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Historic Environment Division

Guidance for Conducting Licensed Archaeological Excavations in Northern Ireland

July 2024



Historic Environment Division's Aim

“Helping communities to enjoy and realise the value of our historic environment”

We do this by:

- Recording, protecting, conserving, advising, promoting and enhancing its value
- Utilising and growing our specialist knowledge and expertise in collaboration with a wide range of groups and individuals
- Contributing to the Executive's objectives as laid out in the Programme for Government

Our historic environment provides authentic and attractive places which increase our pride, character and identity, lead to improved wellbeing and community engagement, and to prosperity through tourism, investment, skills, regeneration and creativity. It is a precious and finite resource available to present generations, and with appropriate management, to future generations.



This document provides information on conducting licensed archaeological excavations in Northern Ireland. It should be read in conjunction with other associated guidance documents, including the Treatment and Care of Human Remains from

Archaeological Excavations and Guidance for the Creation and Care of Archaeological Archives (DfC, 2024) which can be obtained from the Department for Communities website: www.communities-ni.gov.uk

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Preamble

Historic Environment Division (HED) within the Department for Communities (DfC) is the government lead on the historic environment of Northern Ireland. This document has been prepared by HED in partnership with the Chartered Institute for Archaeologists (CIfA) and the Institute of Archaeologists of Ireland (IAI). It deals with the excavation and reporting of archaeological remains in Northern Ireland, and how these activities will be conducted in order to meet agreed professional standards in Northern Ireland.

DfC requires all licensed archaeological work in Northern Ireland to

- comply with professional standards
- be led by a competent and experienced archaeologist
- be conducted giving due regard to supporting professional guidance.

Professional Standards and Guidance

Professional standards provide a set of principles and define the required outcomes of an archaeological activity that must be met. The supporting guidance provides practical advice on how those outcomes should be achieved, in accordance with current best practice.

CIfA and IAI both provide standards and guidance documents relevant to the conduct of archaeological fieldwork:

- CIFA standards and guidance on desk-based assessments, watching briefs, field evaluation, archaeological excavation, geophysical survey, recording structures and more can be found at www.archaeologists.net/codes/cifa
- IAI's Codes of Conduct for Archaeological Assessment Excavation, Excavation and Monitoring can be accessed at www.iai.ie/codes-of-conduct/

As the guidance documents provided by these institutes apply across various jurisdictions, with differing legislative basis, policies and procedures, it is recognised that they also need to work alongside specific national or regional requirements.

This detailed guidance, specific to Northern Ireland, has therefore been produced by HED (as the regulatory body with responsibility for excavation licensing), in collaboration with CIfA and IAI. It aims to provide clarity for practitioners on meeting the required professional standards for licensed archaeological fieldwork and post-excavation work. Both institutes recommend their members adhere to it when working in Northern Ireland. Over time, as the three organisations revise and update their related documents, every effort will be made to ensure ongoing alignment.

In addition to this guidance on conducting licensed archaeological excavation in Northern Ireland, HED, in partnership with ClfA and IAI, have also produced the following:

Guidance for the creation and care of archaeological archives in Northern Ireland. Department for Communities (DfC, 2024)

Guidance for the treatment and care of human remains from archaeological excavations in Northern Ireland. Department for Communities (DfC, 2024)

Guidance for the creation and management of digital archaeological archives in Northern Ireland. Department for Communities (DfC, forthcoming).

1 Introduction



Excavations of medieval and post-medieval structures at Society Street, Derry/Londonderry

Definition of excavation

Archaeological excavation in Northern Ireland (NI) is defined as

a programme of intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area or site on land, in an inter-tidal zone or under water.

The professional standard, aligned with both ClfA and IAI¹, and which Department for

Communities (DfC) expects to be met for licensed archaeological excavation in NI requires that

an archaeological excavation will examine and record the archaeological resource within a specified area using methods described in an agreed project design. The work will be carried out by competent persons giving due regard to professional conduct and relevant guidance. All archaeological excavations will result in a report, published accounts where appropriate, and a stable, ordered and accessible archive.

¹ As set out by ClfA Code of conduct (archaeologists.net) and IAI IAI Code of Professional Conduct (iai.ie)

Purpose of excavation

The purpose of excavation is to examine the archaeological resource in a given area, within a framework of defined objectives, to seek a better understanding of and compile a lasting record of that resource, to analyse and interpret the results, and disseminate them.

Legal requirements

In Northern Ireland, archaeological excavations are subject to the Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995. Under Article 41 of this Order, there is a legal requirement to obtain a licence from the Department (DfC) before conducting an excavation

in or under any land (whether or not such excavation involves the removal of the surface of the land) for the purpose of searching generally for archaeological objects or of searching for, exposing or examining any particular structure or thing of archaeological interest.²

Undertaking such archaeological excavation without a licence may result in criminal prosecution.

This document provides guidance on meeting the required professional standards for licensed archaeological fieldwork and post-excavation work in Northern Ireland. It is aimed at all those planning to search for archaeological objects or remains, but in particular at archaeological companies or units, researchers, consultants and developers. The guidance set out here should be complied with as a minimum, and this document should also be read in conjunction with current relevant professional standards and guidance, particularly those published by ClfA and the IAI. Links to relevant published documents and further guidance, as well as suggestions for further reading, can be found in the Appendices at the end of this document.

This document is not intended as a step-by-step manual on how to conduct an archaeological excavation, but rather to outline what HED, as the regulatory body, require from practitioners with regard to archaeological investigations in Northern Ireland. Explanations for the terms used throughout the document can be found in the Glossary at Appendix A.

² Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995, Article 41

2 The policy context for archaeological excavations in Northern Ireland

Archaeological remains are a valuable source of information about the past. In studying, understanding and debating the past, modern societies learn about their present and influence their future. Our unique archaeological remains are a public good, and the purpose of licensing archaeological excavations is to ensure they are conducted in a manner that protects the public good. Excavation is necessarily a destructive process, so one of HED's primary roles is to seek to preserve our archaeological heritage in situ as much as possible for future generations. The licensing process ensures that archaeological remains are not unnecessarily or unlawfully excavated, and that where they are excavated this is done to an appropriate standard.

Our approach aligns with Article 3 of the European Convention on the Protection of the Archaeological Heritage³ (known as the Valletta Convention), under which each state undertakes to apply procedures for the authorisation and supervision of excavation and other archaeological activities to ensure that

- archaeological excavations and prospecting are undertaken in a scientific manner
- excavations and other potentially destructive techniques are carried out only by qualified, specially authorised persons
- non-destructive methods of investigation are applied wherever possible.

Most archaeological excavations in Northern Ireland take place as a requirement of the planning process, eg for new housing or infrastructure, and this document must be read in conjunction with *Development and Archaeology: Guidance on Archaeological Works in the Planning Process*⁴. DfC is a statutory consultee in the planning process and HED advises the relevant planning authorities on archaeological matters on behalf of DfC. This ensures that decisions made by the planning authorities are fully informed, development proposals comply with planning policy⁵, and suitable strategies are created to address any impacts on archaeological remains.

³ European Convention for the Protection of the Archaeological Heritage (Council of Europe, 1992)

⁴ *Development and Archaeology: Guidance on Archaeological Works in the Planning Process* (DfC, 2019)

⁵ *Strategic Planning Policy Statement for Northern Ireland* (Department for Infrastructure, 2015); Para 6.10 and Para 6.11

Where planning authorities decide not to grant planning permission, or where HED has been informed by the planning authority that it is unlikely to grant planning permission, HED's stance is that there is insufficient reason to depart from preservation in situ and an archaeological excavation is normally not appropriate. This aligns with the approach laid down in the Charter for the Management and Protection of the Archaeological Heritage (known as the Lausanne Charter)⁶, which emphasises that archaeological excavation should only be undertaken to provide

data essential for making decisions on the conservation of a place, or to obtain important evidence that is about to be lost or made inaccessible.

Projects outside the planning process are subject to a similar approach and applicants will have to demonstrate a positive impact on the public good by establishing that the benefits of the excavation would outweigh those of preservation in situ. Applications which do not adequately demonstrate this will be refused or returned for amendment.



Excavation of an early medieval rath at Groggan, Co. Antrim

⁶ Charter for the Management and Protection of the Archaeological Heritage (International Council on Monuments and Sites, 1990)

3 Purposes for conducting archaeological works

Archaeological works may be carried out for a variety of different purposes, as set out below.

In all cases a Licence to Excavate for Archaeological Purposes (Section 4) and approved Programme of Works (POW) (Section 5) will be required.

3.1 Archaeological works conducted as part of the planning process

As noted in Section 2, most archaeological works in Northern Ireland take place as a requirement of the planning process. Before undertaking such works it is essential to refer to Development and Archaeology: Guidance on Archaeological Works in the Planning Process⁷.

Archaeological works may be carried out at two different stages in the planning process:

1) Archaeological assessments and evaluations to inform a planning decision:

These are normally requested by the planning authority, on the advice of HED, in advance of a planning decision, to provide further information where the potential archaeological impacts of a development proposal are unclear. If archaeology is uncovered during evaluation works, the priority will normally be preservation in-situ. Further archaeological works may be required as a planning condition.

2) Archaeological works required by planning conditions:

Archaeological mitigation most commonly occurs where planning permission has been granted for a development which will affect areas known to or likely to contain archaeological remains and is likely to involve comprehensive archaeological excavation, recording, reporting and archiving.

3.2 Research projects

Research excavations are typically undertaken to answer specific questions about an archaeological site, era, landscape, etc. HED recognises that such projects are a vital part of progressing archaeological, historical and conservation knowledge, and can play their part in providing information enabling modern societies to better understand their past and present.

For research excavations, any possible alternatives to excavation must be discussed and the applicant must adequately demonstrate that other techniques are not capable of yielding the desired information.

⁷ Development and Archaeology: Guidance on Archaeological Works in the Planning Process (DfC, 2019)

3.3 Community projects



A community excavation at Dunluce 17th-century village, Co. Antrim

HED welcomes and supports community archaeology in Northern Ireland. Such archaeological investigations can be the entire focus of a heritage project or can occur as one part of a wider community project. HED wishes to see communities lead the proposals, but projects should be co-created with professional archaeological support to ensure that they will meet the requirements for the necessary archaeological excavation licence.

Alongside any archaeological benefits, HED also expects applications for community-led excavations to explain how the project can improve such things as local community cohesion, community confidence, health and well-being, education, engagement in heritage activities, economy and/or tourism.

HED welcomes early contact regarding research strategies and community excavation proposals and can provide feedback to help applicants develop an acceptable proposal.

3.4 Excavation projects required to conserve, present or maintain a monument

This type of archaeological excavation is most commonly undertaken by applicants from central and local government and the heritage-related NGO sector. As with all other categories of excavation, applicants must clearly demonstrate the need for excavation and that the proposed works outweigh the benefits of preservation of the archaeology in situ.

Where the excavation is taking place as an action derived from a site conservation management plan, that plan, or the relevant section(s) from it, should be appended to the licence application.

3.5 Military aircraft or designated vessels

The Protection of Military Remains Act 1986 is designed to protect all potential military grave sites. All military aircraft are automatically protected under this legislation and the Act applies to all military aircraft crash sites, regardless of whether these sites are recorded on the Northern Ireland Sites and Monuments Record.

It is an offence to interfere, without a licence from the Ministry of Defence, with the wreckage of any crashed, sunken or stranded military aircraft or designated vessel. This is irrespective of loss of life or whether the loss occurred during peacetime or wartime. There are no ships in Northern Irish waters protected under this Act.

Any proposed activity on the wreckage of any crashed, sunken or stranded military aircraft or designated vessel requires a licence from the Ministry of Defence in addition to a Licence to Excavate for Archaeological Purposes (see Section 4 below).

Applications for a Ministry of Defence licence should be undertaken in line with the Ministry of Defence, Crashed Military Aircraft of Historical Interest: Licensing of Excavations in the UK: Notes for Guidance of Recovery Groups⁸. Should human remains be discovered, they should not be touched, but must be reported immediately to the Ministry of Defence, PSNI and to HED.

3.6 Archaeological Investigations below the Mean Low Water Mark (including shipwrecks)

Currently, archaeological excavation licensing does not apply to work carried out on archaeological sites (eg shipwrecks) below the Mean Low Water Mark (MLWM). A marine licence may, however, be required, please consult Marine and Fisheries Division (DAERA) for advice in advance of any proposed work below MLWM.

Archaeological excavations which take place between the MLWM and the Mean High Water Mark (MHWM) will usually require a Licence to Excavate for Archaeological Purposes and HED can advise. It may, however, also require a marine licence, please consult Marine and Fisheries Division (DAERA) for advice in advance of any proposed work between the MLWM and the MHWM.

⁸ Ministry of Defence, Crashed Military Aircraft of Historical Interest: Licensing of Excavations in the UK: Notes for Guidance of Recovery Groups (Revised 2018) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/916555/20180514_Licence_NotesforGuidance_2018-3.pdf

4 Licence to excavate for archaeological purposes

It is a legal requirement, under the Historic Monuments and Archaeological Objects (NI) Order 1995, to obtain a Licence to Excavate for Archaeological Purposes from DfC before conducting an archaeological excavation.

