - remote sensing
   - geochemical survey
   - earthwork survey
   - field scanning (i.e. observation and mapping of artefact and other distributions, but not collection of artefacts)
   - standard building survey

b) Destructive Methods (of varying destructive potential)
   - augering
   - hand-excavated test pits
   - hand-excavated trenches
   - machine-stripped and manually excavated test pits
   - machine-stripped and manually excavated trenches
   - probing (frequently used underwater)
   - surface artefact collection: fieldwalking for collection as opposed to scanning

This method is destructive as it removes part or all of the archaeological resource, although that resource has generally moved from its depositional context. Selective collection will bias both the remaining resource and the collected data and is not recommended.

   - Methods such as prop wash and explosives (used occasionally for underwater exploration) are not generally acceptable.

Further information on selection of techniques is set out in ACAO (1993). For guidance on underwater evaluation techniques see Oxley (forthcoming).

Annex 2:
Report contents

The specific requirements of any report will necessarily vary according to the scope of works, the nature of the results or other factors. However, the following sections will occur in most reports:

Non-technical summary
This should outline in plain, non-technical language the principal reason for the work, its objectives and main results. It should include reference to authorship and commissioning body.

Introductory statements
These could include acknowledgements, circumstances of the project such as planning background, the archaeological background, an outline nature of work, the site description (including size, geology and topography, location), when the project was undertaken and by whom.

Aims and objectives
These should reflect or reiterate the aims set out in the project design or specification.

Methodology
The methods used, including the detail of any variation to the agreed project design or specification should be set out carefully, and explained as appropriate.

Results
These should be set out as a series of summary objective statements, organised clearly in relation to the methods used, and describing both structural data and associated finds and/or environmental data recovered. Descriptive material should be clearly separated from interpretative statements. Technical terminology (including dating or period references) should be explained where necessary if the report is aimed at a largely non-archaeological audience. The results should be amplified by the use of drawings and photographs; and by supporting data contained in appendices (see below).

Conclusions
It is appropriate to include a section which sums up and interprets the results and puts them into context (local, national or otherwise). Other elements should include a confidence rating on techniques used, or on limitations imposed by particular factors (e.g. weather or problems of access). Recommendations on further work may also be required, but in most circumstances within the planning framework this will be the responsibility of the relevant planning archaeologist or curator.

Archive location
The final destination of the archive (records and finds) should be noted in the report.

Appendices
These should contain essential technical and supporting detail, including for example lists of artefacts and contexts or details of measurements, gazetteers etc.

Illustrations
Most reports will need the inclusion of one or more illustrations for clarity; as a minimum a location plan should be included. Any plans or sections should be clearly numbered, easily referenced to the National Grid and related to the specified area.

References and bibliography
A list of all sources used should be appended to the report, including electronic sources.

Other
Contents list, disclaimers.
Annex 3:
Contents of a data structure report

A data structure report is a requirement in Scotland. Its contents are listed here for guidance. The level of detail required will depend on the quality and complexity of data.

A data structure report should be produced speedily after each fieldwork exercise or season of fieldwork. It provides a structure for the records of an excavation, and is the basis for further analysis and final archiving of the site archive. It includes:

1. Lists of data
   - Context numbers with brief descriptions
   - Other written documents
   - Plans, sections and other illustrations
   - Photographs (annotated)
   - Small finds lists, with context numbers and brief descriptions of important objects

This list is copied to the Queen’s and Lord Treasurer’s Remembrancer, forming the basis for allocating finds to a museum with a description and explanation of why environmental archaeology samples were taken.

2. A narrative account of the site sequence explaining
   - The relationship between groups of contexts
   - Important finds
   - Provisional Interpretations
   - Sequence diagrams, sketch plans and other diagrams as required

In Scotland, the data structure report is accompanied by a site summary intended for publication in *Discovery and excavation in Scotland* published by the Council for Scottish Archaeology. For further information see Historic Scotland (1998a, 9).

Annex 4:
Recommendations for digital archives

Projects vary in their organisation and implementation, even where standards and best practice are employed. This annex thus provides a checklist for the types of data to be included in the digital archive of a field evaluation. Where those data do not exist they need not be created. Where they are not available in digital format, they need not be digitised. The archive has two components: the minimum archive is the index level record, with other materials as appropriate. Thus, the archive should consist of:

1. Index level record
   An index level record for the investigation conforming to relevant standards. The exact content and structure of that record should be developed in consultation with relevant heritage agencies and identified in the project design. Local circumstances will dictate form of delivery though digital supply should be preferred, in order that the record may be appended to existing database without the need for manual data entry.

2. Other associated data sets
   Other associated data sets as identified in the project design, such as a project specification document, project design document and desk-based assessment report may be included in the archive, and a field evaluation report. Data structure reports, plans, context records, photographs, lists of finds and geo-

physical records should be supplied if available in digital format. The precise composition of the archive will vary with local circumstances.

Data creation

All data created as part of a project design should follow standards and guidelines for good practice. Data that is being deposited in a digital archive should be supplied in a form consistent with that archive’s deposition guidelines.

Further guidance on the management and archiving of digital data can be obtained from the Archaeology Data Service, summarised in part in the Guide to Good Practices series. “Digital Archives from Excavation and Fieldwork: Guide to Good Practice” is the most immediately relevant volume for field evaluation, though others may be more appropriate to the needs of specific projects. Contact details for the Archaeology Data Service are included in Appendix 7.
The Lost Chapel and Holy Well of St Cadoc

Standards Guidance for Archaeological Investigation and Recording of Standing Buildings or Structures

The Institute for Archaeologists is a trading name of the Institute of Field Archaeologists, a company limited by guarantee. It is registered in England, no 1918782. The address of the Registered Office is

SHES
University of Reading
Whiteknights
PO Box 227
Reading
RG6 6AB

STANDARD AND GUIDANCE
for the archaeological investigation and recording of standing buildings or structures

The standard and guidance for archaeological investigation and recording of standing buildings and structures was formally adopted as IFA approved practice at the Annual General Meeting of the Institute held on 11 September 1996.

