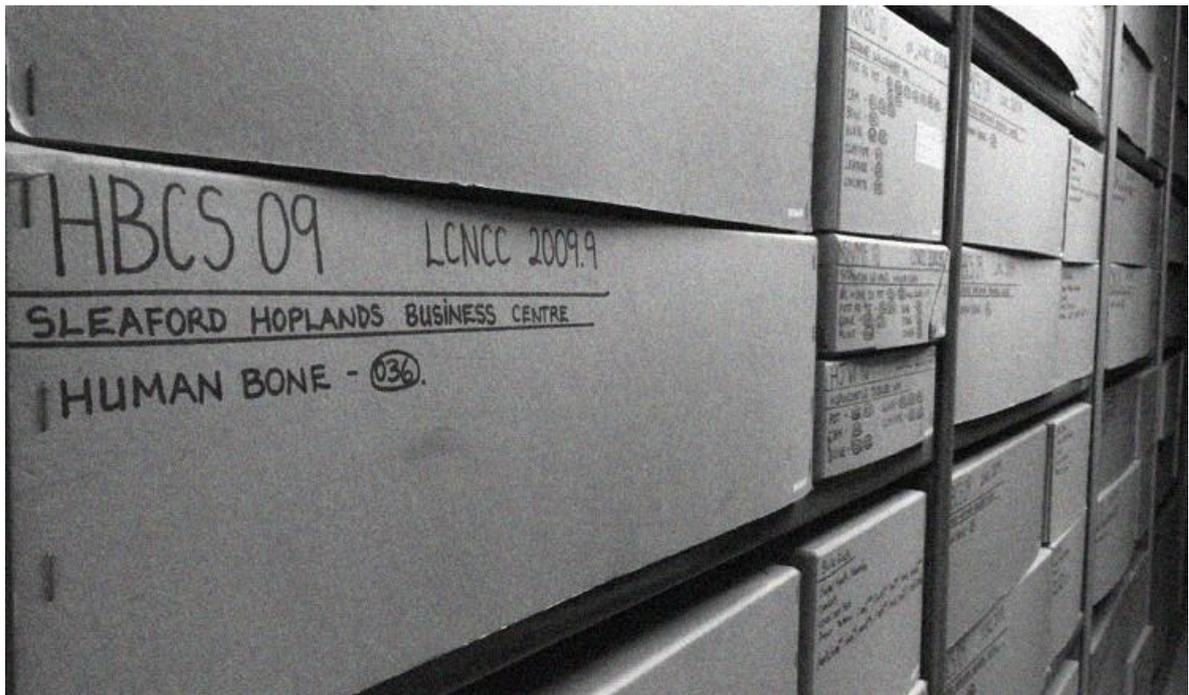


# ARCHAEOLOGICAL ARCHIVES DEPOSITION GUIDELINES



**This document forms chapter 17 of the  
Lincolnshire Archaeological Handbook**

**v4.1, MAY 2017**

The latest versions of this document and associated forms can be found at:  
[www.thecollectionmuseum.com/?/about-us/archaeological-project-archives](http://www.thecollectionmuseum.com/?/about-us/archaeological-project-archives)

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# **PART 1**

## **PROCEDURES AND PRINCIPLES**

## 17.1 INTRODUCTION

Following the retrieval of archaeological data it is essential that an ordered archive is produced and lodged with a suitable repository. In the post 1974 county of Lincolnshire this is the Lincolnshire County Council Heritage Service (hereafter referred to as 'the Heritage Service'). Material excavated in North Lincolnshire and North East Lincolnshire should be deposited in the relevant repository. Throughout this document, contracting archaeological units and amateur archaeological organisations involved in the preparation of archives are referred to as 'the contractor'.

The Heritage Service's stores are the only ones in the county to be approved and registered by Historic England as suitable for housing archaeological archives from excavations that they have funded. It is fitted with security devices and environmental monitoring equipment to ensure the security and integrity of the archives stored there. The Heritage Service's collecting policy guides it to collect and preserve the evidence of human occupation within the county for the benefit of the people of Lincolnshire. The collections contain items dating from the earliest evidence of human occupation in the county to the 19th Century.

In order that the collections be of as much benefit as possible for future research, education and display, it is essential for the Heritage Service to obtain the archives from all scientifically conducted work. This document sets out the current minimum criteria for the acceptance of archaeological archives and provides guidelines for contractors in the preparation of the archive.

The Heritage Service expects that contractors will adhere to the following fundamental principles of creating an archaeological archive:

- All archaeological projects must result in a stable, ordered, accessible archive
- All aspects of the archaeological process affect the quality of the resulting archive
- Standards for the creation, management and preparation of the archive must be understood and agreed at the beginning of any project
- Ensuring the security and stability of the archive is a continuous process and a universal responsibility
- A project has not been completed until the archive has been transferred successfully and is fully accessible for consultation

Regular contact with the Heritage Service regarding all the stages described in this document is recommended.

## 17.2 THE HERITAGE SERVICE AND THE ARCHIVE

The Heritage Service will accept the total archive from any systematic archaeological work carried out within the post 1974 county of Lincolnshire (see Appendix A) provided that it meets the requirements set out in this document. This includes the product of building surveys, photographic surveys and geophysical surveys. These requirements are designed to facilitate the effective storage, retrieval and future study of the material. The main consideration is the integrity of the archive. In order to be most effective for study it is important that both the paper and the object archive are stored together. There will be occasions when this is not possible and the Heritage Service will accept the paper archive (or a full copy) if it proves impossible to donate the object archive. This should be regarded as an exception rather than a rule, however, and must be discussed with the Heritage Service at the earliest opportunity. Retrieval for study and study itself are greatly facilitated if a standard format is adopted in the production and management of an archive. The Heritage Service's requirements and procedures are set out below.

The Heritage Service will allow access to archives in its care through prior appointment. Appointments can be made by emailing [archdeposition@lincolnshire.gov.uk](mailto:archdeposition@lincolnshire.gov.uk).

If an archive is only partly within the Heritage Service's collecting boundary, for example a pipeline project, the final destination of the archive must be discussed before the commencement of work with all relevant repositories. It is often beneficial for an archive to be retained intact, rather than split between repositories. This is the only instance in which the Heritage Service will collect excavated material from outside its collecting boundaries. The Heritage Service will expect to receive a copy of the documentary archive for sites across county boundaries where the physical archive is being held outside of Lincolnshire.

The Heritage Service will under no circumstances accept archives resulting from work that it believes have been undertaken unlawfully, for example without permission of the landowner or on a protected site without relevant permissions.

## 17.3 COMPOSITION OF THE ARCHIVE

The archive is defined as the total assemblage of artefacts and records from an excavation or field survey.

Every archive will comprise up to four elements:

- Documentary archive
- Non-sensitive bulk finds
- Sensitive bulk finds
- Registered finds

These elements must remain distinct within the archive, and finds and documentation **must** be boxed separately. Parts 2 and 3 of this document explain how the Heritage Service expects each of these categories of material to be treated and archived.

The Heritage Service advises that terminology detailed in the Museum Documentation Association (MDA) Archaeological Objects Thesaurus (obtainable through the Collections Trust) be employed when describing objects in the archive.

Contractors are expected to use professional judgement when determining which objects in an assemblage are registered on site. The Heritage Service expects that the results of post-excavation analysis (e.g. finds specialists' reports and x-radiographs) will be used in determining the importance of an object and its suitability for registration. This may mean that previously bulk objects will become registered during the post-excavation phase. If an object becomes registered in this way, the Heritage Service expects that it will be re-assessed to ensure that any stabilisation treatment and packaging are suitable for its new status. The object should also be re-assessed by a specialist if necessary. The Heritage Service reserves the right to refuse to accept an archive if such second phase work is not satisfactorily investigated.

## 17.4 ACCESSION NUMBERS AND SITE CODES

The Heritage Service will assign a unique accession number and site code to a project at its inception, which the contractor must request.

### Accession numbers

The accession number is the unique number given by the Heritage Service to any object entering its permanent collections, archaeological or otherwise. It consists of three elements:

- An alphabetical code which identifies the museum nationally ('LCNCC')
- The year in which the number is generated
- A sequential number

An example accession number would therefore be 'LCNCC: 2007.123'. The accession number must be written in full whenever it is used.

### Site codes

The site code is a 3 or 4 letter reference to the site name, followed by the year of excavation. Each site code will be unique in that year to avoid confusion. Contractors are invited on the site notification form (see Appendix B) to choose their own preferred site codes, though these must not be used until confirmed by the Heritage Service.

Large sites requiring work over a number of years or where subsequent phases of work are required may keep the same letter code and be differentiated by the year number. For example, an intervention at Hall Farm, Saxilby in 2014 may be issued a site code of HFS14. A second year on the same site would be given the site code HFS15. The contractor must always confirm this with the Heritage Service and not assume that the same code will be used.

New accession numbers will be required if a previous stage of work has been deposited with the Heritage Service, or is being undertaken by a different contractor. New accession numbers should also be requested when a new phase of a project involves a 'reset' of site numbering (e.g. context and find numbers restart at '1').

The accession number relates to the year in which it was processed, and may therefore differ from the year identifier of the site code. This is acceptable, and the Heritage Service cannot generate retrospective accession numbers.

Please note that the informal abbreviation 'LCCM', sometimes used to refer to the former City and County Museum, is not an official code, and must not be used on archives.

