

**APPLICATION FOR ACCESS TO THE DUCKWORTH COLLECTIONS:**

**DESTRUCTIVE RESEARCH**

*Please open this form using the Desktop application version of Word, to ensure formatting is consistent.*

To safeguard the collection, all requests are subject to a rigorous review process conducted by members of the Duckworth Collections team and may also include further external opinions from relevant experts. The review process will consider the nature of the proposed research considering other past, current and proposed work on the collections, and in the context of the overall research strategy of the Duckworth Collections. Conservation assessments may also be necessary.

All research applications require a detailed proposal to ensure the Collections are treated with appropriate respect, care and dignity, and those involving access to human remains require compliance with the [Human Tissue Act 2004](https://www.legislation.gov.uk/ukpga/2004/30/contents), where relevant. The [[Duckworth Collections Human Remains Policy](https://www.arch.cam.ac.uk/files/duckworth_laboratory_human_remains_policy_october_2022.pdf)](https://www.arch.cam.ac.uk/files/duckworth_laboratory_human_remains_policy_october_2022.pdf) **(This Link Doesn’t Work)** should be consulted. Please note that **NO** requests for access to any human remains in the Collection that are the subject of a claim for transfer (such as repatriation) can be granted while the outcome of the claim is pending.

Applicants must read and agree to the Duckworth Collections’ Terms and Conditions (Appendix 1). The Duckworth Collections supports and follows the ethical, legal, and practical guidance provided in the documents/legislation below, which applicants should consult as appropriate:

* [Science and the Dead](https://historicengland.org.uk/content/docs/advice/science-and-the-dead-2nd-ed/) (2023)
* [Guidance for Best Practice for the Treatment of Human Remains Excavated from Christian Burial Grounds in England](https://apabe.org.uk/sites/apabe.org.uk/files/2024-08/APABE_Excavated_Remains_Best_Practice.pdf) (2017)
* [Guidance for the Care of Human Remains in Museums](https://www.britishmuseum.org/sites/default/files/2019-11/DCMS-Guidance-for-the-care-of-human-remains-in-museum.pdf) (2005)
* [The Human Tissue Act](https://www.legislation.gov.uk/ukpga/2004/30/contents) (2004)
* [United Nations Declaration on the Rights of Indigenous Peoples](https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html) (2007)
* [BABAO Code of Ethics](https://babao.org.uk/wp-content/uploads/2024/01/BABAO-Code-of-Ethics.pdf) (2019)
* [BABAO Code of Practice](https://babao.org.uk/wp-content/uploads/2024/01/BABAO-Code-of-Practice.pdf) (2019)

\*Excessive destruction will not be permitted, and applicants are expected to keep the number of potential samples to an absolute minimum. Applicants may be invited to consider non-invasive alternatives.

**Bench Fees**

The Duckworth Collections charges bench fees for research visits and reserves the right to make other appropriate charges where necessary. Please see our [website](https://www.arch.cam.ac.uk/jobs/laboratory-fees-and-charges) for fees breakdown. Where appropriate, researchers are requested to make provision in grant applications for funding to meet facilitation fees (or in large-scale projects for the addition of conservation materials).

**How to apply**

Informal discussion with the Curatorial Manager prior to submitting an application is recommended. Please email duckworth@arch.cam.ac.uk. The Duckworth aims to respond to these enquiries within four weeks.

Please complete the form below, which should then be submitted electronically via duckworth@arch.cam.ac.uk with any supporting documents (or the non-destructive version if your project does not involve destructive sampling).

Students are required to provide a letter of reference from their supervisors. Notification of a decision will be communicated via the same email address (duckworth@arch.cam.ac.uk) usually within four weeks of application.

Applicants should note that previous conduct in respect of the conditions for access to the Collections by the applicant or members of their institution will be considered when reviewing applications. Further research with the Duckworth Collections will not be granted until all relevant data are received.