Published September 1996
Revised September 2001 and October 2008

1 Introduction
2 Principles: the Code of conduct and other by-laws of the IFA
3 Procedures
   3.1 Project identification
   3.2 Briefs/project outlines, specifications and project designs
   3.3 Fieldwork
   3.4 Post-fieldwork analyses, reports and dissemination
   3.5 Monitoring
   3.6 Archives, ownership and deposition
   3.7 Other considerations
Annex 1 Building investigation and recording techniques
Annex 2 Contents of a report
Annex 3 Sources of historical and documentary information
Annex 4 Contents of a data structure report
Annex 5 Recommendations for digital archives

Contents

STANDARD
The Standard 2
Definition of archaeological investigation and recording of standing buildings or structures 2
Purpose of archaeological investigation and recording of standing buildings or structures 2
Occurrence 2

GUIDANCE

Standard and guidance
Last updated: 27 October 2008

92

Wednesday, 22 May 2013
The Lost Chapel and Holy Well of St Cadoc

INSTITUTE FOR ARCHAEOLOGISTS

STANDARD AND GUIDANCE

for the archaeological investigation and recording of standing buildings or structures

STANDARD

The Standard

A programme of archaeological building investigation and recording will determine, as far as is reasonably possible, the nature of the archaeological resource associated with a specified building, structure or complex. It will draw on existing records (both archaeological and historical sources) and fieldwork. It will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of conduct, Code of approved practice for the regulation of contractual arrangements in archaeology, and other relevant by-laws of the IFA. The programme will result in the production of drawings, an ordered accessible archive and a report.

Definition of archaeological building investigation and recording

The definition of archaeological building investigation and recording (ABIR) is a programme of work intended to establish the character, history, dating, form and archaeological development of a specified building, structure, or complex and its setting, including buried components, on land, inter-tidal zone or underwater.

Purpose of archaeological building investigation and recording

The purpose of ABIR is to examine a specified building, structure or complex, and its setting, in order to inform:

- the formulation of a strategy for the conservation, alteration, demolition, repair or management of a building, or structure, or complex and its setting

or

- to seek a better understanding, compile a lasting record, analyse the findings/record, and then disseminate the results.

Occurrence

ABIR may arise:

- prior to, during and on completion of works of repair, alteration, management or demolition

- as part of the planning process (within the framework of appropriate national guidance including planning policy guidance and associated legislation and/or development plan policy)

- in a conservation area, where records of buildings, structures or complexes and their setting (PPG 15 para 2.17; see Appendix 6) may assist the local authority to determine the impact of a given proposal on the character of the conservation area as well as assessing individual buildings and structures of importance

- under the provisions of the Ecclesiastical Exemption (Listed Buildings and Conservation Areas) Order 1994 relating to places of worship and their internal systems of control, and such similar provisions in Wales, Scotland and Northern Ireland and the Faculty Jurisdiction System relating to Church of England Churches and arising from the Care of Churches and Ecclesiastical Jurisdiction Measure 1991; or the Care of Cathedrals Measure 1990 and Supplementary Provisions 1994

- as part of an Environmental Impact Assessment (EIA) (see 3.1.11 below)

- as the basis for, or in conjunction with, proposals or specifications for work (eg those of an architect, engineer, builder or chartered surveyor) to a building, structure, or complex and its setting

- as part of an agreed strategy in mitigation of damage or loss to a building, structure or complex and its setting, including a process of controlled demolition or re-erection

- in conjunction with a programme of archaeological assessment, field evaluation or excavation

- in connection with the preparation of conservation or management plans by private, local, national or international bodies; for example as part of a total facility management scheme in a museum or related context, or where a building is seen to be at risk

- within the context of the interpretation and presentation of the site to the public

- within a programme of research not generated by a specific threat to the archaeological resources

- within the context of a threat from natural agencies

- as part of a disaster mitigation plan by way of insurance against loss or damage

ABIR may therefore be commissioned by a number of different individuals or organisations, including local planning authorities, national advisory bodies, government agencies, private owners, developers or their agents, archaeological and architectural researchers, etc.

GUIDANCE

1 Introduction

1.1 This guidance seeks to define best practice for the investigation and archaeological recording of buildings, structures, complexes and their setting, and contemporaneous reporting, in line with the by-laws of the IFA, in particular the Code of conduct and the Code of approved practice for the regulation of contractual arrangements in field archaeology. It seeks to expand and explain general definitions in the Codes for the practice for fieldwork and reporting.

1.2 This Standard and guidance apply to all types of ABIR, whether generated by academic research, by local interest, through the planning process, by management proposals or by any other proposals which may affect the archaeological resource within a specified area.

1.3 In addition this document seeks to amplify guidance given in appropriate national planning policy guidelines (see Appendix 6), and be compatible with current guidelines issued by regulatory authorities.

1.4 The terminology primarily used follows, PPG 16, PPG 15, PG (Wales) as amended, WO circular 60/96, WO circular 61/96, NPPC 5, PPS 6 and guidance issued by the Association of County Archaeological Officers (ACAO) (1993), English Heritage (1991) and Historic Scotland (1996a), with amplifications where necessary. It also seeks to take account of differences in terminology, legal and administrative practice in different parts of the United Kingdom, Channel Islands and Isle of Man. A glossary of terms used can be found in Appendix 1.

1.5 This document provides guidance for work carried out in the United Kingdom, Channel Islands and Isle of Man. Although general guidance is given, the document cannot be exhaustive,
The Lost Chapel and Holy Well of St Cadoc

INSTITUTE OF FIELD ARCHAEOLOGISTS

particularly in its treatment of legislative issues. Archaeologists must ensure they are familiar with the specific legislation and common law pertinent to the area in which they are working. Archaeologists, commissioning bodies and others may find it useful to consult the relevant documents listed in Appendix 6, and can obtain further guidance from the appropriate advisory bodies listed in Appendix 7.

2 Principles: the Code of conduct and other by-laws of the IFA

2.1 An archaeologist undertaking ABIR must adhere to the five principles enshrined in the IFA Code of conduct, and the rules governing those principles.

1 A member shall adhere to high standards of ethical and responsible behaviour in the conduct of archaeological affairs.

2 A member has a responsibility for the conservation of the historic environment.

3 A member shall conduct his or her work in such a way that reliable information about the past may be acquired, and shall ensure that the results are properly recorded.

4 A member has responsibility for making available the results of archaeological work with reasonable dispatch.

5 A member shall recognise the aspirations of employees, colleagues and helpers with regard to all matters relating to employment, including career development, health and safety, terms and conditions of employment and equality of opportunity.

2.2 Further, the Code of approved practice for the regulation of contractual arrangements in archaeology specifically addresses professional conduct in situations where work is sponsored or commissioned on a contractual basis, especially as part of a development controlled by the planning process. It provides guidance on professional behaviour where more than one individual or body is competing for the same work, and seeks to ensure that the terms for all work are clearly defined, normally by contract.

3 Procedures

3.1 Project identification

3.1.1 The preservation of historic buildings and areas of architectural or historic interest is a fundamental aspect of the Government's commitment to the environmental stewardship for the effective protection for all aspects of the historic environment (see PPG 15 para 11.1, PG (Wales) para 114, PPS 6 para 6.32). As part of a proposal to repair (see PPG 15 Annex C, 4; WO circular 61/96 paras 103-4; WO circular 19/8, Appendix C; PPS 6 para 6.32), alter or demolish a historic building, it is important to have a record of the structure as found. This may be required by the local authority, or as part of the initial site investigation in conjunction with the architect, engineer, builder or surveyor, or as a record of intervention on completion of a programme of alteration or repair.