**The Heritage Service issued site code will be the only code associated with the completed archive, and replaces any temporary codes used by contractors.**

## 17.5 PROCEDURE FOR NOTIFICATION OF WORK AND DEPOSITING ARCHIVES

The full procedure for applying to the Heritage Service for a site code / accession number and depositing completed archives is set out in the flow chart below. The site code / accession number application form can be found in Appendix B. It is the responsibility of the contractor to ensure the security of the archive until its deposition with the Heritage Service (see also section 17.15.5). This includes insurance of objects when with the contractor (or any subcontractors or specialists) and during transit to the Heritage Service. The Heritage Service will not be financially or ethically liable for any costs incurred to archives prior to their deposition. Any damage found to have occurred to an archive upon deposition, even if it has occurred during transit, will need to be resolved by the contractor.

The costs of transporting the archive to the Heritage Service must be met by the contractor. **Archives must be personally deposited with the Heritage Service by the contractor. The Heritage Service will not accept archives delivered by courier. The maximum number of boxes to be deposited in a single archive deposition should not exceed 25 (finds boxes and documentary boxes).** The Heritage Service may allow this figure to be raised in some circumstances, following discussion with the contractor. The contractor must forward a list of the archives to be deposited and the total box count when arranging a deposition.

**The entire archive must be deposited at the same time.** It is the responsibility of contractors to ensure that all elements of an archive are prepared for deposition at the same time (e.g. finds returned from specialists) and inform the Heritage Service if this is not possible.

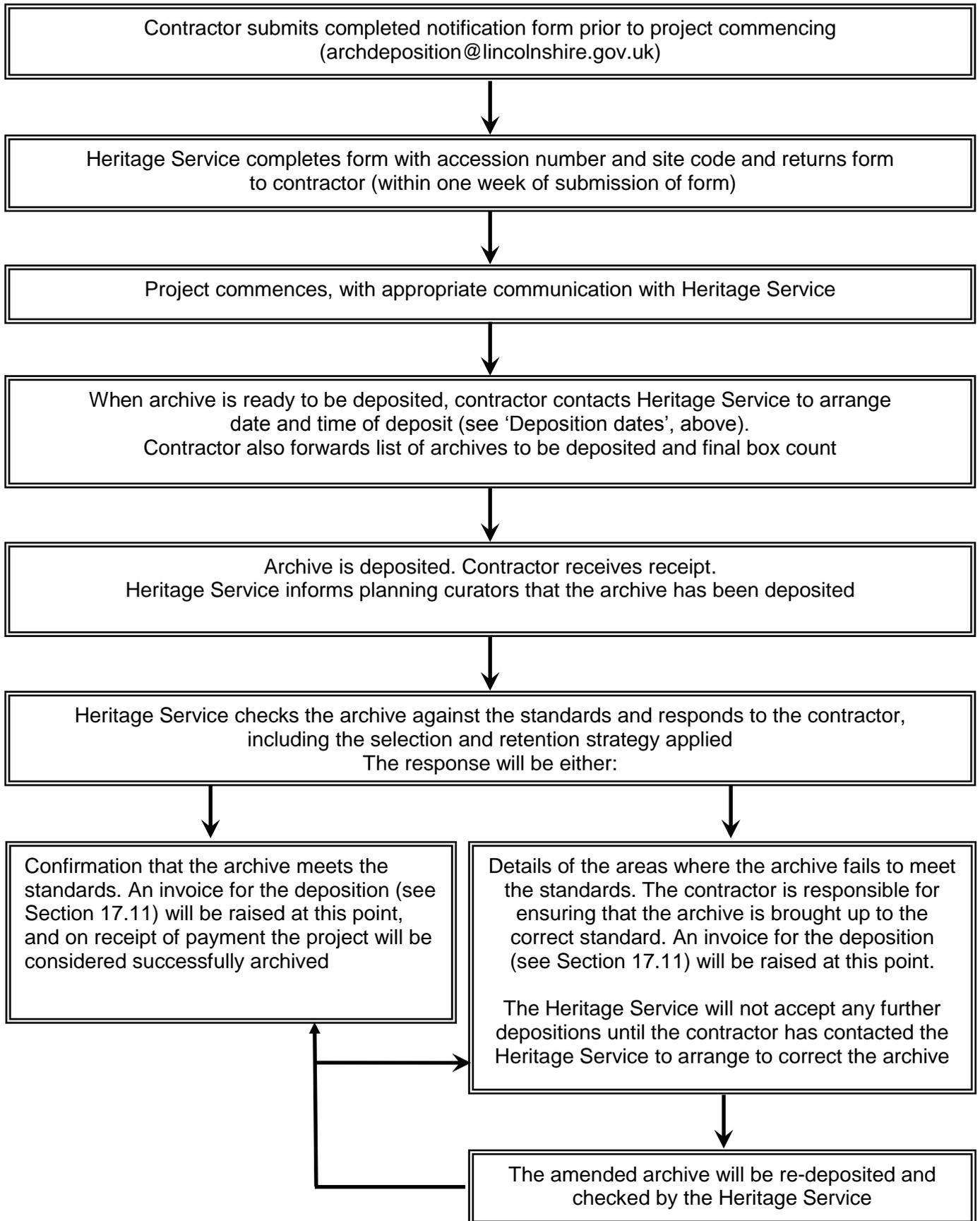
### Deposition dates

The Heritage Service will be available for the deposition of archives for six blocks in the year. These blocks are:

The first full week in February  
The first full week in April  
The first full week in June

The first full week in August  
The first full week in October  
The first full week in December

Depositions in these blocks **must** be booked in advance. Archives of exceedingly large size or unusual composition may be accepted outside of these blocks in exceptional circumstances, at the discretion of the Heritage Service. Deposition outside of these blocks purely to facilitate the fulfilment of planning conditions will not be allowed. It is the responsibility of contractors to factor these blocks into project planning.



## 17.6 CONSULTATION

The Heritage Service expects to be consulted in any major issues relating to the project, including but not exclusively:

- Changes to the project brief
- Abnormally large finds assemblages
- Significant finds assemblages or assemblages which will require increased levels of curation or conservation
- Decisions relating to levels of conservation required
- Conservation work above the levels required by this document, for example aesthetic improvement (see section 17.13)
- Prior to any destructive analysis of any element of the archive
- Significant changes to the proposed deposition date
- Decisions regarding the retention of human skeletal material
- Where any or all of the finds from the archive are to be retained by the landowner or transferred to a third party (including find specialists, universities etc.)
- Significant delays in the project timetable
- Transfer of the project to another contractor
- Projects that only partially lie within the Heritage Service's collecting boundary
- Cancellation of the project

The Heritage Service expects to be consulted on such issues at the earliest opportunity, so that integrated solutions may be sought.

## 17.7 FINDS SPECIALISTS

The Heritage Service expects that contractors will employ all relevant specialists necessary to interpret the site and the finds, including ceramics, small finds, environmental data and geophysical surveying. It is imperative for the interpretation of the site and the future value of the archive as a research resource, that finds are properly identified by a relevant specialist. Specialist advice may also guide conservation treatment and packaging (see sections 17.12 to 17.15). **The Heritage Service may refuse to accept an archive if relevant specialists' reports have not been commissioned.** The Heritage Service may also refuse to accept an archive if recommendations made in specialists' reports (such as for illustrations or further investigative work) are not carried out. The Heritage Service may refuse to accept material that a specialist has recommended be discarded.

The Heritage Service expects specialists' reports to be in a format and using terminology consistent with that currently in use in Lincolnshire.

## 17.8 SELECTION, RETENTION AND DISPERSAL

### 17.8.1 Retention and dispersal rationale

Decisions regarding the selection, retention and dispersal of archaeological material must balance two contrasting factors:

- The implicit need to create as complete an archive as possible, containing as much information as may be required to reinterpret the site in the future
- The realities of museum storage and the practical need to physically retain vast quantities of common and typologically identical material

The purpose of the selection process therefore, as summarised by the Society of Museum Archaeologists' guidance document 'Selection, Retention and Dispersal of Archaeological Collections' (1993) (hereafter referred to as SMA 1993) is:

- To enable a mass of finds and data to be quantified and interrogated more effectively
- To remove material of no perceivable information value and / or intrinsic interest
- To distil the information, research and utility values of an archive into a manageable and cost-effective archive, without compromising the archive's integrity

It is expected that a retention strategy will be proposed by the contractor before work begins on the site, which takes into account the wider archaeological landscape of the site. Any correspondence or rationales regarding the formulation and implementation of the strategy should be included in the documentary archive. The process of assessing and documenting objects for dispersal is a time-consuming and potentially expensive task. The Heritage Service expects contractors to show due diligence in devising retention strategies and expects that the both the intrinsic interest of an object (including potential for future research) and its contextual relevance will be taken into account. Stratification alone is not deemed a valid reason for either retention or dispersal. Unstratified material of intrinsic value (e.g. Pleistocene faunal remains or post Medieval material) must be considered on its individual merits.

**Ferrous metalwork must not be discarded until it has been analysed by x-radiography (see section 17.14.1).** For selection and dispersal of individual materials, the Heritage Service refers contractors to section 4 of SMA 1993. Sections referencing treasure trove should now be disregarded in favour of the Treasure Act 1996.