**Privacy Notice**

The Duckworth Collections will process the personal data you provide for the purposes of assessing your application for access to the collections for scientific research and, should your application be successful, for managing your access and the research use you may make of it. Your personal data will be permanently retained where it is contained in documents related to your research request that are held in our projects archive under strict GDPR guidelines, i.e., your application documents, correspondence relating to the project and any reports or publications arising from the research.

**Conditions Specific for Destructive Sampling**

Applicants should be aware that if permission for destructive sampling is granted, the following conditions will apply:

* All residual samples remain the property of the Duckworth Collections. We request return of any unused and mounted portions of samples when the project is over. If a piece of skin, hair, bone, teeth, or fluid-preserved tissue has been used for biochemical analyses, we require the return of an aliquot of DNA to prevent need for additional destructive sampling of the same remains. If slides of sectioned human or non-human remains are made, we request representative examples be returned.
* Samples or tissues of remains in the Duckworth Collections, or DNA extracted from these samples, cannot be transferred to a third party without express written permission from the Director of the Duckworth Collections. If this is breached, researchers will not have access to the collections in the future.
* Samples may only be used for the purpose(s) outlined in the application. The Description of Research may not be amended, nor may the collections be used for other purposes without written permission from the Director of the Duckworth Collections.
* Results obtained from all analyses that involve destructive sampling (radiocarbon, isotopic analysis, protein analysis, ancient DNA extraction, etc.), as well as any additional data/information should be submitted to the Duckworth Collections on an external memory device as soon as is reasonably practicable. These results are expected in the following stages:
	+ Upon completion of lab work: confirmation of protocols implemented for analysis; confirmation of successful results, and proportion of sample used;
	+ Upon completion of analysis: confirmation of results, to be retained by the Duckworth Collections under embargo until publication of the same;
	+ Upon publication of results: A link to the radiocarbon information (if online, or relevant publication) for inclusion in the Duckworth Collections’ Archives.
* Any agreed costs of sampling by Duckworth staff and Bench Fees shall be paid by the applicant.
* That all sample sizes, methods, feasibility, and previous results are expressly stated in the application.
* Prior to sampling for destructive analyses, we require a micro-CT scan of each element to be sampled; this can be arranged with the Curatorial Manager (duckworth@arch.cam.ac.uk) at the researcher’s expense.
* All collections should be photographed before and after sampling using the DC SOP 6- Sample Removal Inventory Form (this will be provided by the Curatorial Manager). Photographs must be of sufficient detail to discern the area which has been sampled. Copies of all forms must be deposited with the Duckworth Collections.
* The researcher must provide a list at the end of the analysis indicating the catalogue number of the remains, the kind and amount of remains removed, the purpose for removal, and the date of the removal.
* Resulting analytical data and duplicates of tangible products - e.g., SEM photographs, histology slides, or (in the case of aDNA and biochemical sampling) GenBank accession numbers or computer readable copies of sequences - shall be deposited in the Duckworth Collection to become part of the remains’ permanent record.
* We request detailed protocols for the extraction of aDNA from our remains (both successful and unsuccessful). We also would like lists of genes that have been successfully amplified and sequenced from our remains. We will compile lists of both successful and unsuccessful protocols to assist researchers with what we know can be a difficult task.
* The introduction of chemicals from casting of objects and elements can be detrimental to the integrity and preservation of the collection. Therefore, requests for casting of elements or materials (e.g., dental casting or cranial endocasts) will be treated as a destructive sample.

**APPLICATION FOR ACCESS TO DUCKWORTH COLLECTIONS: DESTRUCTIVE RESEARCH**

**Please expand the boxes as appropriate.**

1. Name, contact details, affiliation, and institutional address of applicant

2. Name of project

3. Name of collaborating researchers (if applicable)

4. Contact details of collaborating researchers (if applicable)

5. If your project requires moving parts of the collections to an external lab, please provide the name and address of the institution where analysis will be carried out, and justification.