3.1.2 Within the planning framework in the United Kingdom, Channel Islands and Isle of Man the preservation of archaeological deposits is a material consideration in the planning process. PPG 16, para 18 advises that 'developers and local authorities should take into account archaeological considerations and deal with them from the beginning of the development control process' (see also PG (Wales) para 136, PPG 15 para 21.1, NPPG 5 para 14, PPS 6 para 3.4). PPG 16 also advises PPG 15 (para 2.15 and Annex C).

3.1.3 As preservation of archaeological remains is a material consideration in the planning process, local authorities can reasonably request further information about archaeological matters prior to determination, so that ‘an informed and reasonable planning decision can be taken’ (PPG 16 para 21).

3.1.4 PPG 16 includes, ‘settlements and remains of every period, from the camps of the early hunter-gatherers ... to remains of early twentieth century activities ... places of worship, defence installations, burial grounds, farms and fields and sites of manufacture' as examples of today's archaeological landscape. Standing buildings, structures and complexes form part of the archaeological resource and should be treated in an equivalent manner to other parts of the resource, whether standing, buried, inter-tidal or underwater. Where a specified area is the subject of an archaeological assessment, evaluation or excavation, the archaeologist should take into account the sensitivity of the remains. Conversely where a building, structure or complex is subject to archaeological investigation and recording, the archaeologist should take into account any buried components.

3.1.5 Local authorities may commission surveys of buildings structures or complexes and their setting (PPG 15 para 2.17, WO circular 61/96 par 103-4; PPS 6 para 6.32). This may be as a basis for drafting Conservation Area Statements, determining the impact of a given proposal on the character of the conservation area, or assessing individual buildings and structures of importance.

3.1.6 Within the planning framework, an appraisal (see Appendix 1 for definition) of the building, structure, or complex and/or its setting will be carried out to determine whether further information is required (AACA 1993 Appendix B, 13). This appraisal will normally have been undertaken by the planning archaeologist/conservation officer or curator (but may also have been carried out by an applicant and/or the applicant's agent).

3.1.7 On occasion ABIR may be commissioned in advance of submission of a planning application by the applicant or through their agent or adviser. It should be stressed that in this instance it is appropriate for any proposals for investigation and/or recording to be agreed with the planning archaeologist/conservation officer in advance of intrusive investigation. This is to ensure that the archaeological resource is not needlessly disturbed or damaged, nor inappropriate or excessive cost incurred (Listed Building Consent or Scheduled Monuments Consent may be required for any investigation deemed intrusive to the fabric (PPG 15 para 3.24)).

3.1.8 Under the Care of Cathedrals Measure, a Cathedral archaeological consultant may advise on the desirability of archaeological investigation or recording in connection with proposed works. In the context of an application made to the Cathedral Fabric Commission, or to a Cathedral Fabric Advisory Committee, these bodies may require investigation as a condition of approval.

3.1.9 Under the Care of Churches Measure 1991 (Schedules 1 and 2), Diocesan Advisory Committees are obliged to review and assess the degree of risk to materials, or of loss to archaeological or historic remains or records, arising from any proposals relating to the conservation, repair or alteration of places of worship, churchyards and burial grounds and the contents of such places. Diocesan Chancellors, following the advice of the Diocesan Advisory Committee, may require archaeological investigation or recording before granting a faculty for proposed works.

3.1.10 Certain developments fall within special regulations or statute different from or additional to the standard planning process (eg some projects initiated by public utilities, statutory undertakers, Crown Commissioners, Ministry of Defence etc). Some of these organisations subscribe to codes of practice (eg water companies) or agreements formal or informal) with the lead national archaeological bodies to take into consideration the effects of development proposals on the archaeological resource.

3.1.11 Environmental Impact Assessment (EIA) applies to projects potentially having significant environmental effects (as defined in EC Directive 85/337, and as implemented in the United

Standards and guidance: building investigation and recording

PG (Wales) para 136 and PPG 15 paras 2.11, 2.15, 2.17, and 3.23, PAN 42 para 24, PPS 6 para 3.13). Such information may be provided through desk-based assessment, field evaluation or ABIR.
The Lost Chapel and Holy Well of St Cadoc

INSTITUTE FOR ARCHAEOLOGISTS

Kingdom via various Statutory Instruments etc). EIA involves appraisal, desk-based assessments and in many instances field evaluation. The resulting Environmental Statement (ES) will contain recommendations for mitigating impact on the archaeological resource. The agreed mitigation strategies may include the investigation and recording of standing buildings, structures and landscape complexes: such work would not normally take place before a planning inquiry or public local inquiry.

3.1.12 In EIA, ABIR is usually initiated by the developers or through their advisors, rather than the local planning authority. It is still appropriate for any requirements for ABIR to be discussed and agreed with the relevant planning archaeologist/conservation officer or curator or conservation officer in advance, to avoid needless damage to the archaeological resource.

3.1.13 Management proposals may also result in ABIR in order to obtain information in order to promote the environmental or archaeological resource.

3.1.14 Where a Historic Landscape or Registered Park or Garden is the subject of a proposal for restoration, alteration or development, the impact of the work on any standing structures (eg ornaments, follies, bridges, boundaries, etc) is a relevant factor. A record of these features may form part of any proposals.

3.1.15 Prior to and following a decision relating to a planning application, Listed Building Consent, application, Conservation Area Consent application, Scheduled Monument Consent application, or other application, conditions may be imposed in order to mitigate the impact of the proposals on the archaeological resource (PFG 10 Annex B, 6). The agreed mitigation strategy may include the investigation and recording of standing buildings, structures and landscape complexes.

3.1.16 Conservation Area statements, environmental audits, local plans and supplementary guidance may all be drafted in the course of the management of historic areas. The recording of the historic buildings, structures, and complexes and their setting may contribute directly to the characterisation of such areas.

3.1.17 In certain circumstances, the extensive recording of buildings or landscapes of a particular type or within a defined geographical area may be appropriate in order to establish the general character or relative significance of the resource. Such surveys may be required in connection with an appraisal for large-scale development, EA or for the purposes of research and/or management.

3.1.18 In a research context, the recording of all or parts of selected structures will have been identified by an archaeologist and will be based on defined research interests. This could include work undertaken through universities, central government agencies, local authorities, museums, independent trusts, amateur organisations and societies, private companies or private groups and individuals.