**Any material discarded from the archive, either on site or during the post excavation phase, must be fully recorded and listed within the documentary archive**, including the reason for and method of the dispersal (e.g. reburied, retained by landowner). The record must also include a full count and weight of discarded material. **Any registered finds not retained in the archive (e.g. retained by the landowner) must be suitably recorded in the archive with photographs or illustrations.**

The Heritage Service expects that no material will be removed from an archive for retention by the contractor or a finds specialist (e.g. for inclusion in a type series) without prior consultation with the Heritage Service. In such instances, it is expected that, wherever possible, retained material will be selected from material that would otherwise have been discarded. **All material removed from the archive for such a purpose must be fully documented, and proxy cards placed in the appropriate archive boxes.**

In the case of material selected for destructive analysis, the Heritage Service expects that it will be consulted at the earliest opportunity, and before the analysis has occurred. The Heritage Service expects that comprehensive records of the object and the processes involved will be included in the documentary archive.

The Heritage Service reserves the right to refuse to accept an archive if it is felt that the selection, retention and disposal process has not been carried out to acceptable professional standards.

### 17.8.2 Human remains

In the case of human remains, the Heritage Service adheres to the Department for Culture, Media and Sport's document 'Guidance for the Care of Human Remains in Museums' 2005. In respect of human remains excavated from consecrated ground, the Heritage Service adopts the guidance set out by Historic England and the Church of England in 'Guidance for the best practice for treatment of human remains excavated from Christian burial grounds in England' 2005.

Unless there is requirement for immediate reburial (e.g. due to age or burial conditions), human remains are expected to be deposited with the Heritage Service in the following circumstances:

- Stratified articulated inhumations
- Stratified disarticulated inhumations (depending on the quantity and condition of bone present)
- Cremations

Unstratified human remains will only be collected in exceptional circumstances and these must be discussed with the Heritage Service prior to deposition.

Stratified remains suitable for retention and further study should be identified at the post excavation phase, on the recommendation of an osteoarchaeologist. The Heritage Service should be consulted in any discussion over the retention of human remains by third parties.

Reburial of human remains is the responsibility of the contractor, including liaison with coroners and registrars and all costs pertaining to ethical reburial. **The Heritage Service must receive, as part of the documentary archive, a record of the reburied material, the reasons for reburial, details of the location of the reburial site and copies of all correspondence.** For further guidance on best practice regarding reburial, contractors are directed towards section 4.4.1 of SMA 1993 and IFA paper No. 7 'Guidelines to the Standards for Recording Human Remains'.

Guidance on the packaging and marking of human remains can be found in section 17.16 of this document.

### **17.8.3 Sampling**

The Heritage Service draws a distinction between two forms of sampling:

- Samples which are *examples* – retained from a group of similar objects, the remainder of which have been discarded (for example bricks from a wall)
- Samples which are *analytical* – taken from a bulk deposit for the purposes of identifying that deposit (for example mortar samples)

It is expected that, in the case of ‘examples’, the entire group will be collected and analysed before the sample is taken, to ensure that it is representative of the group and of an appropriate size.

The Heritage Service expects that any issues regarding sampling that arise during fieldwork will be discussed with all relevant parties, including the Heritage Service and the landowner. It is possible that material of lesser research value to the archive may be useful to the Heritage Service in terms of education material, and the Heritage Service is happy to discuss such material with contractors. Such education material is not considered part of the archive.

In the case of analytical samples, it is expected that any surviving samples subjected to analysis will be deposited with the archive along with the resulting report. Samples that are wet or stored in alcohol will not be accepted. Any samples taken but not analysed are not expected to be deposited with the archive, unless there are specific reasons for doing so. This must be discussed with the Heritage Service prior to deposition. It is expected that the contractor will carry out any and all analyses essential to the interpretation of the site.

### **17.8.4 Industrial processes**

Sites producing evidence of industrial processes such as metal smelting, mining or smithing; glass working; ceramic or tile kilns; salt production; bone working; leather working or stone working (including prehistoric lithics) can produce vast quantities of material. Contractors are referred to section 4.2 of SMA 1993 for guidance on sampling such material.

### **17.8.5 Structural remains**

The remains of buildings obviously cannot be included within the archive in their entirety. Contractors are referred to section 4.3 of SMA 1993 for guidance on sampling such material. It is expected that worked stone and stone with inscriptions, masons marks etc will be given particular consideration.

### **17.8.6 Disposal from completed archives**

The Heritage Service reserves the right to discard archival material after its deposition. This disposal will be carried out within the bounds of the current Lincolnshire County Council policies covering collections access and development.

## 17.9 LEGAL TITLE

By law, all excavated material, with the exception of those items falling under the remit of the Treasure Act 1996, is the property of the landowner. The Heritage Service will only accept an archive if ownership has been formally transferred in writing to Lincolnshire County Council. A transfer of title form can be found in Appendix E. It is the contractor's responsibility to ensure that the person signing the transfer of title form has the legal authority to do so. The Heritage Service presumes to never purchase an archive, and will only accept an archive on loan in specific circumstances, such as excavations on Crown land, and only when the Heritage Service has been approached prior to deposition.

The contractor should attempt to obtain transfer of title before the project begins, though it is accepted that this is not always possible. When difficulty in obtaining transfer of title arises, evidence of multiple attempts to gain it, in the form of written evidence (dated emails or written letters) must be provided with the archive. The contractor must contact the Heritage Service as soon as a problem with transfer of title arises and no promises should be made to the landowner on the Heritage Service's behalf.

If significant objects or significant quantities of objects are retained by the landowner without prior consultation with the Heritage Service, the Heritage Service reserves the rights to either accept only the documentary archive or to refuse to accept the archive altogether.

The importance of retaining the integrity of the archive must be stressed to the owner, as must the fact that the archive is passing into public ownership for future research access, not remaining in private hands. The Heritage Service is prepared to discuss acceptance of partial archives, but the contractor must be able to demonstrate that efforts have been made to obtain the full archive.

## 17.10 COPYRIGHT

Copyright of the documentary archive will remain with the excavator and the authors of specialist reports. Lincolnshire County Council must be granted full licence to research, study, display, publish and provide public access to all the information and finds contained in the archive. It is the responsibility of the contractor to obtain such permission from sub-contracted specialists, and this should be written into briefs when employing sub-contractors.

The Heritage Service will acknowledge the originators of the archive in any utilisation of the material and will pass on to the originators any requests for publication of parts of the archive for anything other than academic journals.

The Heritage Service acknowledges that elements of the archive, such as Ordnance Survey maps and original illustrations may remain the copyright of third parties.

The Heritage Service will honour any reasonable confidentiality clauses placed on material within an archive, for example a time restricted non-publication clause.

## 17.11 CHARGING POLICY

The Heritage Service charges for the deposition of archive boxes, irrespective of the age of the archive. The charges are designed to cover the costs incurred by the Heritage Service to manage and curate the archive in the long term. **Charges are made for all boxes deposited, whether containing documentation or finds.**

Charging levels will be reviewed on an annual basis. The charging level will be based on the costs incurred by the Heritage Service to manage and curate archives in the long term, and it is the responsibility of contractors to ensure that they are using the latest charges when costing projects. The charge incurred will be the amount current at the time of deposition. The current charges can be obtained by contacting the Heritage Service, or by looking at the 'Archaeological Project Archives' page of The Collection's website – accessible at:

[www.thecollectionmuseum.com/?/about-us/archaeological-project-archives](http://www.thecollectionmuseum.com/?/about-us/archaeological-project-archives)

The charges for finds are based on 'full-size' and 'half-size' low acid bulk boxes (see Appendix C). Smaller boxes (e.g. registered finds boxes) and loose items (e.g. architectural stone) will be calculated to the equivalent volume of a bulk box and charged accordingly. Skeleton boxes will be charged as 'full-size' boxes and skull boxes as 'half-size' boxes. Charges relating to abnormally large objects with bespoke packaging will be discussed with the contractor at the point of deposition. **Any archive with finds will be charged a minimum of a single half-sized box.**

Documentary boxes (see Appendix C) will be charged at the same rate as 'half-size' bulk finds boxes.

**The box count for a deposition, from which the charge will be calculated, will be agreed with the contractor at the point of deposition.**

Contractors are permitted to place archives within previously deposited boxes as long as there is space and the inclusion would not cause the previously deposited box to breach any of the guidelines set out in this document. Additions to previously deposited boxes will not incur a deposition charge, but a deposition consisting entirely of archives to be placed in previously deposited boxes will incur a staffing charge of £25.70 per hour.

## **PART 2**

# **FINDS ARCHIVES**

## 17.12 CONSERVATION AND INVESTIGATION OVERVIEW

### 17.12.1 Stabilisation of the assemblage

A minimum basic requirement to enable deposition of an archive is to stabilise the assemblage to confer a level of long-term integrity to it, as described in currently accepted standards of best practice for the transfer of an excavation assemblage to a receiving organisation (e.g. MAP2, now incorporated within MoRPHE - Management of Research Projects in the Historic Environment, and other associated documentation), and also reflected in the local authority's planning and development control requirements.

The stabilisation needs of an archive are normally two-fold:

- Provision of appropriate packaging – including physical support and environmental control - necessary for long term storage
- Remedial treatment of actively deteriorating objects

#### **Packaging**

**All items in an assemblage require an appropriate level of packaging.**

Packaging guidance is set out in detail in section 17.15. Further advice on packaging needs of an assemblage can be sought from the Heritage Service and/or an accredited archaeological conservator associated with the project.

Where contractors have followed guidance such as that contained within First Aid for Finds, they should note that such guidance is intended to advise on the needs of an assemblage during and immediately following its recovery from the burial site only. Such guidance does not cover all of the tasks required to render an assemblage transferable to the Heritage Service for long-term storage, and further evaluation of its needs will be required before the contractor's responsibility is discharged.