Where proposed investigations are within a legally protected place (eg a Scheduled Monument or a monument in State Care) any separate permissions or consents required (eg Scheduled Monument Consent) must be obtained from DfC before applying for a licence.

The application form and accompanying guidance notes for a Licence to Excavate for Archaeological Purposes are available from the DfC website⁹. The notes must be read carefully before the form is completed.

4.1 Applicants

Applications for a licence to excavate are generally made jointly by an employing body (usually a recognised archaeological contractor or research institution) and a nominated excavation director.

The nominated excavation director must demonstrate that they are appropriately qualified to undertake the works they propose.

Specific graduate and post-graduate qualifications in archaeology are preferred, but demonstrable relevant experience and competence in archaeological excavation can also be acceptable.

If potential excavation directors have not previously held an excavation licence from DfC they must submit a comprehensive CV demonstrating their archaeological qualifications and relevant experience. First-time applicants will also need to supply the contact details of two appropriate referees. HED may request a demonstration of competence in connection with any licence request if it considers there is insufficient evidence of the applicant's previous experience.

Applicants (both individual and employing bodies) are encouraged to join one of the professional archaeological institutes operating within Northern Ireland: ClfA or IAI.

Restriction on the number of active licences

To ensure that projects are brought to conclusion before additional new projects are commenced HED normally restricts the number of active excavation licences which an excavation director may hold at any time to six.

⁹ Archaeological Excavation Licence Documents (Department for Communities)
<https://www.communities-ni.gov.uk/publications/archaeological-excavation-licence-documents>

This means that the nominated excavation director must have no more than five reports outstanding from other excavation licences at the time of making an application. Further excavation licences are unlikely to be granted until enough report(s) of appropriate quality are submitted to bring the applicant beneath that threshold.

Additional licensees

Where additional licensees are nominated, the same requirements will apply as for the lead licensee with regard to suitable qualifications and the number of active licences held. The expiry date and all conditions relating to the original licence and approved programme of works remain as originally issued unless otherwise agreed by HED.

Transfer of licences

In the event that a licensee will not be conducting the works they have been licensed for, the employing body must apply to HED to re-assign all relevant licences, and this must be done immediately where there are active site works. Applications must be made using the Application to Transfer a Licence to Excavate for Archaeological Purposes form, which must be signed by the original licensee, and be accompanied by a completed licence application form for the nominated director to whom the license is being transferred. The expiry date will remain as issued on the original licence unless otherwise agreed by HED.

Please consult HED Excavation Licensing Team to discuss transfer of a licence if the occasion arises that another company or institution are taking over the responsibility for carrying out post-excavation work and preparing a report once all fieldwork has been completed.

Communications with licensees and employing bodies

HED may hold an annual meeting with licensees and employing bodies who conduct licensed archaeological works. These meetings will enable HED to ensure that amendments and updates to processes and requirements are conveyed directly to practitioners and offer them the opportunity to engage with HED and provide feedback. Licensees and representatives of the employing bodies will be expected to attend. HED will also provide related workshops and training events to help practitioners ensure that they can efficiently meet the requirements of the excavation licence process, including those aspects which relate to the planning process.

HED will maintain a list of contact details (email addresses) for licensees for the purpose of keeping them informed of any changes which may impact on their work practices and inviting them to attend related events. You should inform the HED Excavation Licensing Team if your contact details change, and you may request to be removed from the list if you are no longer working in a relevant role in archaeology in Northern Ireland.



Excavation of preserved timbers at Drumclay Crannog, Co. Fermanagh, occupied during the early medieval and Medieval periods

4.2 Project resourcing

Before applying for a licence to excavate for archaeological purposes, applicants must ensure that all parties, including those commissioning the work, understand their respective responsibilities for the duration of the project. Adequate resources must be demonstrated for all aspects of the archaeological project, including funding and staffing for fieldwork, post-excavation analysis (including scientific dating), conservation, preparation and storage of the site archive, reporting and, potentially, publication.

To demonstrate appropriate resourcing, a signed Agreement between Developer and the Employing Body¹⁰ must be submitted along with the application, where applicable.

Sufficient insurance and indemnities must also be in place to cover all aspects of the archaeological project.

4.3 Submission of excavation licence applications

Licence applications should be made to the HED Excavation Licensing Team as far in advance as possible, and at least a minimum of 20 working days, before the anticipated start date of archaeological works. All licence applications must be accompanied by a Programme of Works (POW) (See Section 5) and proof of funding (See Section 4.2).

¹⁰ Archaeological Excavation Licence Documents (Department for Communities)
<https://www.communities-ni.gov.uk/publications/archaeological-excavation-licence-documents>

If associated with a planning application this POW must have been approved by the relevant planning authority before submission with the licence application and proof of this approval also submitted with the application (see Section 5.2). The application will be reviewed by the HED Excavation Licencing Team, who will contact the applicant if further information or clarification is needed.

The start date of the archaeological works must normally be as far in advance as possible of the proposed start date for construction/development works, and it is important that archaeological consultants make all relevant developers and/or agents aware of this. In the case of large infrastructure projects, for example, it is strongly recommended that the archaeological works should start a minimum of six months in advance of any proposed construction dates.

Applicants for an archaeological excavation licence must submit

- a fully completed, signed and dated application form
- a signed and dated Agreement between Developer and Archaeological Company form, undertaking to fund and carry out all required stages of the excavation process through to publication and archiving
- Programme of Works
- planning authority confirmation that the Programme of Works has been approved (for those applications associated with a planning application)
- a CV with two referees (for first-time applicants)
- any additional consents and permissions, if required.

If any of these documents are incomplete, inconsistent or absent, the application may not be processed further until the required information is supplied.

4.4 Approval of a licence to excavate and associated legally binding conditions

The HED target for issuing a final decision on a licence application is 20 working days from receipt of all the required information. HED reserves the right to return a licence application and accompanying POW where insufficient or incorrect information has been submitted.

If approved, the licence will normally be issued jointly in the name of the employing body and the nominated excavation director – hereafter referred to as the licensee[s]. The funding body can also be copied in at the time of issue, for awareness. Once issued, the licence number and planning reference (where relevant) must be used on all further correspondence with HED – items may be returned where the relevant reference numbers have not been included as these are essential to ensure accurate identification of the relevant site / application.

Archaeological excavation licences are granted subject to conditions, which are issued with the licence. **These conditions must be read carefully by the licensee[s] as they are legally binding, and a breach may leave licensee[s] liable to prosecution or other sanction.**

4.5 Failure to meet the requirements of the Department

Should licensees commit an offence under the legislation, such as by breaching the conditions of an archaeological licence/ consent, HED may report the matter to the police. HED reserves the right to suspend or revoke the relevant licence/consent. In such cases, and in those of repeated failure to submit or satisfactorily finalise reports, HED also reserves the right to reduce the number of licences that the related licensees may hold.

4.6 Cancellation, expiry or extension of licences

HED must be informed in writing if the proposed work is not going to proceed, so that the licence can be cancelled.

Licences are valid for six months from the date of issue. Applications to extend a licence must be submitted before the expiry of the original licence. The extension will usually be valid for an additional six months and the licence can be extended twice. Where long running excavations are likely the licensee[s] are encouraged to discuss with the HED Excavation Licensing Team if it is more appropriate for the licence to be issued for a longer period.

4.7 Requirement to transfer a licence when a licensee leaves the employing body (post-excavation)

Circumstances may arise where a licensee leaves the employing body subsequent to site works being completed, but before all post excavation work has been completed and a report has been submitted. As this remains an active licence, the employing body must contact HED within four weeks to have the licence transferred to another director. The director to whom it is being transferred must have no more than five other active licences at the time of transfer (bringing their total to six). Applications must be made using the Application to Transfer a Licence to Excavate for Archaeological Purposes form, and be accompanied by a completed licence application form for the nominated director to whom the licence is being transferred.

5 Programme of works (POW)

A Programme of Works (POW) may also be referred to as a Written Scheme of Investigation (WSI).

A site-specific POW must accompany every licence application and adequately detail the rationale and methodology for conducting the investigation. The contents of the POW will vary depending on the type and reason for the proposed excavation (see 5.2 – 5.4 below) but must provide sufficient information and proportionate detail to support a licence application.

It is considered good practice that the licensee directing the excavation on site will input into the PoW. However, where this is not the case, it is essential that the excavation director is supplied with and briefed on the PoW by the employing body in advance of the excavation commencing, and has a comprehensive understanding of the project and of all the statutory requirements applicable to the excavation before commencing on site.

5.1 Content of a Programme of Works

Detailed guidance on the contents to be included in all POWs can be found in *Development and Archaeology: Guidance on Archaeological Works in the Planning Process*¹¹ and is provided at Appendix B. This provides comprehensive information on what is expected for items in the summary below.

¹¹ *Development and Archaeology: Guidance on Archaeological Works in the Planning Process* (DfC, 2019)

All POW must include the following items:

- front cover (planning reference, site location, author)
- non-technical summary
- introduction, to include details of author's competencies, reasons for POW and detailed site description
- description of proposed development if planning related
- desk-based assessment
- results of site walkover survey or reason why a walkover was not possible
- assessment of archaeological potential
- assessment of archaeological impacts of the development
- archaeological mitigation strategy proportionate to the proposed works eg
 - methodology for addressing remains uncovered during evaluation works; or
 - detailed methodology for site excavation
- proposed site-specific strategy and methodology for paleo-environmental sampling, recording, processing, assessment, analysis and reporting
- site-specific proposed selection, retention and dispersal strategy for finds
- proposed post-excavation strategy for the production of a Comprehensive Report including, where appropriate, specialist analysis and publication noting that this may need to be reviewed and updated dependent of the results of the works
- provision for compilation of the site archive (material, documentary and digital) to accepted standards, including conservation of items and appropriate storage.
- estimated timetable for completion of the project

Environmental Impact

If not carefully planned and conducted, archaeological excavation has the potential to damage the surrounding environment, causing land, water and air pollution as well as waste production, excessive noise and dust generation. In addition, plant and animal life may be negatively affected. All licensed excavations are required to comply with the Environmental Good Practice Guide for Archaeological Excavations¹² and achieving this compliance must be taken into consideration in writing the POW and subsequently conducting the works on site.

Public Benefit

An archaeological excavation carried out to professional standards can provide many public benefits. Research and community excavations will usually have a built-in outreach strategy, but keeping the public informed should be considered for all projects (if appropriate, and with the consent of the site owner / developer). This could be through the use of site viewing platforms, viewing windows through site hoardings, interpretative panels, social media posts and/or local talks/lectures. Proposals for delivering public benefit should be integrated into the POW where possible.



An early medieval comb, from Drumclay Crannog, Co. Fermanagh

¹² Environmental Good Practice Guide for Archaeological Excavations (Northern Ireland Environment Agency, 2012)
<https://www.communities-ni.gov.uk/publications/environmental-good-practice-guide-archaeological-excavations>

5.2 POW associated with planning applications/ conditions

As noted in Section 3 above, the submission of a POW can take place at two separate stages in the planning process, and the content of the archaeological mitigation strategy in the POW will differ accordingly.

Approval of POW by the planning authority

The planning authorities in Northern Ireland require that all archaeological POWs, relating to both site assessment / evaluations and works required by archaeological planning conditions must be submitted to, and approved by, the planning authority. During this process they will consult HED on the content and agreement of the POW. **When applying for an excavation licence the applicant must provide evidence of the relevant planning authority's agreement of the POW.**

HED welcomes early discussion on proposed POWs relating to large or complex sites prior to formal submission to the planning authorities for official consultation. Such early and often informal discussion can help avoid delays to the later consultation and approval period. This early engagement should be addressed to the relevant area casework officer in the HED Planning Team.

1) Archaeological assessments and evaluations to inform a planning decision:

These are normally requested by the planning authority, on the advice of HED, in

advance of a planning decision, to provide further information where the potential archaeological impacts of a development proposal are unclear. In these cases the POW will contain a desk-based assessment and an evaluation design with a focus on establishing the nature and extent of archaeological remains to inform decision making. The HED planning consultation response will set out what information is required, and the particular aspects of archaeological survival / significance to be clarified. If archaeological remains are uncovered during evaluation works, the priority will normally be preservation in situ.

The result of the evaluation will inform the decision of the planning authority, and it may result in archaeological planning conditions which require further, comprehensive excavation.

2) Archaeological works required by planning conditions:

In cases where planning permission has been granted for a development which will affect sites known to or likely to contain archaeological remains the POW will detail the proposed excavation methodology and make provision for comprehensive archaeological excavation and recording. Particular attention should be paid to the development construction plans to ensure that any areas proposed for landscaping, services or temporary storage and site compounds or constructed access routes are also taken into account when devising the archaeological mitigation.