3.1.19 However it arises an archaeologist should only undertake ABIR which is governed by a written specification or project design (see Appendices 2 and 3) agreed by all relevant parties, as this is the tool against which performance, fitness for purpose, and hence achievement of standards can be measured. In Northern Ireland if a building investigation involves excavation a qualified archaeologist must obtain a licence to undertake the work from the EHB.

3.1.20 The specification or project design is therefore of critical importance.

3.2 Briefs/project outlines, specifications and project designs

3.2.1 The planning and preparation stage of any project is key to its success. This section addresses the initial design stages of an ABIR project, after appraisal has determined the need for further work, in whatever circumstances. The following statements assume that briefs (or project outlines in Scotland) and specifications are issued by those requiring work done (planning authorities, other public bodies or developers or their agents etc). Project designs can either be a response to the brief/project outline or specification, or be initiated, for example as part of a research proposal (English Heritage 1991). This may be summarised as follows.

3.2.2 A brief (or project outline in Scotland) is an outline of the circumstances to be addressed, with an indication of the scope of works that will be required (IAA Code of approved practice for the regulation of contractual arrangements in field archaeology, ACAO 1993 Appendix D, 14–15; Historic Scotland 1996a, 2–6). It does not provide sufficient detail to form the basis for a measurable standard; but it could form the basis for a specification or a project design.

3.2.3 For ABIR within the planning framework, the brief/project outline will usually be prepared by the planning archaeologist/conservation officer or curator and issued by the commissioning body, the developers or their agents to the potential contractor or contractors. The brief/project outline or specification may be prepared by the applicants or their agents, but it is essential that the planning archaeologist/conservation officer or curator has agreed the proposals.

3.2.4 Briefs/project outlines, specifications and project designs must be prepared by suitably qualified and experienced persons, utilising specialist advice where necessary. The person writing the brief should have an understanding of the nature, complexity, and architectural and historical interest of the building; should comprehend the purpose of the proposed work and should be able to assess the potential impact of works upon it.

3.2.5 A specification sets out a schedule of works in sufficient detail for it to be quantifiable, implemented and monitored (ACAO 1993 Appendix D, 15). It should be sufficient to form the basis for a measurable standard.

3.2.6 A project design also sets out a schedule of works in sufficient detail to be quantifiable, implemented and monitored, and therefore also forms the basis for a measurable standard. However, a project design may include additional information which covers contractual details such as staffing levels or cost relevant to the commissioning but not necessarily the monitoring body. Project designs are normally produced by those undertaking the work, and can either be a response to the brief/project outline or specification, or be initiated as part of a research or management proposal independent of the planning framework (see Appendix 3 English Heritage 1991, Appendix 2 Historic Scotland 1996a, 7).

3.2.7 In the case of EIA, the brief/project outline or specification will usually be prepared by the developers or their agents, discussed with the planning archaeologist/conservation officer or curator and issued to tenderers. This may also apply to management proposals.

3.2.8 Proposals for ABIR not prompted by a threat to the archaeological remains will normally take the form of a project design, prepared by the researching archaeologist, and agreed with any commissioning body. If there is no external commissioner there must nevertheless be a written design so that the validity of any models or questions posed can be properly assessed, or so that legal requirements (eg Scheduled Monument Consent) can be properly applied.

3.2.9 Where a brief or specification states that the archaeologist shall base their investigation on drawings or data supplied by others (eg architects, engineers, surveyors or other archaeologists) the archaeologist shall be provided with accurate copies of these drawings or data and assess their fitness for purpose prior to finalising a project design or contractual arrangements.

3.2.10 When preparing a specification or project design an archaeologist must give full consideration to all available practicable methods of ABIR and decide upon the most...
The Lost Chapel and Holy Well of St Cadoc

3.2.11 In the planning and execution of destructive investigations where there is no immediate threat to the archaeological resource, the archaeologist must ensure that the investigation causes the minimum damage or destruction necessary to meet the stated research aims of the project.

3.2.12 It follows that some ABIR projects may be properly terminated (with due regard to the future stability of the resource) before the project design is fulfilled, when some significant criterion is met, for example recognition of such an overriding constraint as to render proposed development impractical. In such circumstances the archaeologist should inform the relevant bodies and seek to ensure that appropriate management measures are taken.

3.2.13 The specification or project design must be suited to the project under consideration; any methods advocated must reflect the type of building or structure, and associated buried deposits which are likely to occur. They should not become infeasible irrespective of site and standard templates should therefore be used with care. Other considerations include ‘reasonableness’ in relation to scale of proposal, value for money etc.

3.2.14 Any archaeologist preparing a specification or project design must examine all appropriate sources, and be fully apprised of and abide by all relevant legislation.

3.2.15 When preparing a specification or project design, consideration should be given to the need to include appropriate contingency arrangements with respect to ABIR procedures. In many cases it may prove impossible to meet the project objectives without sufficient flexibility to apply professional judgement in the field. Commissioners and curators should be helped to understand that overly rigid requirements might unavoidably result in a failure to meet archaeological and non-archaeological objectives. Contingency arrangements should not be open-ended but should be properly specified in their own right and reflect prior knowledge of the building or structure, its physical context, and the primary objectives of the project. Contractors must be in a position to justify in detail the eventual implementation of contingency arrangements.

3.2.16 A specification or project design should contain, as a minimum, the following elements:

- non-technical summary
- site location (including map) and descriptions
- context of the project
- archaeological and historical background
- general and specific aims of fieldwork
- legislative requirements
- field survey/research methodology
- collection and disposal policy for artefacts and ecocasts
- arrangements for immediate and long-term conservation of artefacts
- post-fieldwork methodology
- report and record drawing preparation
- publication and dissemination proposals
- copyright
- archive deposition
- timetable

3.2.17 The contents, and different weighting of detail, between specification and project design contents are further amplified in Appendices 3 and 4. Briefs/project outlines and specifications are also discussed in detail in ACAO (1993) and Historic Scotland (1996a).

3.2.18 An archaeologist responding to a tender which includes a brief/project outline or specification may refer to these elements in the project design if they are set out in sufficient detail.

3.2.19 In all cases, the local archaeological curator (and where appropriate, the national agency curator) must be informed of fieldwork in his or her area. Unless there are over-riding reasons against it, local archaeological societies etc should be informed of fieldwork.

3.2.20 The specification or project design should identify relevant data standards for record organisation and content that will be used in information recording systems employed by the project.

3.3 Fieldwork

3.3.1 The specification and/or project design must be agreed by all relevant parties before work commences. All work must conform to the agreed specification or project design. Any variations must be agreed in writing by all relevant parties.