#### **Remedial Treatment**

Some items in an assemblage may require remedial treatment to recover unstable structures – for example damp or waterlogged material. Remedial treatment for these items must be carried out by an accredited archaeological conservator prior to deposition. Further guidance is set out in section 17.13.

**Delivery of these two functions (Packaging and Remedial Treatment) fulfil the contractor's basic responsibility toward stabilising the archive prior to transfer of the archive to the Heritage Service.**

### 17.12.2 Investigation of finds

Finds should also be fully interpreted and reported on prior to transfer, involving the appropriate specialists. To inform this work, further investigation of finds may be required to assist interpretation, particularly of those elements of the assemblage which have obscured morphology.

Commonly this is likely to involve the following:

- X-radiography
- Investigative Conservation
- Analysis

### **X-radiography**

X-radiography will be undertaken in order to screen all aspects of morphology, for relevant groups of material. This will be carried out by someone with appropriate training/experience in the x-radiography of archaeological material, often an accredited conservator/practitioner.

**X-radiography of certain groups is an essential requirement for archive transfer.** See section 17.14.1 for further information.

### **Further Levels of Investigative Conservation Work and analysis**

In some cases further levels of conservation work beyond remedial level may be required to aid interpretation. Further analysis may also be indicated. This will not apply to every object or project but is dependent on needs for further investigation that have been identified during the 'Assessment of potential for analysis' stage.

**This work should be carried out prior to archive transfer by appropriate specialists and the results included in site and specialist reports.** Further information is set out in sections 17.13 and 17.14.2.

## 17.13 CONSERVATION OF OBJECTS

### 17.13.1 Levels of conservation

Conservation (in this context defined as interventive work on archaeological objects) is generally described within three levels:

- Remedial Conservation
- Investigative Conservation
- Aesthetic Improvement

These can be defined as follows:

*Remedial Conservation*; treatment carried out to recover unstable conditions.

*Investigative Conservation*; selective intervention to investigate specific aspects of an object for research purposes.

*Aesthetic Improvement*; intervention to enhance an object and assist with interpretation for advocacy purposes.

### 17.13.2 Remedial Conservation

Unstable structures require recovery through remedial conservation. **This is an essential element of work that must be carried out prior to deposition.**

The assemblage should be referred to an appropriately qualified person for assessment, identification and recovery of all issues. Conditions that require treatment commonly include the following (but note this is not an exhaustive list):

**Actively corroding metalwork** – most commonly iron and copper alloy. Iron is especially susceptible to active corrosion upon excavation, particularly if environmental control is not tightly maintained. Active corrosion will be evident through the specific corrosion products that result and evidence of damage that occurs as this progresses – cracking, delamination, loss. Treatment to recover existing damage and measures to prevent further corrosion through provision of appropriate environments will be required.

**Damp and waterlogged material** – e.g. leather and wood. Any damp and waterlogged material that warrants retention in the archive and transfer to the Heritage Service, must be treated by an appropriate method. This is likely to involve firstly impregnation with a suitable bulking agent followed by an appropriate drying method and will probably have to be undertaken by a specialist. Other methodologies (e.g. air-drying alone) will not produce acceptable results in most cases and must be discussed with the Heritage Service before proceeding as such processes are irreversible. See the Historic England publication *Waterlogged Organic Artefacts* for further guidance.

Other material that might be in this condition and require a similar approach includes bone, textile, ivory, horn, antler, basketry, jet, shale, amber, glass, low-fired ceramic, composite (e.g. iron knife with wooden handle), etc.

**Cracked, crumbling, delaminating structures** – e.g. glass, bone, plaster, amber, ivory and any other item where there is evidence that the physical structure of the object is compromised with loss/potential for further loss.

**Block-lifted material** - there are a number of circumstances where an item or group of items might be recovered by block-lifting on site. These include waterlogged objects, fragile objects (e.g. low-fired ceramics, textile etc.), fragmented items (e.g. fractured glass/ceramic vessels, ivory rings etc.) and complex groups (e.g. bead groups, grave goods, hoards etc.). These must be dismantled and component parts recorded and treated as required before deposition.

**Completion of remedial tasks does not usually involve "cleaning" or other aesthetic improvement work (unless it is a necessary part of remedial treatment), and objects will still generally be in an 'as-excavated' condition following work.**

### 17.13.3 Investigative Conservation

Sometimes further potential works, such as investigative cleaning/reconstructions etc. may be requested by (for example) artefact researchers associated with the project. This might involve, for example, investigative corrosion removal to further clarify features highlighted on x-radiographs. If such work is identified and agreed as part of a further phase of the project (e.g. during assessment of potential/analysis phase), this would need to be done in addition to the basic minimum requirement. The Heritage Service expects that appropriate levels of investigation will be carried out to determine the identification, typology and function of an object, as well as the existence of decorative schemes.

### 17.13.4 Aesthetic Improvement

Improvement of the appearance of an object for aesthetic reasons (sometimes referred to as 'full cleaning' or 'display level conservation') is not usually a requirement within the planning and development context and would not normally be a requirement for archive transfer.

Where such work does take place, note that within this level of conservation work there will options and a decision-making process regarding the exact work undertaken ('full cleaning' can be a misleading term in this respect). A project specification will be required for discussion with the conservator contracted to carry out the work.

If such work is considered for a specific project – e.g. for a public event or temporary display organised by the developer or contracting unit – this **must** be discussed with the Heritage Service to ensure decisions and project specifications also suit the Heritage Service's future responsibilities towards an object or archive and future advocacy needs.

### 17.13.5 Additional points

**Conservation reports must be provided for all objects that have undergone any level of conservation (remedial, investigative and aesthetic). The reports must include methodology, results and materials used.**

Where corrosion removal is undertaken as a secondary phase of work, this will generally require an adjustment to packaging to ensure suitable support. Objects are often more physically vulnerable following this type of work and likely to require greater levels of support through provision of bespoke packaging. **Where there is a need for adaption/replacement of packaging this must be carried out prior to archive transfer.**

**The Heritage Service will not accept cost as a valid reason for not carrying out relevant work (unless in exceptional circumstances) and reserves the right to refuse to accept an archive if it is not satisfied with the level of work commissioned by the contractor.** Communication with the Heritage Service should occur at the earliest opportunity if the contractor is in any doubt as to the level of investigation required for a specific object.

## 7.14 INVESTIGATIVE TECHNIQUES

### 17.14.1 X-radiography

Screening the assemblage (or appropriately selected sections of it, such as metalwork) via x-radiography will be undertaken to clarify morphology where this is obscured by the processes of deterioration/burial. This non-invasive method will reveal the form and structure of an object as well as other significant details and forms a permanent long-term visual record of the objects. **It is an essential part of the site archiving process.**

#### What to X-ray

This **must** be undertaken for **all iron** in the assemblage (both registered and non-registered finds)

X-radiography will also be required for **most** other metalwork and also some other components of an assemblage – e.g. block-lifted groups, vessels with contents, composites with metal components etc.

It may not be required in specific circumstances, where information would be limited e.g. thick and chunky lead alloys, some copper alloy finds with no accretion (e.g. from waterlogged deposits), obviously modern easily identifiable objects.

It should be carried out on any part of the assemblage where there is potential for the technique to reveal hidden information that will aid understanding and interpretation of the finds. Including:

- object identification/type
- form and shape
- level of deterioration
- surface features and decoration
- technological detail (e.g. manufacture and associated processes)
- relative positions of components/objects (particularly block-lifted finds, vessel contents)

#### How to X-ray

Generally all objects will need to be imaged using multiple incremental exposures (varying exposure time and/or energy of the beam) and also through precise and specific rotations, producing a series of images of each object. This will screen all aspects of morphology, including outermost corrosion/burial debris to reveal even subtle evidence. A more limited approach may be acceptable in certain circumstances, e.g. for very large groups of clearly identifiable nails, where screening without rotations would enable the identification of any items worth further study.

Plates should be clearly labelled, distinguishing between the various views and exposures and identifying multiples parts and groups of objects. Sites should always be X-rayed on separate plates and plates should not be cut to separate objects or remove blank space.

## Notes

**The Heritage Service expects to be consulted on which sections of the assemblage require x-radiography and to what level**, for the purposes of long term curation and public interpretation.

All x-radiography must be completed (and the results interpreted) prior to archive transfer.

A full set of x-radiographs must be included in the archive.

A quality control system should be in place for both the exposure and processing of x-radiographs.

X-radiographs must be marked and packaged appropriately (see section 17.17.8)

Refer to the Historic England publication *Guidelines on the X-radiography of Archaeological Metalwork* for more detailed information.

### 17.14.2 Other analyses

The need for further analysis may be identified for some artefacts during the 'Assessment of potential for analysis' stage (e.g. X-ray Fluorescence, oxygen isotope analysis). Some types of analyses (e.g. microstructural) are destructive in nature. The Heritage Service expects that it will be consulted at the earliest opportunity where the potential for such analysis has been identified, and before the analysis has occurred.

The Heritage Service expects that comprehensive records of the object and the processes involved will be included in the documentary archive.

All analysis work should be completed prior to archive transfer, and objects re-incorporated into the site archive.