The excavation of a Neolithic house at Cloghole, Co. Londonderry

5.3 POW for large infrastructure projects

Large infrastructure projects, such as government-funded road schemes, must also comply with the Department for Infrastructure (DfI) Management of Archaeological Investigations on Major Road Improvement Schemes DEM156/15¹³. This guidance must be followed when preparing a POW and archaeological licence application documents for Strategic Road Improvement Schemes

5.4 POW for research and community projects, or conservation, presentation or maintenance of a monument

POWs for both research and community excavations should provide a convincing rationale for the proposed excavation and detail the benefits for archaeology and society, and how those outweigh the benefits of preservation of the archaeology in situ. Where the works are necessary for the presentation of a monument, the POW must clearly demonstrate the need for excavation and that the proposed works outweigh the benefits of preservation of the archaeology in situ.

13 Director of Engineering Memorandum 'Management of Archaeological Investigations on Major Road Improvement Schemes' (Department for Infrastructure). <https://www.infrastructure-ni.gov.uk/publications/management-archaeological-investigations-major-road-improvement-schemes-dem-15615>

6 Commencing site investigations

6.1 Commencing works and arranging HED inspections

Licensees must provide HED in writing with reasonable notice of the start date for onsite works: normally two weeks in advance. This is a condition of the excavation licence and facilitates arrangements for the monitoring of fieldwork.

On commencement of fieldwork, both the HED Excavation Licencing Team and HED Planning Team must be contacted so they can arrange a site inspection, where appropriate, so that the general site stratigraphy can be assessed at an early stage. This is particularly important if the licence is issued for an evaluation to inform a planning decision. Failure to inform HED of fieldwork commencement and to arrange a visit(s) to inspect open trenches may result in the archaeological contractor having to revisit the site and re-open trenches for HED inspection. It may also result in HED action relating to the licensee's failure to adhere to the terms of the licence.

On large-scale developments involving multiple land parcels, further arrangements can be made so that the site can be regularly inspected during fieldwork and when fieldwork is near completion, but before any trenches have been backfilled.

Where agreed, details on trench findings may also be communicated to HED by email with supporting images.

It is important to note that the person named as licensee must be the attending on-site archaeologist in charge at all times throughout the works, unless otherwise agreed with the HED Excavation Licencing Team in advance.

The site investigation strategy agreed in the POW must be adhered to, and any changes, other than very minor amendments, for example to avoid buried services, must also be discussed and agreed with both the HED Planning and HED Excavation Licencing Teams in advance. Failure to do so may be considered a breach of the licence conditions and result in the licence being suspended (see Section 4.5). For any POW arising from the planning process is also important to ensure any changes are agreed with the HED Planning Team to ensure planning requirements are met and any potential for enforcement action is avoided.

Both the HED Planning and Excavation Licencing Teams must be informed immediately when archaeological remains are uncovered to allow for a site inspection. Depending on the nature of the archaeology uncovered, a review and / or modification of the POW may be needed, which must be supplied in writing as an addendum to the POW previously submitted. The addendum must be approved by both HED teams before works proceed. See also Sections 6.3 - 6.5 in relation to additional requirements where work is undertaken as part of the planning process.



Aerial view of excavations at Ballynagalliagh, Co. Londonderry, showing a Bronze Age timber enclosure

6.2 Initial site investigations

The initial work on site for most projects will be focused on providing a preliminary assessment of the potential archaeological impact. This will obviously be the case where the works are being conducted as an evaluation to inform a planning decision but will usually also be the first stage on sites where archaeological works are required by a planning condition. Typical methodologies include:

- test trenching – the most common technique used on development sites and may be used to target anomalies detected by a non-intrusive survey or to investigate or or investigate areas of archaeological potential identified by a desk-based assessment or site visit (see Section 6.3)
- topsoil stripping – normally used at small-scale development sites with considerable archaeological potential and/or where test trenching is inappropriate or impractical
- hand-dug test trenches – typically requested at highly sensitive sites, for example where human remains are likely, or where the type of site is likely to have left only ephemeral remains
- metal detecting survey(s) – for example when a proposed development is on, or in close proximity to, a known battlefield site (Section 8.4 and Appendix C provide further information).
- coring/auguring/probing – may be requested in some circumstances, such as areas where alluvial or peat deposits are suspected to have buried prehistoric archaeological deposits/historic landscapes
- non-intrusive surveys – methods such as LiDAR and geophysical surveys are sometimes used in the initial stages of an evaluation or research project and may identify areas of higher archaeological potential. In the planning process this method is particularly beneficial for large-scale greenfield developments. Non-intrusive surveys do not require an archaeological licence but may require a Detection Device Consent under Article 29 of the Historic Monuments and Archaeological Object (NI) Order (Section 8.3 provides further guidance).

Test trenching and topsoil stripping

(Test trenching may also be referred to as trial trenching)

Any archaeological trenching strategy agreed with HED must be site specific and take the archaeological potential, topography and local ground conditions into account, for example, any areas of potential raised beach deposits, or deep alluvial or colluvial deposits. The trenching strategy must also consider potential hazards such as the location of overhead power lines, buried cables/utilities as well as ecological issues such as avoiding protected habitats, trees and vegetation.

All mechanical ground reduction, including initial topsoil stripping or test trenching, must be carried out under constant archaeological supervision by the licensee, using an excavator of appropriate size equipped with a standard toothless ditching/grading bucket (typically 1.8m in width).

Where the works require more than one machine, each machine must be monitored by a suitably qualified archaeologist working under the constant supervision of the named licensee (minimum one person per machine).

Unless otherwise agreed with HED, all trenches must be excavated to the full dimensions stipulated in the POW and should normally be spaced no more than 10m apart.

The initial mechanical excavation should continue down to the natural deposits or to the surface of in situ archaeological deposits, whichever is encountered first.

If trenches require excavation to a depth where the sides of the trench or working area are considered unstable, the sides must be either shored, battered or stepped to allow safe working (a safe working environment is paramount and Health and Safety guidance should be followed at all times).

The excavated trenches and any features within them must be accurately located using survey grade GPS or similar and recorded by means of photographs, scale drawings and written descriptions. Section 8 provides detail on acceptable survey methodologies.

Even if no archaeology is present, the sequence of deposits overlying the natural subsoil should still be appropriately recorded and described in detail.

No trenches should be backfilled without prior approval from HED. Failure to gain approval for backfilling from HED may result in the archaeological contractor having to revisit the site and re-open trenches to facilitate HED inspection.

Particular care should be taken by the developer, archaeological contractor and any other persons involved in the wider project not to damage areas containing archaeological remains which have been, or may be, proposed by HED for preservation in situ.

Archaeological remains which are being left in situ shall be recorded and covered with a layer of geotextile prior to backfilling, and the area clearly zoned off during development.

Hand excavation of trenches

There may be occasions where mechanical test trenching is not appropriate because of the sensitive nature of the archaeology. If, for example, desktop research has highlighted the possibility of human burials, hand excavation will normally be required – at least as part of an initial exploratory phase before machine use can be agreed. There may also be instances where archaeological material may occur in the topsoil, eg 17th-century Plantation or battlefield archaeology, which is more ephemeral in nature. In these instances, HED may request hand-dug trial pits or a metal-detecting survey (see Section 8.4) before or in conjunction with the test trenching.

6.3 Evaluation to inform a planning decision

Evaluations where no archaeological remains are uncovered

If no archaeological remains are encountered during an evaluation to inform a planning decision, in most cases no further archaeological fieldwork will be required. The licensee[s] should promptly inform both the HED Planning Team and Excavation Licensing Team of the results of the evaluation so that a site inspection can be arranged if necessary and in order to facilitate efficient processing of the related planning application.

The sequence of deposits overlying the natural subsoil should be appropriately recorded and described in full, and a Comprehensive Report must be submitted to the HED Excavation Licensing Team for classification. The report should also be sent to the planning authority for consultation with the HED Planning Team, to enable the provision of final definitive advice on the associated planning application.

To ensure efficiency, submission of the report to the planning authority in this instance does not need to wait for classification of the report as final from HED.

Evaluations which uncover archaeological remains

If archaeological remains are encountered during an evaluation to inform a planning decision, both the HED Planning and Excavation Licensing Teams must be informed and a site meeting may be arranged in order to determine the course of investigation.

This may require further excavation to determine the character, extent, state of preservation and potential date of those remains, or specific measures to ensure preservation in-situ of remains.

The final scope of the evaluation must be agreed with HED Planning Team to ensure the request for archaeological information has been fully satisfied. Following completion of the evaluation a Comprehensive Report must be completed: excavated trenches and any features within them must be accurately located using survey-grade GPS or similar and recorded by means of photographs, scale drawings, and written descriptions. Section 8 provides detail on acceptable survey methodologies.

The report must be submitted to the HED Excavation Licensing Team for classification. It must also be sent to the planning authority for consultation with the HED Planning Team to enable provision of final definitive advice on the associated planning application. The results of the evaluation may influence the development layout in order to avoid or minimise archaeological impacts and comply with relevant planning policy. It may also inform the need for more extensive archaeological mitigation required by planning conditions in advance of any approved development (see Section 6.4 below).

To ensure efficiency, submission of the report to the planning authority in this instance does not need to wait for classification of the report as final from HED.

6.4 Archaeological works required by planning conditions



Excavation of a rectangular Neolithic House at Ballintaggart, Co. Down

Where the archaeological works on site are required by planning conditions and the initial site investigations uncover archaeology, the HED Planning Team and HED Excavation Licensing Team must both be contacted to arrange a site visit to agree the way forward. This is likely to involve moving to the resolution of archaeology stage (see Section 7 below).

6.5 Archaeological monitoring of ground works/watching briefs

In some cases, planning conditions may stipulate that archaeology should be addressed through the monitoring of ground works / a watching brief. In these instances, instead of an initial assessment phase, a watching brief involves the archaeological supervision of ground

reduction carried out by the developer during the course of the development.

If archaeological remains are uncovered during monitoring both the HED Planning and Excavation Licensing Team must be contacted. Depending on the nature and extent of the archaeology, a site meeting may be needed. HED may then require an additional detailed method statement which sets out the methodology for investigation and recording. Where planning conditions require monitoring of ground works /a watching brief the licensee[s] must make their client aware of the possibility of additional archaeological works to resolve the archaeology as per Section 7 below.

7 Resolution of archaeology



An archaeologist recording an Early Bronze Age cist burial at Ballyoan, Co. Londonderry

The resolution phase is required when archaeological remains are uncovered that cannot be preserved in situ and/or it has been agreed they should undergo further archaeological excavation.

On development and infrastructure projects the extent of uncovered archaeological remains must be defined by establishing a minimum 10m sterile buffer zone around them (or extending to the site boundary where this is less than 10m). The area must be cleaned by hand in order to best define the archaeological remains. It is expected that comprehensive archaeological excavation will then be undertaken; ie the entirety of the archaeological remains under threat will be excavated in line with the minimum HED requirements outlined below. It may be possible, in exceptional circumstances, to agree a different approach on a site-/project-specific basis. This will not set a precedent for the same approach to be used at another similar site/project.

A typical excavation involves the careful manual cleaning, excavating and recording of archaeological features and deposits. Cut features such as pits, postholes, stakeholes and burials must be excavated using small hand tools only, ie trowel. For larger cut features and deposits such as gullies, ditches, large pits and deep or extensive layers, large hand tools may be used, ie mattocks, spades/shovels, etc. The overall level of hand excavation will vary on a site-by-site basis and must be agreed with HED. Section 8 below details the expected level of on-site recording and survey and Section 8.5 provides information on the expected level of palaeo-environmental sampling.

If concentrations of artefacts – eg lithic scatters/ flint débitage, or organic remains such as charred cereal grains – are discovered, these should be left in situ until a suitable sampling, recording and excavation strategy has been devised by the licensee and their specialist(s) and agreed by HED. Excavation of such deposits must be undertaken using hand tools only.

A list of comprehensive excavation requirements is set out below.

Comprehensive excavation requirements

- All areas of archaeology to be cleaned by hand and planned prior to excavation
- On sites with complex stratigraphy, all horizontal deposits and cut features must be recorded and removed by hand and in stratigraphic order, down to the natural subsoil, or, if agreed with HED, down to the construction formation level.
- Particular care must be taken to ensure that areas of in situ burning are not investigated prior to the consideration of scientific dating
- Discrete features: all to be fully (100%) excavated, ie complete excavation of all stakeholes, postholes, hearths, beam slots, ring gullies, and pits internal to structures or where part of a structure
- Burial enclosures: complete (100%) excavation of the ditches of all burial enclosures.
- Burials: complete (100%) excavation of graves and pits containing burial remains (cremation urns to be lifted wherever practicable for micro-excavation in laboratory environment). Burials (including features suspected of being burials) must be fully excavated in accordance with guidance agreed with HED.