3.3.2 Sufficient and appropriate resources (staff, equipment, accommodation, etc) must be used to enable the project to achieve its aims, the desired quality and timescale, and comply with all statutory requirements. Any contingency elements must be clearly identified and justified. It is the role of the archaeologist undertaking the work to define appropriate staff levels.

3.3.3 All techniques must comply with the relevant legislation and be demonstrably fit for the defined purpose(s). Excavation must be undertaken in accordance with the IFA Standard and guidance for archaeological excavations. In particular, pre-determination invasive investigation and recording (opening up) may require Listed Building Consent (PPG 16 para 3.24) or Scheduled Monument Consent before the main works. Scientific work (eg dendrochronology) should be to approved archaeological standards.

3.3.4 All staff, including subcontractors, must be suitably qualified and experienced for their project roles, and employed in line with IFA by-laws (see Appendix 6). The site director and/or manager should preferably be a corporate member of the IFA.

3.3.5 All staff, including subcontractors, must be fully briefed and understand the work required of them under the specification, and must understand the aims of the project and methodologies. There should be a clear mechanism for communication between the archaeologist and the design team (architect, engineers, etc).

3.3.6 All equipment must be suitable for the purpose and in sound condition and comply with Health and Safety Executive recommendations. It should be noted that some items of equipment are subject to specific statutory controls (diving equipment in particular is subject to the Diving Operations at Work Regulations (see Appendix 6)).

3.3.7 Where the archaeologist has, by instruction or agreement, the power to suspend development or repair work, he or she shall, in exercising such power, follow procedures previously agreed with the other contractors on the site. Within the constraints of the nature of the archaeological resource, the archaeologist shall not cause unreasonable disruption to the maintenance of the work schedules of other contractors.
3.3.8 Unless undertaken as part of a process of controlled demolition, ABIR should not normally result in the loss of historic fabric, including surfaces, of the building, structure or complex. Where the removal of items forms part of the brief/project outline, specification or the project design, the standards and approach to fieldwork, conservation, curation, storage, reporting and ownership are those defined in the IFA Standard and guidance for archaeological excavations. Project collection and discard policies, strategies and techniques must be fit for the defined purpose, and understood by all staff and subcontractors (see also IFA Standard and guidance for the collection, documentation, conservation and research of archaeological materials, ifa finds Group 1992, Historic Scotland 1994).

3.3.9 Full and proper records (written, graphic, electronic and photographic, as appropriate) should be made for all work, using, for example, pro forms record forms and sheets as applicable (see Appendix 2). All archaeological record drawings should be prepared to a suitable scale, using techniques appropriate to the site and to the aims of the project. The requirements for dimensional accuracy (see Appendix 2) should be set out in the specification or project design, including the level of detail, eg individual stones, brick courses, or outlines of major features. Digital records created as part of the project should comply with specified data standards. An archaeologist must ensure that digital information, paper, and photographic records should be stored in a secure and appropriate environment, and be regularly copied or backed up, and copies stored in a separate location.

3.3.10 The recording of all intrusive works ‘as built’ is seen as an important and integral part of the conservation process and the archaeologist shall be responsible for ensuring that the permanent works records are updated and maintained as part of the site archive.

3.3.11 Before new records are prepared, existing sources of information should be found and examined for their adequacy. Such information may be found in surveys, drawings, photographs, published and unpublished accounts and descriptions and a wide range of other documents relating to a building, structure, complex and its setting (see Appendix 6).

3.3.12 The accuracy of all base drawings supplied by the client or their agent to be used for the purposes of ABIR must conform to the accuracy required for archaeological work (Appendix 2) and must be checked by the buildings archaeologist before investigation and recording work commencing. This must be covered within the specification and project design, and is particularly relevant to programmes of work where the buildings archaeologist may be required by the planning archaeologist/conservation officer or other agencies to use material generated by non-archaeological agencies as part of a scheme of investigation and conservation.

3.3.13 Health and Safety regulations and requirements cannot be ignored no matter how imperative the need to record archaeological information; hence Health and Safety will take priority over archaeological matters. All archaeologists undertaking fieldwork must do so under a defined Health and Safety Policy. Archaeologists must observe all safe working practices; the Health and Safety arrangements must be agreed and understood by all relevant parties before work commences. Risk assessments must be carried out and documented for every field project, in accordance with the Management of Health and Safety at Work Regulations 1992. Archaeologists should determine whether field projects are covered by Construction (Design and Management) Regulations 1994, and ensure that they meet all requirements under the regulations. In addition they must liaise closely with the principal contractors and comply with specified site rules. Archaeologists are advised to note the onerous responsibilities of the role of a planning supervisor. For further guidance refer to the bibliography (Appendix 6).

3.3.14 The archaeologist undertaking ABIR must ensure that he or she has adequate insurance policies, public and employer’s liability and some relevant form of civil liability indemnity or professional indemnity.

3.3.15 On arrival on site, the archaeologist should report to the site manager or other identified representative of the principal contractors or developers and conform to his or her arrangement for notification of entering and leaving the site. The archaeologist should keep a record of the date, time and duration of all visits, the number of staff concerned and any actions taken.

3.4 Post-fieldwork analyses, reports and dissemination

3.4.1 In some instances it may be appropriate to undertake an assessment (see English Heritage 1991) of the requirements for analysis and reporting. In Scotland the primary product of fieldwork is the data structure report (see Annex 3 and Historic Scotland 1996a) with a costed assessment for further fieldwork and/or post-excavation and publication. This report form does not have a precise equivalent elsewhere in the United Kingdom (see Appendix 1). In these circumstances the guidance set out in the IFA Standard and guidance for archaeological excavations should be followed.

3.4.2 Where this is not the case, the analysis and reporting should follow the requirements set out in the specification or project design.

3.4.3 All techniques used must be demonstrably fit for the defined purpose(s), and comply with relevant legislation.

3.4.4 Those carrying out the work should be suitably qualified and experienced, and fully aware of the work required under the specification or project design.

3.4.5 All data generated as a result of the analysis phase should be included in the project archive. Interpretation of data will form part of the publication.

3.4.6 All retained artefacts and ecofacts must be treated and packaged in accordance with the requirements of the recipient museum/repository and national guidelines (Museums and Galleries Commission 1992, Society of Museum Archaeologists 1992, UKIC 1993, 1994, 1988 and 1990).

3.4.7 The site archive must be prepared in accordance with the requirements of the recipient museum/repository and national guidelines (Ferguson and Murray 1997).

3.4.8 The archaeologist must ensure that the results of ABIR are disseminated in a reasonable time through appropriate means.