6. Collections to be accessed (e.g Human Osteology, Non-Human Primate Osteology, Hominin and Hominid Casts, Duckworth Collections Archives, Mourant Collection, Brain Collection, 3D imaging Library).

7. Please provide a detailed **Research Proposal**, including the nature and aims of overall project, how access to the Duckworth Collections will contribute to your research aims, and details about the collections you wish to access, such as site name(s) and/or code(s), total number of individuals to be analysed, demographic profile (e.g. all, adult males only or infants only), and elements to be analysed (e.g. all bones, skulls only, post-cranial only or left talus only). Please provide full details of the proposed methods of examination or analytical technique(s), equipment, feasibility of the study, justification of selected methods compared to other techniques and associated published results, and standards used (if appropriate). To protect the collections, all human remains must be carefully unpacked and repacked. This takes longer than most people expect and **will limit the number of skeletons a researcher can analyse in a day**.

8. Has the Curatorial Manager been contacted?

9. Briefly outline the experience of the applicant in working with human remains and the sampling method.

1. Is funding for the analysis secured? Please provide basic details.

11. If you propose to use portable analytical techniques involving ionising or non-ionising radiation (other than ambient light) on Duckworth Collections premises, please provide full details of the Health and Safety measures that will be in place for the duration of the work. Prior to any such work taking place a risk assessment will need to be approved.

12. If you have requested samples or the temporary loan of Duckworth Collections, please describe the storage, security and working conditions that will be in place for appropriate care. If the collections are to be analysed in a laboratory external to the applicant's affiliated institution, its contact details must also be provided.

13. Proposed start date.

14. Proposed end date.

15. Expected date of results.

16. Indicate when and where you plan to publish the results of this study.

For students, this form must also be signed electronically by the supervisor/Head of the department/institution, undertaking to ensure that the applicant fulfils the agreed obligations.

**Supervisor/Head of department (for students only)**

Name

Position

Signature

Date

**Please now read the Terms and Conditions and sign the Collections Research Agreement.APPENDIX 1: Duckworth Collections Terms and Conditions**

The study, scan, sample and/or photography relating to the Duckworth Collections is subject to the following terms and conditions.

**SECTION A – Research Visits**

**Access**

Applications for access to study, scan and/or photograph the collections in the Duckworth are generally processed weekly with the exception of August and September when the collections are closed. Applicants will normally be informed of the outcome of their application within four weeks.

Access to the Duckworth Collections is at the discretion of the Director of the Duckworth and by appointment only. This may take into account the current and proposed work of members of the Department of Archaeology, and the overall research strategy of the Duckworth Collections.

Permission to study in the Duckworth Collections is given for a specific project and for a specific period of time to undergraduate and graduate students and established researchers. Students are required to provide a letter of reference from their supervisors.

Due to the number of research visits requested, visits are subject to availability and scheduling. A limit may be placed on the duration of visits and the number of remains, archive records or books that may be viewed.

**Data**

A copy of **all** data obtained, including measurements (2D and 3D), images, 3D surface and CT-scans, should be submitted to the Duckworth Collections within 12 weeks of attendance. A copy of all theses and publications that use data collected from the Duckworth Collections must be deposited in the Collections’ Archives.

All data submitted to the Duckworth Collections should be accompanied by an appropriate electronic file with the relevant metadata (information on numerical data collected with full name of measurements taken, method for 3D surface data collection employed, equipment specification, software used for 3D rendering, list of human remains, size of files, etc.). 3D surface scans, μCT scans and other images should be submitted individually labelled in an **external storage device** (a flash drive or hard disk depending on file size) which is to be retained by the Duckworth as the original source.

All data and/or images collected from the Duckworth Collections will be made accessible to other researchers on request after a period of 3-5 years (unless otherwise negotiated) from collection depending on the study, or after publication of the intended study (dissertation, article, book, etc.) if the latter precedes the 3-year embargo.

Further use of the Duckworth Collections will not be granted until all relevant data are received by the Duckworth Collections.