- Structures: complete (100%) excavation of all structures unless otherwise agreed with HED. Each structure must be investigated to define the extent, form, stratigraphic complexity and depth of the component features and its associated deposits. Intersections between components must be investigated to determine their relationship(s)
- Wells: hand excavation of wells, or similar deep structures, is heavily dependent on safe working procedures being put in place by the licensed archaeological company, but normally 100% excavation is required
- Linear features: segments to be hand excavated along the length of the feature sufficient to understand its depositional sequence and character. Each segment must not be less than 1m long and must be regularly spaced along the length of the feature. A minimum of 40% of each linear feature must be hand excavated. In the first instance, segments should be located away from intersections with other features. Once the nature of the features is understood key intersections and all ditch ends must be targeted and fully excavated
- Large enclosure ditches: minimum 40% hand excavation of all large enclosure ditches. The hand-excavated areas must include any entrances or crossing points. Full excavation of the enclosure ditch will be required if substantial or particularly significant organic material or structural remains are present.
- Burnt Mounds: determined on a case-by-case basis with strong emphasis on environmental sampling. Normally 100% excavation is required.
- Souterrains: hand excavation of souterrains is heavily dependent on safe working procedures being put in place by the licensed archaeological company, but normally 100% excavation is required.

8 Survey, recording and sampling

8.1 Survey methodology and recording



Surveying an early medieval rath at Magheramore, Co. Londonderry

The limit of investigation, ie the extent of opened areas and location of the archaeological trenches, must be accurately surveyed using equipment such as a survey grade GPS or a total station.

All archaeological features, structures and deposits must be accurately planned on site using scaled drawings (or surveyed digitally if appropriate). The extent of modern truncation should also be recorded. The height of the archaeological features must be recorded in relation to the OS survey levels (m OD) and the present ground level.

An accurate written record (comprising context sheets, drawing/photo/sample/find registers and stratigraphic matrices) must also be generated on site. A site diary should be maintained and kept as part of the site archive. HED may carry out scheduled site visits to ensure that the excavation is being undertaken in line with the agreed POW, that the stratigraphic relationships between all features are being adequately understood and recorded, and that the site archive is being maintained.

On site recording – detailed requirements

- The limit of investigation, ie the extent of opened areas and location of trenches, must be accurately surveyed for geospatial reference
- All archaeological features and deposits must be planned to an appropriate scale (typically 1:20 though 1:50 may be used for large enclosures and structures as long as there is no loss of archaeological information)
- All sections and elevations must be drawn to scale (typically 1:10)
- All contexts must be recorded using pro-forma context sheets
- A stratigraphic matrix for each feature must be included on the pro-forma context sheet
- For complex sites or sites with intercutting features a stratigraphic matrix for each area must be kept on site.

8.2 Recording buildings and structural remains of archaeological interest

Where sites include upstanding building/ structural remains of archaeological interest, such as an industrial heritage site, arrangements must be made for their recording. The appropriate site-specific methodology must be agreed in advance with HED and included in the POW and will be based on the levels of building survey outlined in *Understanding Historic Buildings – A Guide to Good Recording Practice*¹⁴.

*Development and Archaeology: Guidance on Archaeological Works in the Planning Process*¹⁵ provides further discussion of building survey.

The level of survey may also be dependent on the structural stability of the upstanding remains and safe working procedures must be put in place.

¹⁴ *Understanding Historic Buildings – A Guide to Good Recording Practice* (Historic England, 2016).

<https://historicengland.org.uk/images-books/publications/understanding-historic-buildings/>

¹⁵ *Development and Archaeology: Guidance on Archaeological Works in the Planning Process* (DfC, 2019)

8.3 Remote sensing

Geophysical survey, or other non-intrusive investigative techniques such as LiDAR, may be used in advance of invasive groundworks to clarify the archaeological potential of a site and potentially identify areas for preservation/investigation.

Geophysical survey may be requested through the planning process as a tool for the assessment of a development site, and routinely forms part of research and community-driven excavation projects in Northern Ireland.

Geophysical survey on protected places – those scheduled under the Historic Monuments and Archaeological Objects (NI) Order 1995, and those in State Ownership and Guardianship – is regulated under Article 29 of the Historic Monuments and Archaeological Objects (NI) Order 1995 and requires a Detection Device Consent (DDC) issued by HED on behalf of the Department. Surveys on State Care sites also require an activity licence from HED.

There is no statutory requirement for a consent for surveys at sites which are not protected, although planning conditions, research objectives, or the requirements of funders will generally dictate that if a geophysical survey is carried out, it is to the highest applicable standards.

All geophysical surveys undertaken at a protected place must meet the minimum standards set by HED and outlined in the HED guidance on the use of detection devices (Appendix C). It is recommended that all geophysical surveys carried out in Northern Ireland, whether on a protected monument or not, comply with these standards.

8.4 Metal detecting as part of an archaeological project

The guidance presented here relates specifically to metal detecting surveys undertaken as part of a mitigation or research strategy for licensed archaeological works. Metal detecting surveys on protected places – those scheduled under the Historic Monuments and Archaeological Objects (NI) Order 1995, and those in State Ownership and Guardianship – is regulated under Article 29 of the Historic Monuments and Archaeological Objects (NI) Order 1995 and requires a Detection Device Consent (DDC) issued by HED on behalf of the Department. Surveys on State Care sites also require an activity licence from HED.

In all cases where digging is to take place to test whether a signal recorded by a metal detector is a response to an archaeological object, an excavation licence must be obtained before any excavation for the object can be carried out. It is an offence under Article 41 of the Historic Monuments and Archaeological Objects (NI) Order 1995 to dig in or under any land for the purpose of searching for archaeological objects without a licence from DfC. Further legal aspects of metal detection are addressed in Appendix C.

It is best practice to undertake a phased detection survey and HED may insist on such an approach. A metal detecting survey of the site may be required before any ground reduction takes place to mitigate the potential loss of metal artefacts within top/plough soil typically removed as part of a development project mitigation or evaluation.

This is usually the approach taken during large infrastructure projects or sites associated with known or potential battle sites. During this initial survey phase recovery of artefacts should be from topsoil layers only – any signals that are revealed to be below the topsoil (ie within the fill of an archaeological feature) should remain in situ and the location flagged and recorded to be excavated appropriately.

A second phase of metal detection survey is likely to be required after a light topsoil strip.

The metal detection survey must be carried out across the target area in linear transects with spacing of no more than 2m.

This methodology should be replicated perpendicular to the original transects to ensure full coverage. The make and model of each detecting device must be recorded in the site archive. A daily log of metal detector use should be kept. Finds from any metal detecting survey must be recorded accurately in three dimensions using appropriate surveying methods and subject to careful handling, bagging, conservation, reporting and archiving. The required spatial survey standards are detailed in Section 8.1 above.

More information on metal detecting in Northern Ireland can be found in A Guide to Metal Detecting, Archaeology and the Law on the DfC website¹⁶.

16 A Guide to Metal Detecting, Archaeology and the Law (DfC). <https://www.communities-ni.gov.uk/articles/guide-metal-detecting-archaeology-and-law>

8.5 Palaeo-environmental sampling



Archaeologists taking environmental samples from around a Bronze Age urn burial at Derrycraw, Co. Down

The study of human remains and environmental archaeology have been subject to fast-paced change in recent years, with new developments and advances, such as multi-proxy techniques in environmental archaeology, aDNA, and isotopic analysis. In this context, the environmental guidance within this document should be seen as an interim summary while DFC are working towards providing further guidelines for the application and practice of environmental archaeology techniques in Northern Ireland.

Useful detailed guidance is currently provided in:

TTII Palaeo-environmental Sampling Guidelines. Retrieval, analysis and reporting of plant macro-remains, wood, charcoal, insect and pollen from archaeological excavations¹⁷

and

Environmental Archaeology: A guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation¹⁸

¹⁷ TTII Palaeo-environmental Sampling Guidelines. Retrieval, Analysis and Reporting of Plant Macro-remains, Wood, Charcoal, Insects and Pollen from Archaeological Excavations. (M McClatchie, E O'Carroll and E Reilly. Transport Infrastructure Ireland, 2015) <https://www.tii.ie/technical-services/archaeology/resources/TTII-Palaeo-environmental-Sampling-Guidelines.pdf>

¹⁸ Environmental Archaeology: A guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second Edition). (G Campbell, L Moffett and V Straker. Historic England, 2011) <https://www.tii.ie/technical-services/archaeology/resources/TTII-Palaeo-environmental-Sampling-Guidelines.pdf>

A structured and appropriate programme of environmental sampling must be implemented during any archaeological fieldwork whether an evaluation, excavation or watching brief. The strategy and methodology for the sampling, recording, processing, assessment, analysis and reporting of deposits with environmental archaeological potential must be devised in consultation with a suitably qualified environmental archaeologist and agreed in the POW. If, during the course of on-site works, significant deposits showing increased potential for palaeo-environmental material are

uncovered, the licensee[s] may be asked for an updated method statement for environmental sampling, following further consultation with the environmental archaeologist. Provision should be made for return site visits by the relevant specialist(s). A summary of requirements is presented below.

Where a Post-excavation Assessment Report is required (Section 11.2), this must include a detailed methodology in respect of environmental samples and outline the extent of specialist work to be undertaken.

Environmental sampling

- Advice must be obtained from an appropriately qualified environmental archaeologist
- The POW must include a detailed description of the proposed method of palaeo-environmental sampling, proposed sample size, processing, assessment and reporting, prepared in consultation with the palaeo-environmental specialist
- Sample volume will depend on the method of preservation encountered, with larger samples of 40–60 litres required if multiple categories of environmental remains are to be analysed from a single deposit, or 100% of smaller features
- Samples should be processed in their entirety and the correct processing technique applied depending on the sampling rationale
- Flot must be collected on a sieve with mesh size of 300 microns, residues must be collected on sieve size of 500 microns–1 mm
- Site visits from the environmental archaeologist and other specialists must be organised/managed to advise on and collect samples during field work
- All processed samples must be assessed and reported on as part of the fieldwork report
- In general, 25% of each chosen deposit should be sampled for palaeo-environmental processing but this will depend on the specific nature of each site and the sampling strategy agreed with HED
- When deposits that have potential to contain significant palaeo-environmental material are encountered, these should not be removed until discussed with HED.

8.6 Geoarchaeology

Geoarchaeology involves the application of earth science principles and techniques to better understand the archaeological record (Historic England, 2015). The discipline involves the examination of sub-surface deposit sequences, through historic records or purposive coring and exposed sections, and investigation of palaeo-environmental proxies, in order to identify formation processes at particular sites, or landscape features of archaeological interest.

HED supports the premise that the character and distribution of past human activity can be better understood through the application of geoarchaeological methods. This approach considers historic landscapes within their environmental setting.

Geoarchaeological approaches are often required as part of a wider programme of archaeological investigation, whether that be desk-based assessments, monitoring of initial ground investigations, site monitoring conditions, or evaluation and mitigation excavations. Geoarchaeological investigations may be required by HED and planning authorities on certain landscapes, such as floodplains, where the deposit sequence can have ancient land surfaces and human activity buried at widely varying depths and of wide-ranging complexity and extent.

HED accepts that particular circumstances will demand varying approaches to the timing and inclusion of geoarchaeological works as components within larger projects. The specific methodologies used must normally be included and agreed as part of the wider project POW, and will be derived from the particular circumstances of the landscape/site, the impact of the proposed development, and what is required to be achieved.

On all sites involving archaeological excavation – whether an evaluation, full excavation or recording under archaeological monitoring conditions – an appropriate level of geoarchaeological recording (and where necessary sampling) must be undertaken to understand site formation processes. As a minimum, all bedrock, superficial deposits and soils exposed during fieldwork must be described and interpreted in relationship to any recorded archaeological features and deposits.

When compiling an appropriate strategy and methodology for geoarchaeological deposit modelling, recording, sampling, processing, assessment, analysis and reporting, the following Historic England guidance documents are useful:

- Geoarchaeology: using earth sciences to understand the archaeological record¹⁹
- Deposit modelling and archaeology: guidance for mapping buried deposits²⁰

¹⁹ Geoarchaeology: using earth sciences to understand the archaeological record (Historic England, 2015)

²⁰ Deposit modelling and archaeology: guidance for mapping buried deposits (Historic England, 2020)

9 Finds

9.1 Selection strategy

A site-specific selection strategy should be an integral part of the POW and must be applied to both the working excavation archive and in the preparation of the archive for long-term storage. This will, where necessary, be subject to relevant expert advice. Throughout the course of the project the selection strategy should be monitored, reviewed and revised as necessary, for instance to take account of unexpected developments or discoveries. All revisions to the selection strategy should be agreed with HED and fully documented. Uncollected material should be recorded and dispersed as agreed in the selection strategy. HED are currently working towards the preparation of a selection, retention and dispersal policy for Northern Ireland. Useful advice, and templates for implementing a selection, retention and dispersal strategy are provided in the ClfA Selection Toolkit²¹.

9.2 Treatment of finds

Archaeological artefacts/ecofacts are subject to biological, chemical and physical decay. Many factors play a part in their preservation: the acidity of the soil, exposure to air, water and fluctuations in temperature, and the composition of the artefact/ecofact itself. The treatment of archaeological objects once uncovered is critical to their long-term preservation. Standards and Guidance for the Creation and Care of Archaeological Archives in Northern Ireland²² should be referred to for information and advice to ensure that all objects recovered are cared for and recorded correctly.