3.4.9 The publication report should normally contain sufficient data and references to the project archive to permit interpretations to be challenged. Similarly, reports should normally integrate the results of specialist researchers with the site sequence, in order to ensure both that important data are not overlooked, and that an informative and interesting account is produced. The assistance of independent referees may be sought to enhance academic quality.

3.4.10 All reports should be written in a clear, concise and logical style; technical terms should be explained if the report is for a non-specialist audience. Locally relevant and familiar terms should be used wherever possible.

3.4.11 Reports should not include recommendations unless required by the planning archaeologist/conservation officer or project specification/project design. However, it would be reasonable for the client to seek independently the contractor’s opinion. Contractors should be careful to note whether or not such advice is a contractual requirement and that they have suitable qualified personnel and professional indemnity cover to undertake such work.

3.4.12 Reports should contain as a minimum:
- non-technical summary
- introductory statements
The Lost Chapel and Holy Well of St Cadoc

INSTITUTE OF FIELD ARCHAEOLOGISTS

- aims and objectives
- methodology
- structural description
- documentary research
- analysis
- conclusion
- supporting drawings, photographs etc
- supporting data
- index to location of archive
- references

The contents are discussed in more detail in Appendix 5.

3.4.13 Copies of a site summary (English Heritage 1991) or data structure report (see Appendix 1 and Historic Scotland 1996b) must be submitted to the appropriate Sites and Monuments Record, the national archaeological record and, where appropriate, the central government conservation organisation within a reasonable period, normally within six months of completion of the fieldwork or earlier, as may be specified by contractual or grant conditions. This should contain sufficient detail to help researchers to find and access the project archive. A suitable format is set out in Annex 5. In Scotland, a summary interim report must be published in an annual regional or national digest of fieldwork (Historic Scotland 1996b). For the United Kingdom and Isle of Man as a whole, it is considered that fuller publication of the majority of projects is required.

3.4.14 Subject to confidentiality arrangements specified for the project, the archaeologist, either during fieldwork or as soon as possible after its conclusion, should prepare a structured description of the project suitable for publication or inclusion in national and local data archives.

3.5 Monitoring

3.5.1 All work must be monitored by the archaeological organisation undertaking the project and, if appropriate, by the national conservation agency, planning archaeologists/conservation officer and commissioning body, or by their nominated representatives. The guidance below is directed in general at monitors from outside the organisation undertaking the work, but many of the points apply equally to internal monitors or managers.

3.5.2 A monitor should be suitably experienced and qualified or have access to appropriate specialist advice.

3.5.3 Monitoring must be undertaken against the written specification and/or project design.

3.5.4 Monitors, where not representing the commissioning body, should bear in mind the need for flexibility, within the stated parameters, in contractual matters such as staff numbers, budgets or timetable.

3.5.5 All monitoring visits must be documented, and agreed by each party.

3.5.6 Non-compliance with the agreed specification or project design must be pointed out by the monitor to the archaeologist undertaking the work, and their client if appropriate, at the earliest opportunity (see AÇAO 1993 Appendix E, 17).

3.5.7 Monitors should be aware of their professional and moral duties regarding Health and Safety, in particular reporting on and advising against bad and unsafe practice.

3.5.8 All monitoring arrangements must be agreed at the outset of the project. The archaeologist undertaking fieldwork must inform the planning archaeologist/conservation officer or other monitor of the commencement of work with reasonable notice.

3.5.9 Although monitors may choose to visit at any time, they should normally inform the archaeologist undertaking the work of any intended visits in advance. Monitors must respect reasonable requests from the client commissioning the work to attend only at pre-arranged times and, if necessary, in the company of the client’s representative.

3.5.10 Any costs for monitoring to be charged by the planning archaeologist/conservation officer or other monitor must be agreed at the outset of the project.

3.6 Archives, ownership and deposition

3.6.1 The requirements for archive preparation and deposition must be addressed at the outset of the project. In Scotland, all excavation archives must be deposited in the National Monument Record for Scotland, which will arrange to copy material to local museums etc.

3.6.2 The recording of buildings, sites or complexes and their setting, unless undertaken as part of a process of controlled demolition or a programme of intrusive archaeological fieldwork, should not normally involve the removal of artefacts from site. Where this does take place, the IAA Standard and guidance for archaeological excavations relating to artefacts should be referred to, and the recipient museum or other repository contacted at the project planning stage. Special arrangements for the deposition of the site archive should be detailed in the specification and/or the project design.

3.6.3 Archive deposition must take account of the requirements of the recipient museum or repository, and the relevant sections of the Re-source: The Council for Museums, Archives and Libraries guidelines relating to the preparation and transfer of archives, or the appropriate national guidelines. A copy of the paper archive should be lodged with the appropriate National Monuments Record, in accordance with its specific requirements.

3.6.4 The site and research archives (English Heritage 1991) generated during fieldwork and post-fieldwork phases should be deposited with the recipient museum in the required format. Artefacts and environmental data form part of these archives. The treatment of human remains will be governed by the relevant legislation and government regulations (see Historic Scotland 1997a).

3.6.5 In the case of Church of England churches and cathedrals and their curtilages, any transfer of finds or records from a church or cathedral is controlled under the Faculty Jurisdiction, the Care of Cathedrals Measure and the Parochial Records Measure.

3.6.6 In England, Wales, Northern Ireland and the Isle of Man, ownership of objects rests with the landowner, except where other law overrides this (eg Treasure Act 1996, Buriels Act 1857). The archaeologist undertaking the fieldwork or the planning archaeologist/conservation officer must make this clear at the inception of the project (in the brief/project outline, specification or project design).

3.6.7 It should be noted that different countries have, inter alia, differing reporting procedures for Treasure and differing requirements for finds deposition. Material cannot be exported from the Isle of Man without a licence. In Scotland all finds of archaeological objects must be reported to the Crown, normally via the Treasure Trove Advisory Panel or the Finds Disposal Panel. Contractors are advised to seek specific advice on excavation and export procedures as in some instances licences are required (see Appendix 7).

3.6.8 Except in Scotland, it is the responsibility of the archaeologist undertaking the fieldwork to endeavour to obtain the consent of the landowner in writing for finds donation and deposition with the recipient museum.

3.6.9 Except in Scotland, in the event that the landowner is unwilling for whatever reason to donate the finds to the appropriate recipient museum, the archaeologist undertaking the fieldwork must endeavour to ensure all artefacts and ecofacts are...
The Lost Chapel and Holy Well of St Cadoc

recorded, safely packaged and conserved where appropriate before transfer to the owner and that their location/ownership is stated in the site archive and public record. It should be noted that the owner’s explicit (written) permission is required before entering such personal information in the public record (see inter alia the Data Protection Act 1984).