**Acknowledgments**

The Duckworth Collections, University of Cambridge, must be acknowledged in any research that includes data and/or images obtained from its collections. All theses and publications that include data collected from the Duckworth Collections must reference the collection, and/or include the following acknowledgement: “*I/we thank the Duckworth Collections, University of Cambridge, for permission to study its collections*.”

All subsequent publications that feature Duckworth data/collections must be sent by the researcher to the Curatorial Manager so it may be added to our archive. If the collections are deemed sensitive by the Collection Manager, then permission to publish must be acquired first by the Director.

**Reproductions**

Reproductions based on the collections, including by photography (collections and collections stores), filming, imaging for 3D modelling or printing may be permitted for non-commercial research only upon application, subject to copyright legislation and other restrictions defined by the Duckworth Collections. Permission to use reproductions based on the Duckworth Collections for publication/social media may be granted after consideration of all relevant information, including copyright for materials from the Duckworth Archives, and agreement upon the appropriate form of acknowledgement.

**Practical considerations**

**Before arrival**

There are no provisions for working on weekends or bank holidays. Access to the collection of primates, including hominin, scientific reproductions is subject to its availability and may be limited during teaching terms.

Visitors are expected to have all the equipment necessary to implement their data collection protocol. The Duckworth Collections can provide osteometric boards and a mandibulometer if needed. In exceptional cases, visitors may borrow callipers, 3D digitisers or 3D scanners from the Duckworth or the Palaeoanthropology Laboratories upon request and previous agreement.

The Duckworth Collections is unable to provide accommodation for visitors, who are expected to make their own arrangements. Details of accommodation and other aspects of visiting Cambridge are available from <https://www.visitcambridge.org/place-categories/accommodation/>.

**While working in the Duckworth**

All research visitors to the Duckworth must read and sign a **Risk Assessment** form prior to the beginning of work. Visitors must comply with all emergency procedures, including the evacuation of the building in the event of a fire, or for fire drills. All visitors must work within the regulations and Guidelines of the University of Cambridge Health and Safety policy. For more information regarding Health and Safety at the University of Cambridge - <https://www.safety.admin.cam.ac.uk/>

Visitors are issued with access cards on arrival each day and should return these to either the Administrator or the Curatorial Manager.

Skeletal remains are vulnerable to damage during handling. Visitors are expected to be careful and do nothing that might damage the collections. All accidental damage is to be reported to the Curatorial Manager immediately. No collections should be removed from the Duckworth without the previously granted permission.

The remains should be packed exactly as found (or as advised by the Curatorial Manager), with all the labels on one side of the bag and the bone(s) clearly visible on the other. Please ask for assistance if anything is difficult to handle or advice on packing is needed.

Visitors are kindly requested not to remove human or non-remains from the collections that they do not have previous permission to examine. If you have questions, please ask the Curatorial Manager.

Visitors are kindly requested not to mark or write on any of the human or non-human remains in the collections. Smoking, eating, drinking, and the chewing of gum is not permitted anywhere in study areas.

**SECTION B – Consultation of the Duckworth Collections Archives (if relevant)**

Researchers may not work within the Duckworth Archive room; materials from the Archives sought for consultation will be made available by the Curatorial Manager, and visitors will be given a desk to carry out their study within the premises.

Please note that the original archival documents and collections information can often include racist and inappropriate language. This information is included in our database for historical purposes only.

Information on the papers that form the Archives can be found at [ArchiveSearch](https://archivesearch.lib.cam.ac.uk/) the University of Cambridge’s networked access to catalogues of archives and manuscript collections, of which the Duckworth Collections is one of the repositories.

Photocopying of archive records and books may be permitted and requests should be made to the Curatorial Manager. Copyright permission for images not owned by the Department will need to be sought out by the researcher, not Duckworth staff.