It is the responsibility of the licensee[s] to ensure that all required conservation of objects, as advised by a relevant specialist if necessary, and agreed with HED, is completed before they are packaged for long-term storage in the site archive.

²¹ ClfA Selection Toolkit <https://www.archaeologists.net/selection-toolkit>

²² Standards and Guidance for the Creation and Care of Archaeological Archives in Northern Ireland (DfC, 2023)

9.3 Treasure items



Late Bronze Age gold dress fastener and sleeve fastener from Killymoon, Co. Tyrone

Certain archaeological objects are classified as Treasure under the Treasure Act 1996, the Treasure (Designation) Order 2002 and the Treasure (Designation) (Amendment) Order 2023. These include

- any metallic object, other than a coin, provided that at least 10% by weight of the metal content is precious metal (ie, gold or silver) and that it is at least 300 years old when found. If the object is of prehistoric date, it will be Treasure if any part of it is precious metal
- any group of two or more metallic objects of any composition of prehistoric date that come from the same find
- two or more coins from the same find provided they are at least 300 years old when found and contain 10% gold or silver (if the coins contain less than 10% gold or silver there must be at least ten of them to constitute Treasure). The close association of the coins is crucial to satisfy the Treasure condition – coins in a hoard or which had been in a purse or packet are considered Treasure; coins found in a variety of different contexts are not
- any object that is found in the same place as, or had previously been together with, another object that is Treasure.
- Significant objects- this class of treasure is designed to capture only those objects that, by virtue of factors such as their rarity, provide an exceptional insight into an aspect of national or regional history, archaeology or culture. This new class was introduced in 2023.

Under the legislation, all items that the finder believes might be Treasure must be reported

- within 14 days of discovery, or
- within 14 days of realising the item/s might be Treasure.

Potential treasure cases should be reported in the first instance to National Museums NI treasure@nationalmuseumsni.org.

If the find appears to meet the criteria to be Treasure, National Museums NI will discuss this with the finder and explain how Treasure cases are progressed through the Northern Ireland Coroner²³. The same reporting conditions apply to the finding of treasure during an archaeological excavation and in addition HED must be informed. If an item of Treasure is found on an archaeological excavation or investigation, the finder - any person, staff or volunteer engaged on the project - is not eligible to claim a reward.

²³ Advice for the finders of Treasure in Northern Ireland (DfC)

<https://www.communities-ni.gov.uk/articles/advice-finders-treasure-northern-ireland>

9.4 Human remains



Early Bronze Age cist burial at Ballyoan, Co. Londonderry

Any human remains uncovered during fieldwork should initially be left in situ, covered and protected, and reported immediately to the Police Service of Northern Ireland (PSNI) and HED.

Guidance on the Treatment and Care of Human Remains from Archaeological Excavations in Northern Ireland²⁴ provides further information and should be referred to for advice on how to proceed.

A detailed methodology for excavating the human remains, including a selection, retention and dispersal strategy, must be agreed with HED prior to any archaeological investigation and recording. Where articulated or substantial cremated remains are present, this methodology must be prepared in consultation with a suitably qualified osteoarchaeologist.

²⁴ Guidance on the Treatment and Care of Human Remains from Archaeological Excavations in Northern Ireland (DfC, 2024)

10 The excavation archive

Creation of the site archive is recognised as an integral part of the archaeological excavation process. It begins at the inception of the project and continues throughout the fieldwork and into the post-excavation and reporting phase, culminating in a comprehensive report and structured material, paper and digital archive, prepared for long-term storage.

HED may inspect any storage facilities, archives or records and the licensee[s] shall facilitate any such inspection. This inspection may be carried out at the location where the excavation is being carried out or, if off-site, where the post excavation work is being undertaken.

10.1 Content of the archive

The archive includes fieldwork reports, context sheets, registers, drawings, photographs, site notebooks and survey data, in written, drawn or digital format, as well as artefacts, ecofacts and all other primary data recovered during the archaeological project.

The site archive will be a comprehensive record of the work undertaken, structured to allow the information to be understood and readily accessible by those unfamiliar with the project.

The content of the archive should be subject to a site-specific selection strategy and useful advice on this is provided by ClfA in their Selection Toolkit for Archaeological Archives²⁵. Not all the records and materials collected or created during the course of an archaeological project require preservation in perpetuity, but selection should be focused on choosing what is to be retained to support future research, outreach, engagement, display and learning activities, rather than deciding what can be dispersed.

Even sites which do not uncover archaeological remains will still have an archive which records the works which have been conducted. The ClfA Selection Toolkit provides specific guidance on archaeological archives from sterile projects.

²⁵ Selection Toolkit for Archaeological Archives (ClfA)

10.2 Standards and guidance for the preparation of the archive



An archaeologist storing artefacts from an excavation in an archival store

Archives deriving from licensed excavations must be prepared to recognised professional standards (in line with the excavation licence guidelines and standard archaeological planning conditions (where relevant) in place since 2019).

For all excavations licensed from 1st January 2025 onwards the Standards and Guidance for the Creation and Care of Archaeological Archives in Northern Ireland²⁶ will apply. Detailed information about the archive must be submitted along with the Comprehensive Report using the HED Excavation Archive Inventory in Excel format.

Failure to submit this information with the report may lead to delays in classification of the report as Final (see Section 12).

Informed by specialist advice, **conservation work must be completed on all items which require it, before the archive is packaged for long-term storage**, and a record of this work will form part of the archive.

Archives must be stored in appropriate conditions to ensure that they do not deteriorate. At present DfC is not in a position to accept transfer or deposition of archaeological archives deriving from excavations but is actively working to resolve this situation.

²⁶ Standards and Guidance for the Creation and Care of Archaeological Archives in Northern Ireland (DfC, 2024)

10.3 Digital archive

Excavation data is increasingly being recorded or stored digitally, and creation of a well-structured and accessible digital archive is an integral part of the excavation process. HED are preparing Guidance for the Creation and Management of Digital Archaeological Archives in Northern Ireland²⁷ (forthcoming). Subsequent to the publication of this guidance, creation of a digital site archive to the appropriate standard, and deposition with a trusted digital repository will be a condition of the excavation licence.

ClfA provides a very useful **Toolkit for managing digital data**²⁸.

²⁷ Guidance for the Creation and Management of Digital Archaeological Archives in Northern Ireland (DfC Forthcoming)

²⁸ Toolkit for managing digital data (ClfA) <https://www.archaeologists.net/digdigital>

11 Reporting

It is a condition of the excavation licence (and, where relevant, also a planning condition), that adequate resources are in place to carry out all post-excavation analysis, reporting, archiving and publication requirements that arise from an excavation. To fulfil this, after fieldwork is completed, the licensee[s] prepares and submits a report to HED. Depending on the nature and extent of the archaeology encountered, a series of staged archaeological reports may be required.

11.1 Brief summary report

Where there is a temporary cessation of archaeological site works for a period of more than one week, HED may require the licensee[s] to submit a brief summary report. This should provide a brief synopsis of the findings of the excavation to date and a plan showing the areas evaluated, with the extents of any archaeological remains found within these areas clearly marked. If the temporary cessation continues beyond the expiry date of the archaeological licence and the licence has not been extended, a comprehensive report on the archaeological remains excavated to date will be required.

11.2 Post-excavation assessment report

Where extensive or complex archaeological remains that require significant specialist analysis have been found the appropriate level of post-excavation and publication must be agreed with HED through submission and approval of a Post-excavation Assessment Report. This report should usually be submitted to HED within four weeks of completion of site works, unless otherwise agreed in writing.

The licensee[s] should not begin the comprehensive report until HED has approved the proposed methodology detailed in the post-excavation assessment report.

All post-excavation assessment reports must include:

Cover page

- title of the report
- site name: townland and county followed by what the site is known as; in towns give street numbers, street and town/village name
- NISMR number – where relevant
- Excavation Licence number in the format AE/XXXX/XXX eg AE/2023/001
- planning reference number – where relevant
- grid reference – Irish Grid format
- date of archaeological fieldwork
- name of the licensee[s]
- date of submission of report
- version number of the report if it is a revision
- name of report author
- name of report editor

Preliminary pages

- list of contents
- list of figures
- list of tables
- list of photographs
- acknowledgements

Report content

- a summary assessment of the nature and significance of the archaeology excavated
- a detailed site plan showing all archaeological features excavated
- sufficient sections and elevations to allow HED to assess the proposed post-excavation methodology
- a preliminary assessment of the various material and environmental remains recovered and a statement on their potential (normally undertaken with specialist advice)
- details of further specialist work or analysis proposed for specific material or biological remains (eg radiocarbon dates, palaeo-ecological assessments, faunal or human bone reports, artefact reports, conservation works and illustrations, etc.), including details of the proposed person / company conducting the analysis
- a methodology which articulates how the comprehensive report will be produced and what it will comprise
- tabulation and quantification of the total number of
 - contexts
 - environmental samples
 - artefacts/finds (separated by type)
 - palaeo-ecological columns/boxes/cores
 - photographs
 - plans, sections/elevations
- proposed archive storage
- proposed publication method.

11.3 The Comprehensive Report



Examination of Late Bronze Age pottery from Killymoon, Co. Tyrone

Prior to commencing the comprehensive report, any uncertainty about the need for a post-excavation assessment report must be clarified with HED.

The Comprehensive Report must be submitted to HED within six months of the end of the excavation, unless otherwise agreed with HED in writing. The Comprehensive Report must be classified as Final by HED (see Section 12.2) in order for the licence conditions to be fulfilled.

Where the works were required by the planning process the report must provide sufficient information to enable HED to advise the planning authority on the discharge of archaeological planning conditions attached to the development.

A Comprehensive Report may be the only substantial publicly available written record of the outcome of the project. Consequently, it must adequately detail the results of the archaeological fieldwork and incorporate the agreed appropriate level of post-excavation analysis and synthesis. The content will vary depending on the nature of the site and whether or not archaeological remains have been uncovered. However, certain information must be included, for all licensed work, whether or not archaeological material has been discovered.

The licensee[s] must ensure that the report is proofread prior to submission to HED (eg all tables and illustrations are correctly labelled, cross-referencing between sections

is correct, etc). HED reserves the right to return a report without classification if the content is incomplete, insufficient to enable understanding of the site, or inaccurate.

To comply with General Data Protection Regulations, it is essential that all personal data, such as landowner names and addresses, are not included in a Comprehensive Report, as it will be made available to the public through HERoNI (see Section 13).

All Comprehensive Reports must include:

Cover page

- same items as the post-excavation assessment report (Section 11.2 above)

Preliminary pages

- same items as the post-excavation assessment report (Section 11.2 above)

Non-technical summary

- an overview of the main findings of the fieldwork using non-technical language

Introduction and background

Although some of the information required in these sections may have already been provided in the POW, the fieldwork report is a standalone document, so all relevant information (proportionate to whether archaeology has been found or not) needs to be presented within it.

- description of site location within Northern Ireland
- dates work was undertaken
- site location map
- background to the requirement for excavation/licensed work

- planning background including nature of proposed development (where relevant)
- function and scope of report
- topographic and geological description
- regional and specific setting – defining parameters – and including reference to all relevant heritage assets
- historic background, where relevant to the results of the excavation
- place-names discussion
- fieldwork methodology
- finds retrieval methodology, with success or limitations
- archaeological and palaeo-environmental sampling methodology with success or limitations
- quantification of the physical and digital archive, ie total numbers of context sheets, drawings, photos, register sheets, artefacts, etc.
- List of samples taken, showing which were processed and for what, and whether anything was retrieved
- List of dates obtained from the excavation

Fieldwork results

The report must give a clear and accurate account of the fieldwork undertaken and interpret and discuss any archaeological material uncovered in an accessible manner for the reader. This section should also note any agreed variations from the methodology (POW) and the reasons for that variation. The content of this section will differ depending on whether any archaeological remains or artefacts/ecofacts were uncovered or not.

Where **no archaeological material is recovered**, the fieldwork account must include:

- description of the area investigated
- description of trenches/area excavated – noting length, width, depth and alignment
- description and thickness of the overlying deposits (eg topsoil and/or overburden, ploughsoil)
- description of the subsoil
- plans showing the outlines of trenches/ excavated areas in relation to the site boundary
- high-quality photographic record, ensuring that
 - a scale is used in all photographs
 - surfaces are clean and clear
 - excavated surfaces are not obscured by heavy shadow, flooding, snow cover, etc
 - an appendix containing the results for each trench alongside relevant figures and photographs.