3.6.10 In Scotland all archaeological artefacts, irrespective of raw material, may be claimed on behalf of the Crown under common law. This applies no matter where, or on whose property, artefacts are found, as noted in paragraph 3.5 of the IFA Standard and guidance for the collection, documentation, conservation and research of archaeological materials, all finds must be reported to the Treasure Trove Advisory Panel or, in the case of artefacts from fieldwork funded by Historic Scotland, to the Finds Disposal Panel. Ownership in either case is passed to the museum which receives the finds at the end of the allocation process.

3.6.12 The rules of ownership applicable to material which has come from a vessel (ie all those classified as ‘wreck’) are dealt with under the Merchant Shipping Act 1996 (see Appendix 6). In cases of wreck material the Receiver of Wreck, in the Maritime and Coastguard Agency should be contacted.

3.7 Other considerations

3.7.1 It is advisable that ABIR projects are governed by a written contract or agreement, to which the specification or project design may be attached. Such contracts or agreements should include reference to the defined area of study outlined on a map; to the specification or project design; to conditions for access; programme, methods, timetable for payment; copyright and signed and dated by all parties (Davvis and Atkins 1991) together with other intellectual property arrangements (see Cathedrals Fabric Commission Advisory Note 5).

3.7.2 It is normal practice for both the copyright and ownership of the paper and digital archive from archaeological work to rest with the originating body (the archaeological organisation undertaking the work). The originating body deposits the material with the recipient museum or repository on completion of the contracted works, and normally transfers title and/or licences the use of the records at this stage. These arrangements may be varied by contract, and for the avoidance of doubt it is advisable to include statements on ownership and copyright in a written contract agreement.

3.7.3 Material copied or cited in reports should be duly acknowledged, and all copyright conditions (such as those for Ordnance Survey maps and the National Grid) observed.

3.7.4 All matters relating to publicity must be agreed at the outset of the project between the commissioning body and the archaeological organisation or individual undertaking the project.

3.7.5 The archaeologist undertaking the work must respect the requirements of the client or commissioning body over confidentiality, but the archaeologist must emphasise their professional obligation to make the results of archaeological work available to the wider community within a reasonable time.

ANNEX 1: Building investigation and recording techniques

ABIR often takes place in conjunction with, or as a basis for, the work of other professionals eg local authority planners, architects, landscape architects, engineers, surveyors or building and architectural historians and other interpretative agencies. In undertaking buildings investigation and recording archaeologists must be prepared to respect the needs in terms of terminology and conventions of other professionals, and present their information in a manner which may be readily understood by others.

Where archaeological recording is undertaken as a basis for repair or alteration, drawings should be prepared at an accepted scale and accuracy and in a format that is suitable for use by other professionals or on site. Conventions and layout should be readily understood by other associated professionals or clients. Detail of the project, contractor, scale, height values, compass points, National Grid Reference (and any museum site accession code), date, author and title should be noted on each drawing and site record sheet. The following types of drawings and written records may be appropriate to a programme of ABIR

Analytical drawing

Based on suitable scaled base drawing or photogrammetric plot but showing relative phasing and stratigraphic analysis of the structure, for example on changes in materials, butt joints, key joints, mortar, surface treatments or other constructional details. May comprise sections, elevations, details and plans.

Detail

Drawing designed to illustrate or explain a selected detail of construction (eg jointing), alteration (eg complex junction), technology or function. May be plan, section, elevation, axonometric, isometric or cut-away. Scale is normally larger than that for base drawings.

Dimensioned sketch

Drawing, not to scale but including dimensioned information. Could comprise plan, cross-section, elevation, and detail.

Interpretive drawing

Drawings produced to illustrate phasing, development, analysis, function or use of a structure, building or complex. These may not necessarily be to scale and may be axonometric, isometric or cut-away as well as plans, sections or elevations. May include reconstructions of lost features, functions, machinery or form.

Rectified photography

The process of obtaining dimensioned information from a single photograph, which is usually aligned parallel to the wall plane. A distance measured on the wall plane then provides scale. Computerised methods can reduce the need for accurate alignment.

Scaled base drawing as existing

Existing survey showing structure as found, including fixtures, fittings, features, materials, and constructional details. May show individual stones, brick courses, timbers or general form of building. May comprise section, elevation, detail, and plan. Below ground remains or associated features should be shown where relevant.

Site survey

Scaled survey showing buildings, structures or complexes in their local setting, including significant locational features, such as plot boundaries, undertaken by hand-measured survey or by electronic data collection.

Additional methods available:

- ground based remote sensing
- dendrochronology
- magnetometry
- photogrammetric plot
- photogrammetry
- resistivity
- sample collection

ANNEX 2: Contents of a report

The level of detail required in a report will depend upon the requirements of the brief, the project design and upon the professional judgement of the individual contractor. A report might contain as a minimum the following elements, depending on the nature of the site.
The Lost Chapel and Holy Well of St Cadoc

INSTITUTE OF FIELD ARCHAEOLOGISTS

Non-technical summary

This should outline in plain, non-technical language, the principal reason for the work, its aims and main results, and should include reference to authorship and commissioning body.

Introduction

This should include the scope of the project, circumstances and dates of fieldwork, acknowledgements and a brief archaeological, historical, topographical or technical background to the site.

Site description

Description of the structure, building or complex as found including archaeological interpretation of sequence, construction or function, use of materials. The description should use terminology appropriate to the architecture of the period. The results of any associated below-ground archaeological work should be incorporated into the site description.

Aims and objectives

These should reflect the aims of the brief, specification or project design.

Methodology

The methods used, including detail of any variation to the agreed project design or specification should be set out carefully, and explained as appropriate.

Documentary research

Presentation of map, pictorial, documentary or other research, setting out implications of source for understanding the archaeology of the site and its ability to inform.

Analysis and interpretation

Analysis and interpretation of the site, drawing together documentary, archaeological, technical, dating and other sources including a summary of specialist contributions in a description of the development and function of the site through time.

Development or other impact (if appropriate)

Implications for the archaeology of the site of any development, repair, demolition or management proposals.

Conclusions

A summary of the results of the work, placing the site in its context (local, regional, national, international, archaeological, historical or technical in terms of setting, origin, purpose, form, construction, design, materials or status). The section should include a statement on the reliability of the sources or any limitation imposed on the work. Recommendations on further work may also be required, but in most cases within the planning framework this will be the responsibility of the relevant planning archaeologist/conservation officer or curator.

Appendices

These should consist of essential technical and other details to support the conclusions, and may include for example, a copy of the project design, a table of individual archaeological contexts (if used or gazetted site components), details of supporting technical or dating work, specialist contributions in full, summaries of sources, copies of documents, project archive catalogue, list of consultees, index to site codes.