## 17.15 OBJECT PACKAGING

### 17.15.1 Principles of packaging

Material comprising the physical archive will be packaged differently depending on its material and condition. Specific packaging guidelines are provided below, but some general packaging principles apply to all elements of the object archive:

- All bags and boxes must be marked directly in lightfast and waterproof permanent black marker pen with the accession number, site code, context number, registered find number (if applicable) and the material contained. **All boxes must be marked on two sides of the box, one long side and one short side.** Do not use adhesive labels. Paper contents lists placed inside boxes are not an acceptable substitute for marking the box exterior.
- Polythene-style boxes must be suitably robust, airtight, stackable and of a suitable size (see Appendix C). For example, takeaway-style boxes would not be acceptable.
- Always use conservation grade materials such as acid free tissue, plastazote, ethafoam and correx. Consult an accredited archaeological conservator or the Heritage Service if unsure how to obtain or use these materials
- All items should be placed within their own space within a box. Suitable padding and space within a box is likely to be adequate protection for most items.
- Where items need more protection, foam may be added to finds bags.
- Never roll or wrap an object, for example in acid free tissue.
- Bags and foam should be of a suitable size to not compromise access to the object/s. It should be easy to remove objects from the bag. Any delicate or fragile object that may be damaged through use of a bag and foam should be provided with more appropriate protection, such as a box.
- Never pad out half full boxes with packaging chips, bubble wrap or newspaper
- Bespoke packaging might be provided in a variety of ways. For example cushioning with acid free tissue in a box or construction of a customised box and foam support. **Appropriate conservation grade materials must be used for the construction of bespoke packaging.**
- Objects should be accessible and easy to extract from and replace in its packaging. Where appropriate, space should be provided around objects to enable them to be picked up, e.g. finger holes in foam.
- Boxes should not be overfilled with objects or packaging, to avoid the risk of crushing.
- No individual box should weigh more than 7kg

### 17.15.2 Bulk finds - non-sensitive

The majority of material such as pottery, building material and animal bone will be considered as bulk non-sensitive finds. Any bulk items of a more sensitive or diagnostic nature, as detailed below, require greater physical protection.

Bulk non-sensitive material should be washed and stored in re-sealable pierced polythene bags within low-acid cardboard boxes (see Appendix C for acceptable box dimensions).

Material from more than one archive may be stored in the same box but must be separated within the box, and the box marked accordingly. However, contractors must make all efforts to keep different sites boxed separately.

Finds from larger sites should be boxed by material type. For small sites, e.g. watching briefs, different materials may be boxed (but not bagged) together, provided that more delicate material is provided adequate protection and that boxes are not overfilled.

**Finds in boxes should be arranged in context order.** Under no circumstances should different materials be bagged together, even when from the same context. There may be occasions where bulk objects are not stored with their contexts, for example where material has been extracted for publication or illustration or where parts of a single object have been found in different contexts and subsequently re-joined. Proxy cards should be placed in the context boxes from which the objects have been taken.

The species of bulk animal bone should be marked on the bag when feasible, and on the outer cardboard box where space permits.

**All bulk ceramics must be bagged according to their ware type, using established codes used by Lincolnshire ceramics specialists.** The specialists should be contacted directly for any queries regarding use of these codes.

### 17.15.3 Bulk finds - sensitive

Distinction needs to be made between sensitive bulk material and registered finds. The term sensitive bulk finds is used to refer to bulk material of a more diagnostic or physically delicate nature that requires a greater degree of protection than non-sensitive bulk finds.

Sensitive bulk finds may need additional physical protection than is generally required for bulk finds. Some examples are listed below. This list is not exhaustive; all bulk assemblages should be screened to identify items that need additional protection.

Sensitive bulk finds might be stored in a separate smaller box either within the main low-acid bulk box or separately. Separate boxes must be labelled as described in section 17.15.1, above. See sections 17.12 and 17.13 for further information on the conservation of objects.

**The following, once given additional protection, can be placed inside the main non-sensitive bulk boxes**

**Small mammalian, avian or piscine bones** should be packed in small boxes by species and labelled.

**Friable and fragile ceramics** need special attention. They should be provided with adequate physical protection but still following all other instructions regarding marking and storing according to context and ware type.

Any sharp, thin or otherwise fragile **glass** should be provided with adequate physical protection, generally in a smaller box, or at least with sufficient padding. Painted or otherwise decorated glass should always be packaged in a separate box – see below.

**Friable and fragile shell** should be provided with adequate physical protection. Particular care must be taken with very small shells that may be crushed by other bulk material.

**Charcoal samples** should be provided with adequate physical protection, generally in a smaller box to prevent it being crushed by other material.

**The following must be packaged separately according to the specific instructions below, and not placed inside the main low-acid bulk box**

**Human skeletal material.** This should be placed within a skeleton box (see Appendix C), bagged by skeletal area. Upper and lower limb bones separately on each side, axial skeleton, hands and feet individually and the skull carefully supported and placed in a separate skull box (see Appendix C). If the skull is fragmentary, it may be bagged within the main skeleton box. Care must be taken to protect more fragile bones from damage, through the positioning of bones in the box and the insertion of protective foam where necessary. **No more than one individual should be placed in a single box** without prior consultation with the Heritage Service.

**Metals.** All metals (and associated material, e.g. **slag**) must be treated as sensitive and packaged sympathetically to their condition. They should be placed in labelled polythene bags within sealed polythene boxes. Different metal types (e.g. iron, copper alloy) should be stored separately. It is not expected that bulk metals will be packaged to the same level as registered metal finds, for example multiple objects may be placed in the same bag. The effects of physical abrasion on such objects must be considered and the objects provided with adequate protection to ensure their survival, even though they are bulk objects. **Bulk metals should be packaged separately from registered metallics**, and must be packaged with an appropriate amount of silica gel and a humidity indicator card. Advice should be sought from the Heritage Service if in doubt over the packaging of bulk metallics.

**Leather.** Bulk leather objects should be packaged sympathetically to their condition, stored in bags within sealed polythene boxes. All leather must be appropriately treated before deposition. **Waterlogged leather will not be accepted.**

**Complete or near complete ceramics**, including those found to be so after reconstruction, should be separately packaged according to their need, using low-acid card boxes or custom packaging where necessary. Bubble wrap or packaging chips should never be used to support ceramics in the box.

**Wood** is unlikely to survive in such quantity that it will be treated as bulk material, but if this is the case, it must be packaged with consideration for its condition. This

will include smaller pieces being placed in polythene bags and then inside polythene boxes. Larger or unusually shaped pieces will require bespoke packaging. Advice should be sought from the Heritage Service if there is any doubt over the suitability of packaging. Wood must be appropriately treated prior to deposition. **Wood will not be accepted by the Heritage Service if it is still in a waterlogged condition.**

**Painted/Decorated Glass** would generally be expected to be registered, but if it is not it should be placed in a polythene box with suitable bespoke support. Wrapping in tissue paper in a polythene bag would not generally be considered suitable.

**Environmental samples, e.g. flots, thin sections, metallographic samples** should be stored using suitable inert materials (e.g. polythene boxes, glass jars). Packaged samples should be grouped together into an appropriate outer box. Any specific storage guidance supplied by specialists should be adhered to. Environmental conditions should be maintained as appropriate for the sample material type (see section 17.15.5). Unprocessed, wet, or samples stored in alcohol will not be accepted.

#### **17.15.4 Registered finds**

These include finds that are registered on site and those that are considered to be worthy of registration in hindsight (see below). For the purposes of packaging, all registered finds should be treated as sensitive. Registered finds must be fully assessed to identify bespoke packaging needs.

If there is any doubt as to the correct method for packaging of registered finds, advice must be sought from the Heritage Service or an accredited archaeological conservator. Sections 17.12 and 17.13 set out conservation requirements in more detail.

Different materials should be boxed separately. All objects must have their own individually labelled packaging (e.g. polythene bags or boxes) within the outer sealed polythene box. The effects of physical abrasion on such objects must be considered and the objects provided with adequate protection to ensure their survival. Larger registered finds (e.g. stone and complete ceramics) must be provided with suitable bespoke packaging. **Finds in boxes should be arranged in registered find number order.**

**Provision of suitable microclimates within registered finds boxes is essential.** Refer to section 17.15.5 below.

On very small sites, it is possible to group items registered and sensitive bulk finds of the same material together to maximise storage efficiency. This must be discussed with the Heritage Service in advance. Different material types should not be stored in the same box except in the case of composite items (e.g. an iron knife with a bone handle). Guidance should be sought from the Heritage Service or an accredited archaeological conservator if there is any doubt over the most suitable packaging or environment for composite material.

All bags and boxes should be marked with the accession number, site code, context, registered find number and, where appropriate, x-ray film number. Where appropriate for singly packaged items, an image of the object should be placed on the outside of the box.

### 17.15.5 Environment

It is important that sensitive bulk and registered finds are provided with suitable environments for their long term preservation. Suitable environments within boxes must be provided at the point of deposition, as detailed below. Consult the Heritage Service or an accredited archaeological conservator if in any doubt as to the suitable environmental conditions or controls required.

Any humidity control (e.g. silica gel) within a box must not be placed on top of objects and should be easily accessible for replacement.

The table below lists the ideal conditions for common archaeological materials.