Where **archaeological material is recovered**, the following information must be included **in addition** to that described above:

- stratigraphic sequence of the site
- description and interpretation of archaeological features. This must not paraphrase information on the pro-forma context sheets but be limited to information relevant to the interpretation of the feature. Full detailed descriptions of each feature should be presented in a table or list format either as an appendix or alongside text if that would make the report text more readable
- illustrations (see below)
- synthesis of specialist reports and other post-excavation analysis
- a discussion that sets out the licensee's interpretation of what they have excavated. It must take into account the specialist reports, the archaeological and historical context of the site, and any period-related data. It must include discussion on any departure from hitherto-accepted archaeological knowledge, eg new discoveries or new dating for site or artefact types. The significance of the site and its excavated remains must also be assessed against a local, national and international background.

General illustrations and photographs

The report text must be supported by the use of maps, plans, sections, photographs, interpretative illustrations, figures and graphs, commensurate with the extent and complexity of the archaeology. All illustrations and photographs must be cross-referenced in the text.

All comprehensive reports must include a site plan at an appropriate scale which clearly identifies the excavated area(s) in the context of the overall site. Large excavations will normally require one overall plan with a number of larger-scale plans. All trenches, cuttings and/or expanded areas marked on site plans must be clearly labelled to allow cross-referencing to more detailed plans within the report. All plans must be tied into the Irish Grid and have appropriate scales, north point and legend.

All figures must be of a resolution and clarity capable of being read in the digital copy and also when printed in a standard A4 layout or on a fold-out compatible with an A4-sized print out. Context numbers and any other text must be clearly visible on all figures.

Section/elevation points must be labelled on both plans and sections to allow cross-referencing of the section with the feature location.

It is not necessary to include all section and elevation drawings or photographs in the body of the report, only the key features required to interpret the site adequately. The rest of the site drawings and photographs can be included in an appendix or submitted as accompanying files.

A comprehensive report must include

- site location maps at appropriate scales
- location map showing site boundary clearly marked on OS base map where the scale is not less than 1:2500 and tied into OS grid
- distribution maps sufficient to support the statements, interpretation and discussion in the text, with site boundary clearly shown
- labelled outline of excavation area/ trench locations with OD levels shown
- labelled plan(s) of any archaeological features uncovered
- section/profile drawings of selected features with OD levels shown.
- individual feature plans as necessary.

11.4 Specialist reports

Specialist reports are an integral part of the comprehensive report and may be undertaken by in-house or external specialists. The licensee[s] must ensure that each specialist is suitably qualified and experienced to undertake the analysis, interpretation and reporting required. Sufficient contextual data must be provided to the specialist for them to complete their analysis and report. Specialist reports must include methodologies, tabulated data (where appropriate) and discussion. All material subject to specialist analysis must be quantified, characterised and interpreted,

and the results considered against a local, national and international background. Specialist reports should also make retention/dispersal recommendations where appropriate. The authorship of each specialist report should be clearly stated, along with the date the assemblage was assessed and reported upon. If the study of any artefactual material requires that it be transported outside of Northern Ireland, HED must be notified in advance of removal from the jurisdiction, and if necessary, an appropriate Export Licence (Objects of Cultural Interest) obtained²⁹.

The licensee[s] is responsible for ensuring that their interpretation and discussion of the archaeology is consistent with the data in the accompanying specialist reports (whether compiled in-house or by an external specialist).

²⁹ For current guidance see <https://www.gov.uk/guidance/exporting-or-importing-objects-of-cultural-interest>

Specialist reports must include:

Introduction

- the name and competency of the author(s)
- a note on any constraints on the report
- the basis on which the descriptions have been made, methodology used in analysis and recording
- identification of artefacts, ecofacts, etc requiring specific storage conditions as advised during conservation
- present location of finds
- recommendations for retention and or dispersal

Catalogue

- a description of each item, including accurate measurements where relevant
- context number enabling the information to be cross-referenced with site chronology

Specialist discussion

This will be dependent on the nature of the artefact type, but in general it should address

- technology used in the production/ derivation of any item
- dating of the items and phasing within the site chronology

- implications in terms of distribution and occurrence within the site
- comparable items and or assemblages from elsewhere, and implications for the understanding of the assemblage in the local, national and international context

Artefact/ecofact illustrations and photographs

An illustrated and/or photographed representative sample of artefacts and or ecofacts and in particular those highlighted for discussion must be included.

These must

- be at a scale appropriate to the size of the object and format of the report
- include a scale
- include the finds number (this may be given in the caption)
- include cross-sections as appropriate (illustrations only)

References

Items cited in the text must be referenced using a standard and consistent format (eg Harvard system) and included in a bibliography. References and standard texts used in artefact and sample reporting must also be included in the bibliography. Items that have been used as general background reading, but not cited in the text, can be listed separately.

12 Submission and classification of the report

12.1 Accompanying documentation

The Comprehensive Report is not a single document, but in fact consists of a number of elements which must be submitted together to the HED Excavation Licensing Team for review:

- I. Comprehensive Report in digital form (and in hardcopy if requested). Acceptable digital formats include Microsoft Word (.doc/.docx), OpenDocument Text (.odt) or PDF/A (.pdf)
- II. Archaeological Investigation Report Form
- III. any specific HERoNI Site Reporting Forms, as prescribed by the DfC at www.communities-ni.gov.uk/archaeological-excavation-licence.
- IV. GIS dataset (see below)
- V. confirmation that all necessary copyrights and permissions for the public dissemination of both the comprehensive report, including all of its contents, and the GIS data have been obtained.
- VI. HED Excavation Archive Inventory in Excel format, using the template provided and fully completed – see Standards and Guidance for the Creation and Care of Archaeological Archives in Northern Ireland for details.

12.2 GIS dataset

The GIS dataset (including metadata) must include trench locations and dimensions and the limit of the excavation area, using the Irish Grid Referencing System. The GIS dataset should be submitted in an open or industry standard georeferenced vector format (eg ESRI shapefile or CAD DXF) and include all appropriate metadata. Guidance for the Creation and Management of Digital Archaeological Archives in Northern Ireland provides more detail.

Once the archaeological report and accompanying spatial data is deemed final, this information will be added to HERoNI and be available to the public on the HED Historic Environment Mapviewer.

Failure to submit or delayed submission of any of the items listed in 12.1 may delay the Comprehensive Report being classified as Final and consequently the discharge of the client's planning conditions.

12.3 Classification of the report and approval of accompanying data

The HED Excavation Licensing Team will review the submitted information. If vital pieces of information are missing, or the report and accompanying forms/datasets do not meet the minimum requirements, they will be returned and the submission marked as not received. If the submitted material is of an acceptable standard but requires some further work and/or clarification, it will be classified as Preliminary and a note of what is needed to bring it to Final status will be issued to the licensee[s] and the employing archaeological company.

At present HED are not inspecting all archives towards classification of the Comprehensive Report as Final. However, it is intended, as a minimum, to conduct an annual inspection of a proportionate sample of the archives to ensure that these are being created to meet the HED archives guidelines³⁰.

In cases where archives are consistently found to be failing to meet the guidelines HED may choose to instigate inspection of individual archives for each submission of a Comprehensive Report for classification, until it is demonstrated that archives are being consistently created to meet standards.

Once the submission has been classified as Final, the licensee[s] will receive confirmation from the HED Excavation Licensing Team that the licence conditions have been fulfilled. Where the project was required by a planning condition, a copy of the comprehensive report (along with evidence that it has been classified as Final by HED) must be supplied to the planning authority by the licensee[s], to facilitate discharge of archaeological conditions.

30 Guidance for the creation and care of archaeological archives in Northern Ireland (DfC, 2023)

13 Making information publicly available

Archaeological reports which have been classified as Final, and data from investigation and site reporting forms will subsequently be made publicly available through HERoNI via

- the HERoNI Historic Environment map viewer Archaeological Investigations layer which will show the location/area excavated and contain a link to the Comprehensive Report
- NI Sites and Monuments Record database
- printed hard copy for visitors to HERoNI premises

In future it is also intended to make the site archive dataset available for research purposes.

As reports will be made publicly accessible it is the responsibility of the licensee[s] to ensure that no personal data is included, and it is compliant with requirements of the Data Protection Act 2018 and the UK General Data Protection Regulations. Further information on compliance is available under Data Protection on the Gov.uk website.

Reports which remain classified as preliminary

HERoNI will normally only make available reports that have been classified as Final. Any enquiries received by HERoNI relating to reports which remain classified as Preliminary will usually be referred to the relevant licensee[s] / employing body.

13.1 Publication

It is a condition of the excavation licence that adequate resourcing must be in place to publish the results of the excavation to an appropriate level and in an appropriate format. For all excavation licences (including where no archaeological remains had been found) a brief synopsis of the results of the excavation must also to be submitted to the Database for Irish Excavation Reports for inclusion in Excavations Bulletin.³¹

For sites with archaeological significance, **HED will agree additional publication requirements with the licensee[s] when approving the post-excavation assessment report.** The level and nature of additional publication will be dependent on the significance of the archaeological material excavated. Generally, only full publication will be acceptable for research projects or for excavations funded by the Department.

HED may not have any additional publication requirements when the site has minimal archaeological significance.

Publication requirements for major road improvement schemes are detailed in Management of Archaeological Investigations on Major Road Improvement Schemes DEM165/15.³²

³¹ Database for Irish Excavation Reports <https://excavations.ie/>

³² Management of Archaeological Investigations on Major Road Improvement Schemes DEM165/15 (Department for Infrastructure). <https://www.infrastructure-ni.gov.uk/publications/management-archaeological-investigations-major-road-improvement-schemes-dem-15615>

14 Contact details and further information

Excavation Licensing

For any queries relating to an archaeological excavation licence application, an existing excavation licence, or general excavation enquiries, please contact the Excavation Licensing Team:

HED general enquiries: **028 9081 9226**

Email: **ExcavationsandReports@communities-ni.gov.uk**

Archaeological Planning issues

For enquiries related to archaeological planning issues please contact the HED Planning Team:

General enquiries: **028 9082 3100**

Email: **HEDPlanning.General@communities-ni.gov.uk**

Marine Historic Environment

Email: **Marine.InfoRequests@daera-ni.gov.uk**

Marine Licensing enquiries

Email: **marinelicensingteam@daera-ni.gov.uk**

Treasure

HED general enquiries: **028 9081 9226**

Email: **ExcavationsandReports@communities-ni.gov.uk**

National Museums NI

Email: **treasure@nationalmuseumsni.org**

Historic Environment Record of Northern Ireland

General enquiries: **028 9056 9701**

Email: **HERoNI@communities-ni.gov.uk**

15 Appendices

15.1 Appendix A: Glossary of key terms

Archaeological evaluation – a limited archaeological investigation to understand the nature and extent of below-ground archaeological remains within a site. It does not normally involve full archaeological excavation.

Archaeological programme of works (POW) – a written document prepared by an archaeological consultant which describes archaeological works to be undertaken at a site. For planning conditions, it must set out a detailed archaeological mitigation strategy specific to the archaeological potential of the site and to the nature of the development. It is also used for associated excavation licence applications. Also referred to as a Written Scheme, Written Scheme of Investigation (WSI), or Method Statement.

Archive – An archaeological archive comprises the retrieved material remains, such as the artefacts and ecofacts, as well the written and drawn records relating to an archaeological project, from the initial planning phase to completion of the post-excavation analysis. It also includes digital files including survey data, photographs, reports and spreadsheets. It is the full record of an archaeological excavation.

Discharge of archaeological planning condition – the process overseen by the planning authority to satisfy the requirements of an archaeological planning condition.

Excavation – controlled, intrusive fieldwork with specific agreed objectives, which examines, records and interprets archaeological deposits, features and structures, and, as appropriate, retrieves artefacts, ecofacts and other remains. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design.

Geoarchaeology – The study of natural site formation processes from an archaeological perspective.

Geophysical survey – is a non-intrusive method of assessing below-ground archaeological potential using a number of methodologies including ground penetrating radar (GPR), resistivity, and magnetometry. The techniques generally measure one or more of the physical properties of the subsurface, and archaeological or artificial material is usually identified as an anomaly or anomalies that contrast with the background readings. Results can vary depending on prevailing site conditions.

Historic Building Survey – involves the recording and analysis of upstanding buildings and structures. See *Understanding Historic Buildings: A Guide to Good Recording Practice* issued by Historic England.

Historic Environment Record of Northern Ireland (HERoNI) – The public record maintained by HED of all recorded historic environment assets in Northern Ireland. It includes archaeological sites and monuments, historic buildings, industrial heritage, historic parks, gardens and demesnes, defence heritage and maritime heritage sites.

LiDAR is a surveying method that measures distance to a target using pulsed laser light. The results can be used to make digital terrain models and identify archaeological features.

Metal Detecting uses a detecting device to search for metal objects. An excavation licence is required to excavate in search of archaeological objects in Northern Ireland.

Mitigation – The process whereby the impacts of development upon archaeology can be avoided, minimised or offset. It may include preservation in situ of remains or full archaeological excavation. Also referred to as mitigation strategy.

Monitoring – involves a licensed archaeologist being present during the initial phases of development, for example topsoil stripping or site preparation works, to undertake a formal programme of observation, investigation and recording of any archaeological remains which may be encountered. Also known as a Watching Brief.