Illustrations

Illustrations including modern location map, site survey, as-found drawings, detail drawings, interpretative drawings, analytical drawings, record photographs and copies of relevant historic sources (e.g. historic OS, tithe and estate maps, historic illustrations). These may be within text or at the end, or where needed for site purposes in an attached pocket. They should be clearly numbered and easily referenced.

Bibliography

A list of all primary and secondary sources, including maps and illustrations if not referenced elsewhere.

Other

Contents, disclaimers.

ANNEX 3:
Sources of historical and documentary information

Archaeological and buildings databases

Source type


Source location

National heritage bodies, Royal Commissions, Local Authorities, museums, archaeological trusts and units, universities, Ordnance Survey, local archaeological and historical societies and other professional and amenity groups interested in buildings.

Historical documents

Source type

Charters, registers, manuscript collections (ecclesiastical, deeds, wills, probates and inventories, estate papers, electoral rolls, rating and taxation records, contemporary unpublished accounts, diaries, building records, plans and elevations, published accounts, industrial investigations.

Source location

Public Record Office, parish records, diocesan and cathedral record offices, county and district record offices, estate and private collections, district and county development control records, and other local authority administrative records, museums, national and local libraries, study centres, press and other publication libraries, Ordnance Survey, British Library, Lambeth Palace Library, the Church of England Record Centre and the record offices and libraries of other religious denominations, naval and military archives.

Cartographic, pictorial documents

Source type

Early maps, prints, drawings, paintings, photographs, tithe apportionment maps, enclosure award maps, estate maps and plans, Ordnance Survey maps, Admiralty charts, property plans with deeds, probates and inventories and for taxation and fire insurance purposes.

Source location

As for documents above and including the British Library, National Monuments Records, topographical collections, the Victoria and Albert Drawings Collection, the Bodleian Library, the RIBA drawings collection, the Irish Architectural Archive, the National Libraries of Scotland and Wales, the Manx Museum.

Aerial photographs
The Lost Chapel and Holy Well of St Cadoc

In Scotland, the data structure report is accompanied by a site summary intended for publication in Discovery and excavation in Scotland published by the Council for Scottish Archaeology. For further information see Historic Scotland 1996b, 9.

ANNEX 5:
Recommendations for digital archives

Projects vary in their organisation and implementation, even where standards and best practice are employed. This annex provides a checklist for the types of data to be included in the digital archive of a building investigation. Where those data do not exist they need not be created. Where they are not available in digital format, they need not be digitised. The archive has two components: the minimum archive is the index level record; with other materials as appropriate. Thus, the archive should consist of:

1. Index level record

An index level record for the investigation conforming to relevant standards. The exact content and structure of that record should be developed in consultation with relevant heritage agencies and identified in the project design. Local circumstances will dictate form of delivery though digital supply should be preferred, in order that the record may be appended to existing databases without the need for manual data entry.

2. Other associated data sets

Other associated data sets should be included in the digital archive, such as project specification documents, project design documents, a desk-based assessment report (where this has not already been archived), and a Building or standing structure report. Analytical drawings, rectified photographs, interpretative or detailed drawings, survey data or detailed illustrations should also be supplied if available in digital format. The precise composition of the archive will vary with local circumstances.

Data creation

All data created as part of a project design should follow standards and guidelines for good practice. Data that is being deposited in a digital archive and should be supplied in a form consistent with that archive’s deposition guidelines.

Further guidance on the management and archiving of digital data can be obtained from the Archaeology Data Service, summarised in part in the Guide to Good Practices series. “Digital Archives from Excavation and Fieldwork: Guide to Good Practice” and “CAD: Guide to Good Practice” are the most immediately relevant volumes for building surveys, though others may be more appropriate to the needs of specific projects. Contact details for the Archaeology Data Service are included in Appendix 7.

ANNEX 4:
Contents of a data structure report

A data structure report is a requirement in Scotland. Its contents are listed here for guidance. The level of detail required will depend on the quantity and complexity of data.

A data structure report should be produced speedily after each fieldwork exercise or season of fieldwork. It provides a structure for the records of an ABIR, and is the basis for further analysis and final archiving of the site archive. It includes:

1. Lists of data
   - contact numbers with brief descriptions
   - other written documents
   - plans, elevations and other illustrations
   - photographs (annotated)
   - small finds lists, with context numbers and brief descriptions of important objects

This list is copied to the Queen’s and Lord Treasurer’s Remembrancer and forms the basis for allocating finds to a museum; environmental archaeology samples, with a description and explanation of why they were taken.

2. A narrative account of the site sequence explaining
   - the relationship between groups of contexts
   - important finds
   - provisional interpretations
   - sequence diagrams, sketch plans and other diagrams as required
   - environmental archaeology samples
The Lost Chapel and Holy Well of St Cadoc

INDEX

Autodesk, 15, 16, 22
Baseline offset, 14
Cadoc, 2, 4, 5, 8, 9, 10, 11, 12, 13, 17, 18, 23, 24, 25, 26, 32, 34, 35, 36, 37, 38, 39, 40, 41, 42, 47, 48
Catacleuse, 19, 22, 38
Cemetery, 10, 11, 12, 13, 17, 19, 22, 31, 37
Point Cloud, 15, 16, 20, 22
Community, 10, 14, 16, 23, 41
Doble, 11, 12, 13, 14, 16, 17, 18, 20, 24, 25, 36
Dowsing, 3, 5, 14, 20
Geomatic, 10
Geophysical Survey, 5, 9, 23, 37
Google, 4, 9, 12, 16, 17, 24
Granite, 19, 22
Health and Safety, 11
Henderson, 5, 11, 12, 17, 25, 32, 36
HER, 5, 7, 10, 14, 17, 25, 35, 48
Herringbone, 22
Holy well, 9, 18, 20, 23, 37, 42

IfA, 15, 16
Iron Age, 10, 41, 42, 43, 44
Jope, 5, 12, 19, 25, 49
LEIOS 2, 15, 16
Packhorse Bridge, 9, 12, 18, 23
Phenomenology, 13, 20
Photogrammetry, 4, 5, 14, 15, 20, 24, 25
Photosynth, 15, 20, 22, 25
Plan, 6, 12, 13, 14, 17, 18, 20, 23, 36, 41
Prideaux, 10, 11
Risk assessment, 11, 38, 41
Roof tile, 19, 24
Silt, 9, 19, 22
Social media, 10
Stream, 10, 12, 23
Survey, 4, 9, 10, 13, 14, 15, 18, 19, 20, 22, 23, 25, 37, 43
Synth, 15, 16, 20
Tithe, 11, 12, 17
Visualisation, 15, 16, 18
Volunteers, 3, 8, 10, 16, 22, 23, 39, 54