Material	Relative Humidity (RH)
Ferrous metal	<15%
Non-ferrous metal	<35%
Bone	40-60%
Glass	40-60%
Ceramic	40-60%
Jet / shale	40-60%
Leather (post treatment if waterlogged)	40-60%
Wood (post treatment if waterlogged)	40-60%

Types of environmental control and monitoring that might be required include:

- **Desiccated silica gel** (silica gel which is supplied dried out and is very efficient at adsorbing water from the air at low RH (below 45%). Used to produce very dry conditions)
- **Buffered / conditioned silica gel** (silica gel that is supplied having been conditioned to a specific RH. It controls changes to relative humidity by absorbing and desorbing water vapour from surrounding air. It is used to maintain conditions to a specific relative humidity within a mid-range RH (e.g. 50%)
- **Humidity indicator card**. This must cover the full scale from 0% to 100%
- **Oxygen scavengers** (sachets used to create very low oxygen environments within sealed packaging)

The Heritage Service will not accept the following:

- Self-indicating silica gel
- Loose silica gel in boxes

- Silica gel in glued and/or paper sachets (only stitched fabric sachets will be accepted)
- Silica that has been previously used (unless regenerated)
- Multiple very small sachets (e.g. those typically found in shoe boxes and electrical product packaging)
- Humidity indicator cards with a reduced range (e.g. 20% - 60%)

Consult the Heritage Service or an accredited archaeological conservator for advice on identifying such objects and determining their individual requirements.

### **Using silica gel in boxes**

The silica gel quantity required to maintain an appropriate microclimate in a box long-term depends on a number of factors, such as the size of the box, the type of contents, room conditions when the box is sealed, frequency of access etc. However as a general guide, silica gel should be added to containers at a minimum of the following ratios. The environment in the box should be monitored to ensure required conditions are maintained. Silica gel should be replaced as often as necessary to maintain conditions.

- Desiccated silica gel should be added to boxes at a minimum ratio of 30gms/litre (1000cm<sup>3</sup>)
- Buffered silica gel (e.g. Prosorb) should be added to boxes at a minimum ratio of 4gms/litre (1000cm<sup>3</sup>)

### **Ferrous and non-ferrous metals**

Ferrous and non-ferrous metals must be placed within a well-sealed polythene box. All boxes should be provided with an appropriate amount of desiccant (silica gel), determined by the volume of the box and according to the formula below. A humidity indicator card must be placed within every box so it is visible without the need to open the box.

### **Non-metallic objects**

All registered non-metallic finds and relevant sensitive bulk finds must be stored in a well-sealed polythene box. A humidity indicator card must be placed within every box so it is visible without the need to open the box. Desiccant must not be used.

### **Vulnerable objects**

Some particularly vulnerable objects will require additional environmental controls. Some examples are:

- Composite objects (e.g. bone and iron). May require buffered / conditioned silica gel to a specific humidity
- Ivory and very unstable bone. May require buffered / conditioned silica gel to a specific humidity
- Very unstable iron. May require an oxygen scavenger

### **Care of finds prior to deposition**

The Heritage Service expects that sensitive bulk and registered material will be kept in suitable environmental conditions from as soon as possible after excavation

until its deposition in the Heritage Service. As well as the provision of microclimates (as detailed above and in guidance such as First Aid for Finds), the environment in contractor's storage areas is also important. This should be stable, protected from extremes and fluctuate as little as possible. The changes in temperature between day and night can be particularly problematic as temperature also directly affects humidity.

Environments within boxes should be monitored using humidity indicator cards and silica gel must be replaced whenever necessary until the archive is deposited.

**Material that has been allowed to deteriorate, even after conservation treatment, through poor storage environments will not be accepted by the Heritage Service.**

The physical security of objects is also of paramount importance, and the Heritage Service expects that objects will be stored in secured spaces, not openly accessible to visitors.

Contractors are also directed towards IFA Paper No. 8 'Disaster Management Planning for Archaeological Archives' for further practical advice on safeguarding archives prior to deposition.

## 17.16 OBJECT MARKING

### 17.16.1 Principles of object marking

Sections 17.15 (finds) and 17.17 (documentary) detail what information should be applied to the outer packaging for each element of the archive. This section outlines procedures for the physical marking of objects within the archive, in accordance with procedures set out by the Museum Documentation Association guidance document 'Labelling and Marking Museum Objects'.

All objects should be marked when possible, though the method used to mark different materials differs and is set out below.

Ideally, marks made on objects should be:

- **Secure.** The chances of accidental removal of the mark must be remote
- **Reversible.** It should be possible to intentionally remove a mark from an object, even after 50-100 years, with little or no trace of the mark remaining
- **Safe for the object.** Neither the materials nor the technique used to apply the mark should put the object at risk
- **Discreet but visible.** The position of the mark must not obscure detail on the object or spoil its appearance. It must however, be able to be seen without undue handling of the object
- **Safe for staff.** The materials used to apply the mark should be safe for the person applying it and subsequent users, if relevant health and safety guidelines are followed.

Some materials should never be used to mark museum objects. These specifically include correction fluid (e.g. Tippex™), nail varnish and nail varnish remover. These should never be used as alternatives to conservation grade materials.

### 17.16.2 Object marking requirements

The Heritage Service expects that specific object types within the archive should be marked by the following means. Please note that decisions regarding marking should be made with regard to the condition of the individual object. Please consult the Heritage Service or an accredited archaeological conservator if there are any doubts over the marking of an object.

**All individual bulk finds, including ceramic sherds, stonework and animal bone should be marked** with the site code or accession number and context number, if the object is in a condition to be marked. Ceramic sherds should be marked on the body of the sherd, not on the broken edges and in a contrasting colour to the sherd's fabric. Bulk finds need only be marked with ink, not with paraloid.

Registered finds must be physically marked with the site code / accession number and registered find number, unless they are of a small or fragile nature. Examples of objects not expected to be physically marked would include corroded ferrous material and coins.

<b>Material</b>	<b>Marking technique</b>
Animal bone	Mark with ink
CBM	Mark with ink
Ceramics	Mark with ink
Clay pipe	Mark with ink
Coins and tokens	Do not mark
Copper alloy (except coins and tokens)	Mark with paraloid and ink, if suitable (see section 17.10)
Glass (vessel and window)	Mark with paraloid and ink, if suitable (see section 17.10)
Human bone	Do not mark
Iron	Mark with paraloid and ink, if suitable (see section 17.10)
Jet / shale	Mark with paraloid and ink (see section 17.10)
Lead	Mark with paraloid and ink, if suitable (see section 17.10)
Leather	Do not mark
Stone (architectural)	Mark with ink or paint
Wood	Do not mark

### 17.16.3 Locating the mark

The following considerations should be borne in mind when locating a mark on an object:

- Avoid physically unstable surfaces, or marking across an existing break or crack
- Avoid decorated, painted, pigmented, varnished or waxed areas
- Choose a position that is not likely to be visible if the object is placed on display, for example away from areas of detail or decoration
- Avoid areas where the mark is at risk from abrasion from packaging or handling
- Mark all detachable parts of an object
- As far as possible, standardise the positioning of marks on similar objects

### 17.16.4 Suitability of an object for marking

The standard method for marking registered archaeological objects is with paraloid and drawing ink. This process is detailed in section 17.16.5. Bulk finds can be marked directly with drawing ink.

Some objects are unsuitable for permanent marking with ink, depending on a number of factors. If in doubt over the suitability of an object, assess the condition of the object against the table below, determining whether the object scores 'low', 'medium' or 'high' against the categories listed in the column on the left.

-	Low	Medium	High
<b>Physical surface stability</b>	Cannot mark without disturbing the surface	Can mark without disturbing the surface	Tape tied loosely around loop etc. in object will not cause surface material to be disturbed
<b>Physical strength (resistance to tensional forces)</b>	Object likely to be damaged if moderate force applied to tied-on label	Object unlikely to be damaged as long as force applied to tied-on label is not enough to break attachment/ adhesion	Object unlikely to be damaged even if force applied to tied-on label is enough to break attachment/adhesion
<b>Porosity</b>	Significant quantities of acetone-based paraloid will not be absorbed into surface on application	Significant quantity of paraloid will be absorbed but more viscous adhesives or acrylic mixtures will not	Significant quantity of viscous adhesive and acrylic mixtures would be absorbed on application
<b>Roughness</b>	Writing on surface is easy	Writing on surface is possible but more difficult	Writing on surface is impractical
<b>Flexibility</b>	Does not bend in normal handling	Bends, but not enough to cause paraloid or ink layer to crack	Bends enough to cause paraloid or ink layer to crack, e.g. cloth, leather

Then compare the results with the table below. If the object does not meet the criteria for 'drawing ink and paraloid', one of the other options below may be more suitable.

-	Surface materials	Physical surface stability	Physical strength	Porosity	Roughness	Flexibility
<b>Drawing ink and paraloid</b>	Not painted, waxed, varnished, pigmented, plastic or leather	Medium - high	Any	Low	Low-medium	Low-medium
<b>Loose label</b>	Any	Any	Any	Any	Any	Any
<b>Tie-on label</b>	Any	High	High	Any	Any	Any
<b>Paint</b>	Not painted, waxed, varnished, pigmented, plastic or leather	Medium - high	Any	Low (oils) Medium (acrylics)	Low-medium	Low-medium

Organic materials should never be marked with ink and paraloid. Paint should only ever be used on stone and architectural ceramic. Tied on labels should take the form of Tyvek© labels attached with non-bleached cotton tape. Labels should be attached with care to non-delicate elements of the object. Always consult the Heritage Service or an accredited archaeological conservator if in any doubt about marking and labelling techniques, materials or positioning.