Non-intrusive survey - does not disturb the ground or adversely impact on archaeological remains.

Planning Authorities - have responsibility for determining planning applications, planning enforcement, local development plans and planning policy. The 11 local councils and the Department for Infrastructure are the planning authorities in Northern Ireland.

Post-excavation – can refer to anything which happens after excavation, including specialist analysis, archive preparation, report production and publication.

Preservation in-situ is the retention of an archaeological site in its original location.

Report refers to the written account of an archaeological investigation.

Scheduled Monument is an archaeological site which has been scheduled for protection under Article 3 of The Historic Monuments and Archaeological Objects (Northern Ireland) Order 1995.

Scheduled Monument Consent (SMC) must be granted by HED for any works within the scheduled area of a scheduled monument (see HED guidance document). It is an offence to undertake works within a scheduled area without SMC.

Significance (archaeological significance) is the expression of the cultural value afforded to a place, site, or item. Significance may change over time and with use, or as the result of new information.

Test trenching – The excavation of a series of trenches to determine the archaeological potential of a site.

15.2 Appendix B: Content of a Programme of Works

Extract from **Development and Archaeology: Guidance on Archaeological Works in the Planning process Appendix 2: Contents of an Archaeological Programme of Works (POW)**

(DfC, April 2019)

Archaeological Programme of Works documents must be prepared by a suitably qualified and experienced archaeologist or archaeological consultancy. In the planning process the agreement of a POW is the first step in undertaking a site evaluation to inform a planning decision or in the discharge of archaeological planning conditions.

The purpose of a POW is to identify the potential archaeological impacts of a development and to devise a methodology to clarify archaeological survival within a site and, if required, describe a mitigation strategy to avoid or offset impacts upon archaeological remains, through full archaeological excavation if necessary, and to provide for the production of a Comprehensive archaeological report.

For archaeological planning conditions the POW document will be used as the agreed basis against which the discharge of the conditions will be measured by the planning authority and HED. It is essential, therefore, that it accurately describes how the archaeological works will align with the development programme and how the conditions will be discharged in full for any particular scheme.

The POW should be presented as a comprehensive written report, properly citing all sources referenced, along with appropriate maps and illustrations. The level of detail and scope of contents will vary depending on the nature of a site and project; however, HED would expect the following contents as a minimum requirement when assessing POW documents:

1. The **front cover** must clearly identify the planning reference, development name/ location and the author of the report.
2. A **non-technical summary**.
3. The **introduction** should include:
 - a. Details of the professional competency of the POW author
 - b. The reasons for the POW, noting the relevant HED planning consultation response and related archaeological planning conditions if applicable. Any specific requirements set out in the HED response as well as any general or specific research aims for the project should be noted
 - c. A detailed site description including site address, coordinates, size, townland name, topography, current site conditions and prevailing geology
4. A **description of the proposed development** including scaled plans accurately identifying the development site location, site layout plans for the development and any other drawings which may be relevant to identifying the archaeological impacts of the development.

5. A **desk-based assessment** to identify the known archaeological and related historic environment assets within the development site and within an appropriate study area. The study area and the identified historic environment assets should be clearly mapped and illustrated within the report.

The **study area** can vary in extent depending on the scale and nature of the development. It must be sufficiently large to fully assess the archaeological potential of a site and the potential archaeological impacts of the development- HED recommend a minimum 500m radius from the site boundary for small-scale development, whereas a 2km radius or more may be appropriate for larger schemes. The study area must be clearly identified in the POW.

The desk-based assessment should include a review of the following records as a minimum requirement:

- a) The Historic Environment Record of Northern Ireland, including:
 - i. The Northern Ireland Sites and Monuments Record
 - ii. Industrial Heritage Record
 - iii. Register of Historic Parks, Gardens and Demesnes
 - iv. Defence Heritage Record
 - v. Maritime Heritage Record
 - vi. Listed Buildings
 - vii. Battle Sites

- b) Any **statutory designations** - such as State Care and Scheduled monuments -should be clearly identified.
- c) Relevant designations and zonings in local development plans - such as **Areas of Significant Archaeological Interest (ASAs), Areas of Archaeological Potential (AAPs)**.
- d) The results of **previous archaeological investigations** and surveys, including HED's excavations database and the Excavations Bulletin, LiDAR or geophysical surveys where available.
- e) A **cartographic review** of historic maps, including early OS map editions and earlier maps which may be available and relevant to the site. Maps should be illustrated within the report to highlight particular aspects of archaeological potential.
- f) A review of available historic and modern **aerial photographs** of the site.
- g) **National Museums NI** records of archaeological findspots.
- h) Historic records held in **PRONI**.
- i) A **bibliographic review** of relevant published sources, for example plantation records, OS Memoirs, Gazetteers, Street Directories (for Urban Areas), Griffith's Valuation, as well as modern academic publications.

6. The results of a detailed **site walkover survey** undertaken by a suitably qualified archaeologist to assess the archaeological potential of the site, identify recorded assets and identify previously unrecorded features of archaeological interest. This should be illustrated as necessary with photographs and site plans.
7. An assessment of the **archaeological potential** of the site based upon points 5 and 6 above.
8. An assessment of the **archaeological impacts** of the proposed development, including identifying the significance of the remains in question, the magnitude of the impacts and the significance of the effects.
9. An **archaeological mitigation strategy** tailored to the specific details of the development and designed to avoid, minimise or offset the identified impacts. The mitigation strategy should address any specific requirements highlighted in the HED response and should include:
 - a. A methodology to evaluate and identify the extent of archaeological survival within the development site. A plan must be provided showing proposed areas and layout of trenching, topsoil stripping or other investigation.
 - b. Options to preserve identified remains in-situ.
 - c. If preservation is not possible, a detailed methodology for the archaeological excavation and recording of affected remains, including a sampling strategy.
 - d. If required, the mitigation strategy may include the survey of upstanding buildings/structures. Include details of survey equipment and accuracy.
 - e. Arrangements for undertaking conservation of remains which may arise as a result of excavation.
 - f. Methodology for treatment of human remains and of treasure.
 - g. A proposed post-excavation strategy providing for specialist analysis as required and the production of a Comprehensive Report, to publication standard if necessary.
 - h. Details of archiving arrangements including preparing the digital, documentary and material archive for deposition.
 - i. Contingency arrangements.

For works to discharge archaeological planning conditions the mitigation strategy should carefully describe how the archaeological works will align with the commencement of development works and the overall development programme. This should include describing the phased discharge of archaeological site works for large-scale phased developments. Refer to the process described in Section 3 above.

10. Monitoring arrangements and updating the POW - details should be included for informing HED of the commencement of works, archaeological discoveries and arrangements for site meetings to agree updates or revisions to the POW when required. Provisions for amending the scope of the POW in light of archaeological discoveries should be included.
11. The POW should provide for the production of a Preliminary Report within 4 weeks of the completion of archaeological site works, which should indicate necessary measures and timescales for the production of the Comprehensive Report, to publication standard if necessary.

15.3 Appendix C: Detection devices

Archaeological surveys using detecting devices – most commonly metal detectors and geophysical survey equipment such as electrical resistance meters, magnetometers and ground penetrating radar – are regularly incorporated into archaeological project designs in Northern Ireland.

The value of any detecting device survey is that, when undertaken and interpreted correctly, it can provide increasingly comprehensive information on subsurface conditions, features or objects without disturbing the modern ground surface.

The legal provisions governing detecting device survey in Northern Ireland

Article 29 of the Historic Monuments and Archaeological Objects (NI) Order 1995 regulates the use of detecting devices on protected sites (Scheduled sites and those in State ownership and/or guardianship). A detecting device is defined in Article 29 as ‘any device designed or adapted for detecting or locating any metal or mineral on or in the ground’ and this definition is broad enough to include all of the various types of survey equipment commonly used in archaeological prospection.

Anyone wishing to use a detecting device at a protected site must first obtain a Detecting Device Consent (DDC) from HED. Even the presence of a detecting device on a protected site requires a DDC, even if the device is not in use.

There is no statutory requirement to obtain a DDC for surveys at sites which are not statutorily protected. However, planning conditions, research objectives or the requirements of funders will generally demand that the survey is carried out to the highest applicable standards, and that survey results are reported. It is therefore recommended that all surveys carried out using a detecting device for archaeological purposes comply with these guidelines.

It is emphasised that, whether a site is protected or not, and irrespective of the detecting device that is used (including metal detectors), any digging to search for archaeological objects or material in response to a signal from a detector requires:

- a licence to excavate under Article 41 as outlined of the Historic monuments and Archaeological Objects (NI) Order 1995
- additional regulatory permissions or consents (such as Scheduled Monument Consent and State Care Activity Licence) if the site is protected under legislation
- consent of the landowner (this must always be obtained in advance).

Geophysical survey techniques and resources

Geophysical survey techniques generally measure soil characteristics and the underlying conditions, geology or mineralogy of the site being tested, and their efficacy relies on recognising variations or anomalies in the readings recorded. Survey readings are usually recorded digitally and can be mapped using customised software packages to produce 2D or 3D images of the survey, in plan or section. This allows for an image of the site to be created and analysed without disturbing it. In some instances, past activity at the site will be immediately evident in the image produced, as an anomaly may clearly define an archaeological site, but a skilled archaeo-geophysicist is able to interpret anthropogenic impacts from the nature or character of more subtle anomalies.

Northern Ireland has an extremely diverse geological background for a relatively small landmass (Mitchell 2004), resulting in a challenging environment for geophysical survey. It is therefore essential that every survey employs the technique(s) most suitable to the particular site, and uses a methodology that elicits the best results from that technique. The experience and expertise of the surveyor are key to the successful design and completion of a survey.

There is a wide-ranging and ever-increasing body of techniques that produce valid and successful archaeological surveys. A select bibliography of the relevant contemporary information is provided below.

Electrical resistance and magnetometry have traditionally been the most commonly used techniques in Northern Ireland, but in more recent years ground-penetrating radar and electromagnetic induction techniques have been employed with increasing success. Metal detector survey is also increasingly used in the archaeological sphere. HED encourages practitioners to apply innovative techniques and methodologies in their surveys; the most successful employ a combination of complementary techniques, and these may be allied to other forms of survey or investigation.

HED require that best practice is applied to any survey carried out under a DDC and the following is the agreed acceptable baseline standard for all work carried out using detecting devices in Northern Ireland.

An archaeological geophysical survey will determine, as far as is reasonably possible, the nature of the detectable archaeological resource within a specified area using appropriate methods and practices.³³

HED requires that the survey takes into account the specific archaeological, topographical and geological features of the site, and that the technique chosen will be applied with a methodology suitable for achieving the best possible outcomes. The surveyor will be expected to demonstrate that their proposal is adequate to properly investigate the site in question. HED can be contacted at any stage to discuss the survey process.

³³ ClfA Standard and Guidance for Archaeological Geophysical Survey.
https://www.archaeologists.net/sites/default/files/ClfAS&GGGeophysics_1.pdf

Applying for a Detecting Device Consent

If the survey is to be carried out at a protected site, a DDC will be required. The application form requests details of the employing institution as well as the named surveyor, who will be responsible for devising, completing and reporting on the survey. The named surveyor must be an individual with a qualification in and/or demonstrable experience in the successful completion of relevant archaeological survey projects. A first-time applicant will be expected to demonstrate this in a CV, supplying two referees for verification.

The applicant must supply a detailed survey project design, which should contain as a minimum

- the archaeological background of the site and wider landscape
- a location map of the proposed survey area
- the rationale for the project and the aim of the survey
- the survey technique(s) and methodology with justification for the choice(s)
- a summary of the site-specific geological and other considerations or restrictions
- a physical description of the survey area
- a list of the deliverables of the survey.

The project design must also

- provide justification for the proposed survey
- explain why the method is applicable and appropriate to the site
- explain how the method addresses the aims of the project
- set out the survey parameters that will be used
- include a commitment to producing an archive of the survey to the appropriate standard.

The DDC will be granted if HED is satisfied that the applicant has the required expertise to carry out the survey, and that the project outlined in the survey project design is appropriate and will be carried out in accordance with contemporary best practice to meet the required standard. In order to grant a DDC, HED may require amendments to or discussion about applications. HED welcome early contact from applicants to discuss geophysical projects.

The surveyor must ensure they have obtained the consent of the owner and occupier of the land before applying for a DDC.

It is best practice to apply complementary survey techniques to each site, and this will be a factor in determining applications. As well as other geophysical methods, complementary survey techniques can include LiDAR, 3D photogrammetric or topographical survey.

The geophysical survey must be tied into the Irish Grid reference system (TM 1975), with GPS or another metrically accurate survey method, both so that the results can accurately be located in the landscape, and that the survey is repeatable if necessary or desired.

The applicant must notify HED in advance of the survey so HED can plan a site inspection.

A DDC does not authorise excavation for archaeological objects.

If this is required to test anomalies detected by a survey, an excavation licence must be applied for and granted in advance of any excavation. Other permits such as Scheduled Monument Consent and/or State Care Activity licence will also be required.