**SECTION C – Collection of 2D measurements and/or 3D landmarks data and images (if relevant)**

Morphological and anatomical data may be collected from the Duckworth Collections’ human and non-human primate osteological remains, as well as the collection of fossil hominid and hominin scientific reproductions. These data may be in the form of observations, linear measurements, 3D landmarks, 3D surface scans, CT scans, and photographs. Due to the number of visitors, permission to surface scan may be subject to space constraints. Applications that require medical-grade CT scanning, μCT scanning, structured light scanning, structure from motion, laser surface scanning and general photogrammetry must be discussed with the Curatorial Manager during the application process.

**SECTION D – Destructive Sampling in the Duckworth Collections (if relevant)**

***Prior to sampling***

**Applications for destructive sampling must include:**

* The type and amount needed (e.g., sternal rib end sample, 0.5 g). Excessive destruction will not be permitted, and applicants are expected to keep the number of potential samples to an absolute minimum. Applicants may be invited to consider non-invasive alternatives.
* Information on the funding available for the full analysis of any samples collected.
* A timeframe for the completion of all analyses and the date by which the Duckworth Collections will be informed of the results obtained.
* Information regarding the location and storage method of the sample(s) collected. If analysis will take place in a laboratory external to the applicant's affiliated institution, its contact details must also be provided.

**Applications for destructive sampling of the Duckworth Collections should:**

* justify the need for sampling on scientific grounds, and should include a statement of the predicted role and/or impact of the sample obtained from the Duckworth collections on the outcome of the study being undertaken.
* be based on research designs drawn up in such a way as to make best use of any samples taken.
* Permission for destruction is only to be given if:
	+ Radiocarbon dating also obtains isotopic information;
	+ Ancient DNA extraction aims at whole genome sequencing (rather than genotyping);
	+ Research includes the provision for actual or virtual replicas of the human/non-human remains to be destroyed
	+ The collections to be sampled are to be photographed before and after sampling. Photographs must be of sufficient detail to discern the area which has been sampled. A copy of each photograph, properly labelled, should be given to the Duckworth Collections by the end of the sampling visit.
	+ A μCT-scan of all remains to be sampled for ancient DNA and/or other analyses that require large amounts of bone, or that involve the destruction of dental crowns and roots, must be obtained prior to the sampling taking place. This is done in the Paleoanthropology Laboratory in the Department of Archaeology at a date suitable to the Duckworth Curatorial Manager, and at the cost of the researcher.

When drawing up the research design, applicants should consider the time and costs they will incur from bench fees, photography, μCT scanning, printing, as well as postage/transport of returned samples.

Decisions to grant permission to carry out destructive sampling of Duckworth collections are made on a case by case basis, and may involve the commission of experts’ views.

The number of individuals to be sampled for which permission is given may be restricted, and/or a pilot study on a small number of samples from the collections requested prior to granting permission for a more substantial project.

**Preferred hierarchy of elements to be sampled according to type of analysis:**

|  |  |
| --- | --- |
| *Definition of a sample*  | *Any form of material taken from skeletal/mummified remains for the purpose of analysis.*  |
| C14 dating   | Least morphologically informative bone – e.g. rib, followed by diaphyseal fragments. Destruction of teeth for radiocarbon dating will only be considered in exceptional circumstances depending on the state of completion of the skeleton.  |
| aDNA  | Petrous bone; if not available, a tooth. Requests for sampling for aDNA will take into consideration the presence or absence of the antimere element.  |
| Isotopes  | Rib, femur, tooth (w/multiple tissue sampling); if necessary, morphologically non-informative bone   |

***During sampling***

Once permission for sampling particular remains has been granted, the decision as to what element(s) from an individual may be sampled will be made by staff of the Duckworth Collections.

The Duckworth reserves the right to insist that all sampling should take place within the premises, however, sampling in external labs will be considered; for any sampling applications, the Curatorial Manager will determine the remains to be sampled based on preservation and the integrity of the collections and then book the use of the appropriate laboratory facilities if necessary. Sampling of petrous bones for aDNA extraction should be carried out using a flexible Dremmel tip to minimise damage. Dental calculus will be removed by the Curatorial Manager prior to destructive analysis (if not part of the original application) and held in the Duckworth Collections Calculus BioBank.