### 17.16.5 Marking an object

If an object is suitable for marking with ink, the following procedure should be followed for registered finds (bulk finds require only steps 7 and 8):

- 1 Moisten a cotton bud with a small quantity of acetone and remove any excess
- 2 Roll the cotton bud over the area to be marked, making sure that it is as small an area as possible. This cleans the surface
- 3 Wait for 30 seconds for the acetone to evaporate. If any adverse effects are noticed, contact an accredited archaeological conservator for advice
- 4 Mix a solution of Paraloid B72 granules in acetone at 20% weight to volume (e.g. 20g Paraloid in 100ml acetone). Wait for the granules to dissolve. Store in an airtight container
- 5 Apply a thin layer of the Paraloid / acetone solution to the object with a small brush
- 6 Allow to dry for 5 minutes
- 7 Apply the number using drawing ink. **Use white or black ink depending on the colour of the object**
- 8 Allow 15 minutes for the ink to dry
- 9 Apply a second layer of Paraloid / acetone solution to seal the ink
- 10 Allow to dry for 5 minutes

If at any stage you need to remove any paraloid and ink, use a cotton bud dipped in a small amount of acetone. Acetone can also be used to clean brushes and thin the Paraloid / acetone mixture (though drying time may be increased). Remember that the Paraloid / acetone mixture is flammable and must be appropriately stored. Its use should always be in accordance with the contractor's own Health and Safety risk assessment / COSHH assessment etc.

## **PART 3**

# **DOCUMENTARY ARCHIVES**

## 17.17 THE DOCUMENTARY ARCHIVE

### 17.17.1 Documentary archive marking

All paper material must be marked with the accession number and site code, in different places on the page if possible. These should be made using permanent ink, pencil, ink stamp or be printed as part of the document. Documentary archives must be placed within appropriate boxes (see Appendix C) and marked clearly with the words 'DOCUMENTARY ARCHIVE' along with the site code, accession number and site name **on two sides of the box** (one long side and one short side on rectangular boxes). The outside of the box should be marked with an appropriately sized permanent black marker pen.

Documentary material from multiple archives may be placed within the same box to save space. However, all of the archives contained within must be listed on the box, and the archives must be easily distinguishable within the box and contained within their own folders.

The documentary archive consists of all material associated with the project, but not the artefacts themselves. The contents of the archive must be indexed and pages or sections numbered and cross referenced.

### 17.17.2 Documentary Archives contents

Every archaeological site is different, but the following provides a guide to the most common contents of a documentary archive

#### Site archive:

- Copies of correspondence relating to fieldwork
- Survey reports
- Site notebooks / diaries
- Original context records
- Site drawings
- Original finds records
- Records of conservation undertaken during fieldwork
- Original sample records
- Original skeletal records
- Digital media (see sections 17.17.8 and 17.17.9 below)
- Full site matrix
- Summary of context record
- Summary of artefact record
- Summary of environmental record
- Preliminary conservation assessment
- Summary of the nature and quantity of the total archive by type

#### Post excavation assessment archive:

- Context information
- Photographic catalogue (including one digital copy, see section 17.17.9)

- Photographic record (original photographs or digital contact sheet, including one digital copy of any digital images, see sections 17.17.8 and 17.17.9)
- Stratigraphic drawings
- Object catalogues (including one digital copy, see section 17.17.9). See section 13.4 of the Lincolnshire Archaeology Handbook for details of what the object catalogue should contain.
- Object drawings
- X-rays and catalogue
- Conservation records
- Site narrative
- Specialists reports (including one digital copy, see section 17.17.9)
- Records of any material disposed of during sampling, retained by the landowner or a third party, or retained by contractors or specialists (e.g. for type series)
- Records of items selected for destructive analysis

**Other documentary material:**

- An index to the contents of the archive (including one digital copy, see section 17.17.9)
- All original material produced as part of the preparation of the final report
- The final report (two printed and securely bound copies and one digital copy, see section 17.17.9). **The front cover of the report must include the Heritage Service 's site code and accession number**
- Additional or subsidiary reports such as geophysics and building surveys (1 printed and bound copy and one digital copy, see section 17.17.9).
- Site summary containing administrative details about the site
- Transfer of title, or correspondence showing attempts to obtain transfer of title (see section 17.9)
- Home Office licenses for the excavation of human skeletal material
- Details of reburied human skeletal material
- Details of material not included with the archive (i.e. retained by landowner of stored elsewhere)

Further guidance on the creation of documentary archives can be found in the UKIC publication 'Guidelines for the Preparation of Excavation Archives for Long-term Storage' (1990).

### **17.17.3 Documentary archive materials**

All documentary archival material must be presented in a manner and in media that promote their long-term preservation. In particular, the following guidelines must be followed:

- Ferrous metal fastenings should not be used (staples or paper clips). Brass staples may be used instead
- Treasury tags may be used, but they must be plastic, not metal
- Elastic bands or adhesive tape should not be used to hold rolled material. Use unbleached cotton tape instead
- Papers should be stored flat and unfolded in appropriate archive boxes (see Appendix C)

- Papers must be stored within low acid folders, not ordinary office stationary folders
- Papers must **not** be presented in ring binders or box files

#### 17.17.4 Drawings and plans

- Drawings must be on polyester based film
- Drawings must be on regular sized film (no smaller than A4 or larger than A0)
- Drawings must identify the subject, include a scale and, where appropriate, a means of orientation (e.g. compass rose)
- Any necessary key or colour coding must be marked on the drawing
- Original drawings on film must be in hard pencil (at least 4H) and not inked over
- Multiple drawings must be separated in the archive with low-acid card or low-acid tissue paper
- Do not use adhesive tape of any kind on drawing film
- Plans should be rolled rather than folded and stored in low acid tubes or low acid cardboard boxes if the plans will fit (see Appendix C)
- Rolled plans must be clearly marked with the site code and accession number, **visible on the outside of the roll**
- Drawings and plans that are born digital should be printed and included in the archive where appropriate, and digital copies provided with the archive

#### 17.17.5 Photography overview

Site photography will be accepted in traditional (film) formats and in digital format, adhering to the quality standards set out below.

Whatever format is used, both digital and hard copy (thumbnails / contact sheet) versions of images must be provided, as set out in sections 17.17.6 to 17.17.8.

All record photographs must identify the subject, include a scale and, where appropriate, a means of orientation (e.g. compass rose). Where necessary, site and object identifiers must also be included.

#### 17.17.6 Traditional film photographs

- Film must be developed by a professional processing company and must meet British Standard BS5699
- Photographic prints must be stored in archival quality low acid paper enclosures or polyester sleeves
- Photographic prints and their holders must be marked (on the reverse) with the site code or accession number, object number (if appropriate), film number and frame number using 2B pencil (not ink)
- A photographic index must be provided as an overview to all photographic material in the archive, one paper copy and one digital copy
- Polaroid film is not acceptable for archival photographs
- Digital versions must be provided in TIFF or JPG format. Image filenames must reference the site code or accession number and the individual image number.

### 17.17.7 Transparencies (slides and negatives)

- Transparency mounts should be marked, not the film, using lightfast and waterproof ink.
- Transparencies should be stored in archival quality storage holders, marked with the site code or accession number, object number (if appropriate), film number and frame number using lightfast and waterproof ink.
- Digital versions must be provided in TIFF or JPG format. Image filenames must reference the site code or accession number and the individual image number.
- A photographic index must be provided as an overview to all photographic material in the archive, one paper copy and one digital copy

### 17.17.8 Digital photographs

- Digital photographs must be of a suitable quality, and taken at the highest resolution available to contractors.
- TIFF is the preferred file format for preservation purposes, but JPG images will also be accepted. JPGs must be taken at the highest possible quality setting (e.g. 'superfine') to minimise image compression errors. Images should also be saved to the highest quality setting in photo editing software (e.g. not compressed). Original camera images should be provided alongside any edited images.
- Colour sheets with thumbnails of all images in the archive must be provided on archival quality low acid paper and appropriately marked.
- Image filenames must be changed to reference the site code or accession number and the individual image number. Images retaining camera generated filenames will not be accepted.
- A photographic index must be provided as an overview to all photographic material in the archive, one paper copy and one digital copy.

### 17.17.9 Digital Media

Digital media are rapidly becoming the preferred option for the production and storage of many elements of the archive, but **submission of a fully digital archive is not acceptable**. As stated in section 17.17.2, the Heritage Service expects digital copies of the following elements of the archives to be provided digitally **in addition** to the paper copies in the documentary archive:

- Index of archive contents
- Final report
- Subsidiary reports
- Specialists reports (eg finds specialists reports, geophysical surveys, scientific analysis of samples, human remains reports)
- Object catalogues
- Details of objects discarded from the archive
- Photographic catalogue
- Digital photographs and the photographic index
- Born digital maps, plans and reconstructions (hand drawn maps and plans do not need to be provided digitally)

These will be transferred on to the Heritage Service’s servers for ease of future reference and research. The Heritage Service’s baseline operating systems at the time of writing are Windows 7 and Office 2010, so all files must be in formats readable on such machines. The Heritage Service also refers contractors to the guidance prepared by the Archaeological Data Service in the document ‘Digital Archives from Excavation and Fieldwork Guide to Good Practice, Second Edition’. **Digital media submitted to the Heritage Service must also be submitted to ADS and the OASIS database.** Guidance on dissemination of digital data can be found in the Historic England document ‘MoRPHE Technical Guide 1: Digital Archiving and Digital Dissemination’ (2006).