If excavation is intended to test the results of the survey, this should be highlighted in the survey project design.

Field survey

Fieldwork must be carried out under the supervision of the surveyor named on the DDC, and anyone assisting the surveyor must have the relevant skills and experience to contribute to the successful capture of survey data.

The survey project should comply with the techniques and methodologies outlined in the survey project design. The project design should provide scope for alterations due to unexpected on-site or weather conditions. Should a significant alteration to the technique or methodology be required, this must be reported to and approved by HED before continuing with the survey.

It is good practice to download and view survey data at the completion of each working day at a minimum, so that any issues or defects in the data can be found while in the field and rectified.

All equipment, including survey rods, pegs, canes and tapes, must be removed from the site on completion of the survey. The placement and retention of any permanent survey markers must be agreed in advance with HED and may require additional consents.

The survey report

It will be a condition of any DDC to supply a report on the results to HED **within twelve weeks** of the completion of the survey.

The survey report should, at a minimum contain the information listed below:

- a summary page outlining the main results
- the archaeological background of the site and wider landscape
- a location map of the proposed survey area
- the rationale for the project and the aim of the survey
- the survey technique and methodology, with justification for choice
- a summary of geological and localised site considerations or restrictions
- a physical description of the survey area
- a technical section on the technique employed, equipment and relevant survey parameters (eg instrument set up, traverse and sample intervals, resolution)
- a summary of site conditions on day(s) of the survey, to include restrictions and any deviations from the geophysical method statement
- raw survey data depicted as a greyscale and minimally enhanced data depicted as a greyscale if relevant
- the processed dataset in at least two graphic formats (eg greyscale, trace, plots, pseudo sections, 3D modelling). These images must all include north arrows and relevant annotation, scales and range of values
- an annotated interpretative diagram of the survey anomalies
- a written description of the survey anomalies, cross-referenced with the interpretative diagram
- interpretation of the anomalies and discussion of their archaeological significance in the context of what is known of the site. Where the survey formed part of a wider investigation involving concurrent excavations to test the geophysical anomalies detected, discussion should be provided on the ground-truthing of the anomalies
- recommendations for further work if necessary
- a conclusion.

HED will classify the report as either preliminary or final. If the classification is preliminary, the surveyor will be supplied with a list of requirements and suggestions to obtain a classification of final for the report.

As with excavation licences, applicants can only hold six DDC consents at any one time.

Archiving

Once a report has been classed as final, the surveyor must submit the digital survey archive to HED.

In common with all archaeological projects, a detecting device survey results in the collection of scientific data, the potential of which can only be realised if it is properly retained and archived when the project is completed. It is a condition of any DDC to supply a complete geophysical archive to HED once the geophysical survey report has been classified as final. The results of the survey must also be passed on to HERoNI if the data can be used either to create an entry for a newly discovered archaeological site in the record, or to significantly augment knowledge about an existing site. This can be done by submitting one or both (as required) of the HED digital Archaeological Investigation Report Form and HERoNI Site Reporting Form³⁴.

All digital data must be collected and processed in accordance with HED's guidance on digital archives. The standards should be consulted prior to each survey project as these may be regularly updated.

The **detecting device survey archive** must consist of

- inventory of archive contents
- digital copy of the report classified as final
- digital working files (survey grid files in the file format in which they were collected, containing full metadata)
- digital files of grids in .txt file (X, Y, Z) format
- digital copy of metadata in .txt file
- digital image files of raw and minimally enhanced data
- digital image files of processed data
- survey notebooks and field sketches
- shapefile of survey for location purposes

The conditions of the DDC will be discharged on receipt of the survey archive completed to an appropriate standard. Failure to discharge the DDC conditions may result in future applications being refused.

34 <https://www.communities-ni.gov.uk/publications/archaeological-excavation-licence-documents>

Metal detectors and archaeological excavation

Metal detectors are included within the definition of a detecting device in the Historic Monuments and Archaeological Objects (NI) Order 1995 (the Order). Metal detector survey has become an increasingly popular and effective technique in valid archaeological work, particularly in the prospection for battle sites and in community-led projects. Unlike other techniques, the equipment is relatively affordable and widely available to the public. It is best practice that a metal detector survey should meet the same standards as other detecting device survey projects – properly planned, undertaken by individuals with sufficient expertise, and compliant with the procedures and guidelines outlined in this document.

Any metal detecting survey at a protected site will require a DDC, as well any other statutory consents that may be applicable.

Where excavation is undertaken or anticipated to test anomalies detected during the survey, an excavation licence under Article 41 of the Order must always be secured in advance, even where the location is not a protected site.

Excavation of archaeological material detected by a metal detector will normally only be licensed to, or under the direction of, a suitably qualified archaeological professional. In addition, excavation of metal detector anomalies will normally only be licensed in areas which are, or have demonstrably recently been, under arable cultivation. In such cases, the licence will only extend to excavation within the ploughsoil, as this will not disturb material in a secure archaeological context.

HED has produced separate guidance on the use of metal detectors in a wider context, as well as dealing with objects which may be classed as Treasure under the Treasure Act 1996 and including the provisions of the Treasure (Designation) Order 2002 and the Treasure (Designation) (Amendment) Order 2023. Anybody intending to undertake metal detector survey should familiarise themselves both with the relevant legislation and with this guidance:

- A Guide to Metal Detecting, Archaeology and the Law³⁵
- Advice for finders of treasure in Northern Ireland³⁶

³⁵ <https://www.communities-ni.gov.uk/articles/guide-metal-detecting-archaeology-and-law>

³⁶ <https://www.communities-ni.gov.uk/articles/advice-finders-treasure-northern-ireland>

15.4 Appendix D: Links to relevant documents and further guidance

Archaeological Investigations on Major Road Improvement Schemes DEM156/15

<https://www.infrastructure-ni.gov.uk/publications/management-archaeological-investigations-major-road-improvement-schemes-dem-15615>

Association of Local Government Officers Archaeological Officers – advice note for post-excavation assessment

https://www.algao.org.uk/sites/default/files/documents/ALGEO_England_PXA_Advice_Note.pdf

CIfA regulations, Standards and guidance

<https://www.archaeologists.net/codes/cifa>

Coroners Service of NI

<https://www.justice-ni.gov.uk/articles/coroners-service-northern-ireland>

Database of Irish Excavation Reports

<https://excavations.ie/>

Development and Archaeology: Guidance on Archaeological Works in the Planning Process

<https://www.communities-ni.gov.uk/publications/development-and-archaeology-guidance-archaeological-works-planning-process>

Environmental Good Practice Guide for Archaeological Excavations

<https://www.communities-ni.gov.uk/publications/environmental-good-practice-guide-archaeological-excavations>

Exporting or importing objects of cultural interest

<https://www.gov.uk/guidance/exporting-or-importing-objects-of-cultural-interest>

Geoarchaeology

<https://historicengland.org.uk/images-books/publications/geoarchaeology-earth-sciences-to-understand-archaeological-record/>

Guidelines for the Testing and Mitigation of the Wetland Archaeological Heritage for National Road Schemes

<https://www.tiipublications.ie/advanced-search/results/document/?id=2970>

HED Licence application documents

<https://www.communities-ni.gov.uk/publications/archaeological-excavation-licence-documents>

Historic England general guidelines

<https://historicengland.org.uk/advice/find/a-z-publications/>

IAI guidelines

<https://www.iai.ie/guidelines-technical-reports/>

The British Association for Biological Anthropology and Osteoarchaeology (BABAO)

<https://www.babao.org.uk/publications/>

TII Palaeo-environmental Sampling Guidelines: Retrieval, analysis and reporting of plant macro-remains, wood, charcoal, insects and pollen from archaeological excavations.

<https://www.tiipublications.ie/advanced-search/results/document/?id=2667>

Waterlogged Wood

<https://historicengland.org.uk/images-books/publications/waterlogged-wood/>

Zooarchaeological Sampling Guidelines: Best Practice for the Treatment, Analysis and Curation of Animal Bones from Archaeological Excavations

<https://www.tiipublications.ie/advanced-search/results/document/?id=3168>

15.5 Appendix E: Further reading

AAF, 2007 Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation. Archaeological Archives Forum

Bonsall, J, Gaffney, C and Armit, I, 2014 Preparing for the future: a reappraisal of archaeo-geophysical surveying on National Road Schemes 2001–2010. University of Bradford report for the National Roads Authority

ClfA, 2014 Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology. Reading: Chartered Institute for Archaeologists

ClfA, 2014 Standard and guidance for archaeological desk-based assessment. Reading: Chartered Institute for Archaeologists

ClfA, 2014 Standard and guidance for archaeological excavation. Reading: Chartered Institute for Archaeologists

ClfA 2014 Standard and guidance for archaeological field evaluation. Reading: Chartered Institute for Archaeologists

ClfA, 2014 Standard and guidance for archaeological investigation and recording of standing buildings or structures. Reading: Chartered Institute for Archaeologists

ClfA, 2014 Standard and guidance for an archaeological watching brief. Reading: Chartered Institute for Archaeologists

ClfA, 2014 Standard and guidance for the collection, documentation, conservation and research of archaeological materials. Reading: Chartered Institute for Archaeologists

ClfA 2014 Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives. Reading: Chartered Institute for Archaeologists

ClfA, 2014 Standard and Guidance for Archaeological Geophysical Survey. Reading: ClfA.

ClfA, 2023 Standard for archaeological excavation. Reading: Chartered Institute for Archaeologists

ClfA, 2023 Standard for archaeological field evaluation. Reading: Chartered Institute for Archaeologists

ClfA, 2023 Standard for archaeological monitoring and recording. Reading: Chartered Institute for Archaeologists

Clark, J, Darlington, J and Fairclough, G, 2004 Using Historic Landscape Characterisation. London: English Heritage

DfC, 2023 Guidance for the creation and care of archaeological archives in Northern Ireland. Belfast: Department for Communities

DfC, 2023 Guidance on the treatment and care of human remains from archaeological excavations in Northern Ireland. Belfast: Department for Communities

DfC, 2023 Guidance for the creation and management of digital archaeological archives in Northern Ireland. Belfast: Department for Communities

- EH, 1991 The Management of Archaeological Projects. Second Edition (MAP2). English Heritage
- EH, 2000 Managing Lithic Scatters. Archaeological guidance for planning authorities and developers. London: English Heritage
- EH, 2002 Human Bones from Archaeological Sites. Guidelines for producing assessment documents and analytical reports. London: English Heritage
- EH, 2006 Archaeomagnetic Dating. Swindon: English Heritage
- EH, 2006 Science for Historic Industries: Guidelines for the investigation of 17th- to 19th-century industries. Swindon: English Heritage
- EH, 2006 Management of Research Projects in the Historic Environment. The MoRPHE Project Managers' Guide. Swindon: English Heritage
- EH, 2008 Luminescence Dating. Guidelines on using luminescence dating in archaeology. Swindon: English Heritage.
- EH, 2010 Waterlogged Wood: Guidelines on the recording, sampling, conservation and curation of archaeological wood. London: English Heritage
- EH, 2011 Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation. London: English Heritage
- European Association of Geoscientists and Engineers. Near Surface Geophysics.
- Gaffney, C and Gater, J, 2003 Revealing the Buried Past: Geophysics for Archaeologists. Stroud: Tempus
- Gillings, M and Wise, A, 1999 GIS: A guide to good practice. York: Archaeology Data Service
- Historic England, 2015 Geoarchaeology: using earth sciences to understand the archaeological record
- Historic England, 2017 Understanding the Archaeology of Landscapes. A guide to good recording practice. (Revised version of 2007 EH edition)
- Historic England, 2016 Understanding Historic Buildings: a guide to good recording practice
- Historic England, 2020 Deposit modelling and archaeology: guidance for mapping buried deposits
- IAI, 2007 Environmental Sampling: Guidelines for Archaeologists. Dublin: Institute of Archaeologists of Ireland
- IAI, 2004 The Treatment of Human Remains: Technical Paper for Archaeologists. Dublin: Institute of Archaeologists of Ireland
- Mitchell, P D and Brickley, M, (eds) 2017 Updated Guidelines to the Standards for Recording Human Remains. British Association for Biological Anthropology and Osteoarchaeology and Chartered Institute of Field Archaeologists
- Mitchell, W I (ed), 2004 The geology of Northern Ireland – our natural foundation. Belfast: Geological Survey of Northern Ireland
- Schmidt, A, 2013 Geophysical Data in Archaeology: A Guide to Good Practice. (2nd, fully revised print edition). Oxford and Oakville: Oxbow Books

Schmidt, A, Linford, P, Linford, N, David, A, Gaffney, C, Sarris, A and Fassbinder, J, 2015 EAC Guidelines for the use of Geophysics in Archaeology, Questions to ask and Points to Consider Namur: EAC

Watkinson, D E, and Neal, V, 1998 First Aid for Finds. Third edition. London: RESCUE/ United Kingdom Institute for Conservation, Archaeology Section and Museum of London



A 16th-century wall at Society Street, Derry/Londonderry



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