***After sampling***

Samples of remains in the Duckworth collections, or DNA extracted from these samples, cannot be transferred to a third party **without express written permission from the Director of the Duckworth Collections**. If this is breached, researchers will not have access to the collections in the future.

Samples from the Duckworth collections should be used only for the purposes stated in the application. This may not be amended nor may they be used for other purposes without permission from the Director of the Duckworth Collections.

Any extant sample/remains **must** be returned to the Duckworth Collections upon completion of the study.  Results obtained from all analyses that involve destructive sampling (radiocarbon, isotopic analysis, protein analysis, ancient DNA extraction, etc.), as well as any additional data/information should be submitted to the Duckworth Collections on an **external memory device** as soon as is reasonably practicable.

These results are expected in the following stages:

1. Upon completion of lab work:
	* Confirmation of protocols implemented for analysis.
	* Confirmation of successful results.
	* Confirmation of proportion of sample used.
2. Upon completion of analysis:
	* Confirmation of results, to be retained by the Duckworth Collections under embargo until publication of the same.
3. Upon publication of results
	* A link to the radiocarbon information (if online, or relevant publication) for inclusion in the Duckworth Collections’ Archives.

**Applications for destructive sampling may be refused if the individual or collections requested:**

* Is part of an ongoing study internal or external to the Department of Archaeology at Cambridge;
* Is considered too sensitive for sampling;
* Is considered too extensive to warrant destruction in the course of one study;
* Is rare or unique in date, provenance or burial context;
* Is very poorly preserved or few skeletal elements are present;
* Has previously been sampled in house, or by external researchers, including C14 dating;
* If the ethical considerations are thought to outweigh the value of any results generated;
* If the applicant has not returned samples from a previous project conducted using remains from the Duckworth collections;
* If previous studies have not been published, or a copy of the results and a summary report have not been deposited with the Duckworth Collections;
* The proposal is not considered clear and does not explicitly state sampling requirements and methods. Destructive testing will not be permitted if the technique is not sufficiently well known to consistently produce satisfactory results, or the remains are known to be unsuitable for sampling;
* Destructive sampling will not normally be considered for neonatal or pathological elements

**Having read the Terms and Conditions, please read and sign the Collections Research Agreement.**

|  |  |
| --- | --- |
| **Collections Research Agreement** | **Signature** |
| I have read and agree to the Terms and Conditions. |  |
| I have read and agree to the Department of Archaeology’s Ethics Guidelines. |  |
| I have read and agree to adhere to the Destructive Sampling Procedure (Terms and Conditions Section D). |  |
| I agree to not provide samples from the Duckworth to a third-party without express written consent from the Director of the Duckworth Collections. |  |
| I agree to gain permission from the Duckworth Collections to use images from the collections in any form of publication including, but not limited to, online publications and social media. |  |
| I agree to acknowledge the Duckworth Collections, University of Cambridge, must be acknowledged in any research that includes data and/or images obtained from its collections. |  |
| **Print Name:** | **Date:** |
| **Researcher Signature:** | **Staff Signature:** |

**FOR DUCKWORTH COLLECTIONS USE ONLY**

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| --- |
| THIS REQUEST INCLUDES HUMAN REMAINS COVERED BY THE HUMAN TISSUE ACT 2004YES/NO |

|  |  |  |  |
| --- | --- | --- | --- |
| **Exit Protocol & Follow Up** | **Comments** | **Initial** | **Date** |
| Has research been completed?Yes No |  |  |  |
| Have samples and/or residues been returned to the DW?Yes No N/AIf not, has the researcher been contacted?Yes No N/A |  |  |  |
| Have the required documents been sent to the DW?Yes NoIf not, has the researcher been contacted?Yes No N/A |  |  |  |
| **Will access be considered in the future?**Yes No |  |  |  |