The following file formats should be used:

Data Type	Formats
Reports	PDF, PDF/A, DOCX, DOC
Finds catalogues	DOCX, DOC, XLSX, XLS, PDF, PDF/A
Specialists reports	PDF, PDF/A, DOCX, DOC
Images	TIFF, JPG
CAD	DXF, DWG
Databases	ASCII delimited text
Geophysics	AGF, plain text (data + control info)
GIS	ArInfo, DXF, DWG
Moving Image	MPEG
Virtual Reality	VRML 2.0

Physical elements of the digital archive, such as CDs and DVDs, must be marked with the site code or accession number, using a water-based marker pen. Alcohol based pens should not be used as they may damage the disk in the long-term. Disks must be presented in individual cases. **File names for digital media are left to the discretion of contractors, but must reference the site’s accession number or site code.**

When saving data onto CDs and DVDs, certain brands are known to produce better quality products for archiving purposes. These are TDK, Verbatim, Mitsubishi, Kodak Gold, Taiyo Yuden and Mitsui. These brands are preferable when submitting digital material. Files may be presented on a USB flash drive ('datastick') but please note that it is not possible for the drive to be returned.

#### 17.17.10 X-radiography

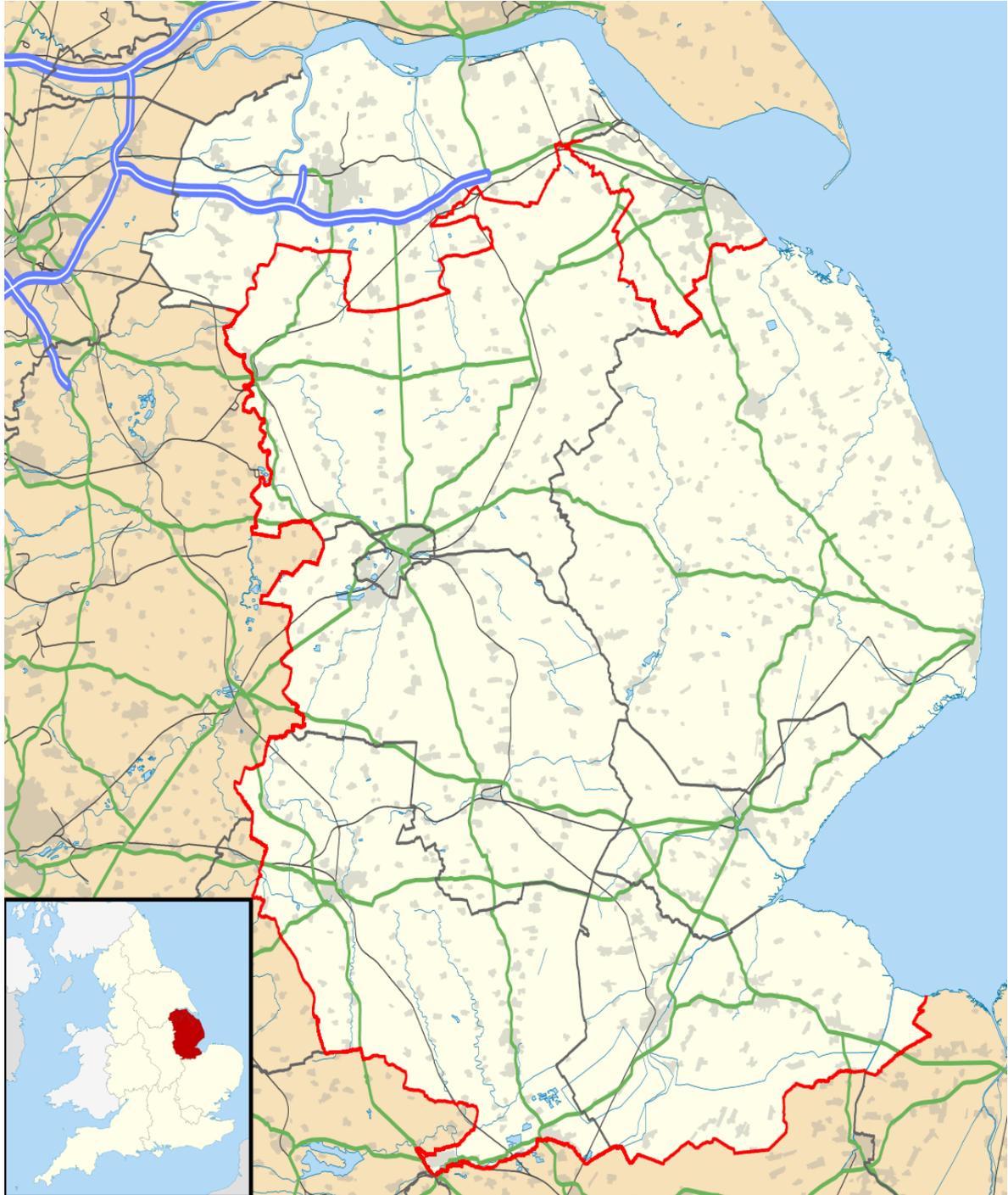
Film sizes 18 x 24cm and / or 24 x 30cm should be used as appropriate to the assemblage/objects.

X-radiographs should be marked/stored in accordance with Historic England *Guidelines on the X-radiography of Archaeological Metalwork, 2006*. In summary:

- X-rays should be marked (normally using white ink or lead lettering of an appropriate size) with site details, film number, accession numbers, indication of orientation of artefacts and any other relevant information
- The information marked on the x-ray film should also be recorded on the outer sleeve, along with information on exposures, using archival quality ink (e.g. it should be water and light resistant)
- Each film should be protected from damage by enclosing it in a transparent polyester sleeve and then placing it in an low-acid outer envelope / sleeve
- Ensure plastic sleeves are of archival quality (e.g. do not use plasticised, nitrated or chlorinated sleeves)
- X-ray plates must not be cut to separate objects. Sites should be X-rayed on different plates (see section 17.14.1)

## APPENDIX A HERITAGE SERVICE COLLECTING BOUNDARY

The Heritage Service's collecting boundary is the post-1974 county of Lincolnshire.



**APPENDIX B  
DEPOSITION OF ARCHAEOLOGICAL ARCHIVE REQUEST FORM**

**CONTRACTOR DETAILS**

Contractor name:
Contractor address:
Contractor telephone: Contractor fax:
Contractor email:

**SITE DETAILS**

Site name:
Site address / location:
Grid reference (at least 6 figure):
Planning Reference:
Nature of work:
Deposition window (mark month and specify year): Feb   Apr   Jun   Aug   Oct   Dec            Year:

**MUSEUM DETAILS**

Contractor suggested site code:
Museum confirmed site code: (for museum use only)
Museum Accession Number: (for museum use only)

Send form to [archdeposition@lincolnshire.gov.uk](mailto:archdeposition@lincolnshire.gov.uk)

## APPENDIX C ARCHIVE BOX SIZES AND SUPPLIERS

### Documentary archive boxes

Boxes containing documentary archives should be low-acid, brass stapled with full or half depth lids. The acceptable dimensions are:

- 254mm x 356mm x up to 115mm (suitable for A4)
- 355mm x 470mm x up to 115mm (suitable for A3)
- 360mm x 920mm x up to 115mm (suitable for rolled documents up to A0)

### Bulk finds boxes

Boxes containing bulk finds should be low-acid, wire stitched with full or half depth lids. The acceptable dimensions are:

- 305mm x 305mm x 203mm ('full-size' bulk box)
- 305mm x 305mm x 102mm ('half-sized' bulk box)
- 610mm x 305mm x 203mm ('skeleton box')
- 216mm x 216mm x 210mm ('skull box')

### Registered finds boxes

Registered finds boxes should be of a suitable size to safely contain the material inside. **No individual outer box should be smaller than 130mm x 130mm x 50mm.** Any registered finds box (including custom boxes) over 610mm x 305mm x 203mm should be discussed with the Heritage Service prior to deposition to ensure that storage arrangements can be made.

### Suppliers

A selection of external suppliers for packaging and object marking are suggested below, but other suppliers are available. Lincolnshire County Council has no affiliation with any of the suppliers listed and takes no responsibility for the products they supply.

Low acid boxes for documentary and bulk find storage can be purchased from:

G. Ryder and Co. Ltd.  
Denbigh Road  
Bletchley  
Milton Keynes  
MK1 1DG  
Tel: 01908 375524  
Web: [www.ryderbox.co.uk](http://www.ryderbox.co.uk)

Airtight polythene boxes for the storage of registered finds and sensitive bulk finds can be purchased from:

The Stewart Company  
Stewart House  
Waddon Marsh Way  
Purley Way  
Croyden  
Surrey  
CR9 4HS  
Tel: 020 8603 5700  
Web: [www.stewartcompany.co.uk/](http://www.stewartcompany.co.uk/)

Materials for object marking and general conservation grade materials can be obtained from:

Preservation Equipment Ltd  
Vinces Road  
Diss  
Norfolk  
IP22 4HQ  
Tel: 01379 647400  
Web: [www.preservationequipment.com](http://www.preservationequipment.com)

Conservation Resources UK Ltd  
Unit 2 Ashville Way  
Off Watlington Road  
Cowley  
Oxfordshire  
OX4 6TU  
Tel: 01865 747755  
Web: [www.conservation-resources.co.uk](http://www.conservation-resources.co.uk)

Conservation by Design  
2 Wolseley Road  
Kempston  
Bedford  
MK42 7AD  
Tel: 01234 846300  
Web: [www.conservation-by-design.com](http://www.conservation-by-design.com)

**APPENDIX D  
TRANSFER OF TITLE FORM**

To The Lincolnshire County Council Heritage Service

Re (site):

.....  
.....  
.....

I am the legal owner of the finds from the above named archaeological site. I hereby agree to donate the artefacts from the site to the Heritage Service as representatives of Lincolnshire County Council. This donation is an absolute gift without condition. I relinquish all legal claims for the ownership of the artefacts in favour of Lincolnshire County Council.

Signed .....

Print .....

Position.....

Organisation.....

Date.....