

Invitation to Tender - User Needs Consultant

The National Heritage Science Forum (NHSF) invites tenders from user needs consultants for a research project to inform the development of a new Heritage Science Data Service (HSDS). The research will test proposed elements of the HSDS with different user groups on an iterative basis. The research will explore general requirements for functionality and ease of use of the service, as well as developmental aspects such as how the community could benefit from high performance computing facilities and Virtual Research Environments.

The research will take place in three phases between November 2024 and February 2027 according to a schedule which has been agreed with the Heritage Science Data Service (University of York).

Information about the Heritage Science Data Service

The [Heritage Science Data Service](#) (HSDS) is a core component of the RICHeS programme. RICHeS ([Research Infrastructure for Conservation and Heritage Science](#)) is an £80 million programme of investment by UKRI (UK Research and Innovation) which aims to transform heritage science and conservation research and its capacity to advance understanding, preservation and management of heritage in the UK.

HSDS will address the significant digital infrastructure requirements of the fields of conservation and heritage science research, which employ a wide range of technologies and can result in large-scale and born-digital datasets that require active management to support preservation and re-use. The HSDS aims to create:

- A catalogue of heritage science research facilities, reference collections, and expertise.
- An aggregating function for navigable and searchable data collections.
- A FAIR repository for research data, encouraging Access and Re-use, and ensuring datasets are preserved into the long term.
- A suite of Virtual Research Environments and software tools to allow researchers to visualise and analyse data.

The HSDS is being developed by a consortium led by the Archaeology Data Service at the University of York. Key partners include the STFC Hartree Centre, Manchester Metropolitan University and the National Heritage Science Forum, with collaboration from several major UK institutions: The British Museum, The National Gallery, The National Archives, The Natural History Museum, The British Geological Survey, Historic England, Historic Environment Scotland, and Amgueddfa Cymru - Museums Wales.

Information about NHSF

The [National Heritage Science Forum](#) (NHSF) is a charity and membership organisation which facilitates collaboration and works to demonstrate the public benefit of heritage science.

Heritage science is the scientific study of cultural and natural heritage. The field of heritage science brings people together from the arts and sciences and is used in the understanding, care and long-term management of heritage, as well as to increase people's enjoyment of heritage. It spans the use of sub-microscopic techniques to the exploration of global issues such as climate change.

NHSF is a member of the consortium that is working together to develop and deliver the Heritage Science Data Service. NHSF's role is to commission and oversee the production of research into user needs for the Heritage Science Data Service.

NHSF seeks to appoint a User Needs Consultant to undertake this research, the scope and schedule of which has been agreed with the University of York.

Scope of work

Research objectives

- Establish a knowledge baseline of existing user needs data for the RICHeS digital research services (HSDS)
- Identify and segment potential users of the HSDS
- Gather insights on user requirements, preferences, and readiness to engage with the HSDS
- Understand user journeys for different segments
- Test user experience and explore support needs throughout the project's development
- Inform the design and development of the HSDS based on user feedback
- Contribute to assessments of the impact and effectiveness of the HSDS over time

Target audience

The principal audience for this research is the HSDS consortium, particularly the developers of the portal, data repository and virtual research environments, and the people responsible for community engagement and training.

The consultant's work will involve identification and segmentation of potential users of the HSDS, considering the various stakeholders in the heritage science and conservation research community and the nature of their potential engagement with the HSDS. Stakeholders may include:

- Members of the HSDS consortium
- Recipients of RICHeS grant funding
- Researchers in archaeology, heritage science, conservation, and related fields
- Heritage professionals and practitioners
- Data managers and curators
- Policy makers and funders
- Public engagement and communications professionals

Methodology

The research will be conducted in phases over the period November 2024 to February 2027, with annual cycles of data collection and analysis. A list of tasks and deliverables which has been agreed with HSDS is given in Annex A.

The methodology should address:

Year 1:

- Review of existing user needs data.
- User identification and segmentation.
- Design and implementation of a large-scale survey with report on survey findings.
- Three focus groups to develop user journeys and explore questions arising from survey findings, with report on focus group findings.

Years 2 and 3:

- Annual surveys to track changes in user needs and evaluate HSDS development.
- Year 2 & 3 focus groups (or interviews) as needed to explore evolving issues.

The consultant should be prepared to adapt the research plan based on annual reviews and emerging needs of the project, including an evolving user-base.

The consultant will work with the NHSF Project Manager with input from the NHSF Member Council and Board of Trustees. Close collaboration with the HSDS consortium will be essential throughout the research process.

The research should align with and inform the development of various HSDS components, including the data catalogue, repository, and virtual research environments. It should also take account of RICHeS IHQ (Infrastructure Headquarters) engagement and evaluation activities.

Use of Generative AI and related technologies

Given the substantial scope and multi-year timeline of this research project, it is likely that generative AI tools could be leveraged to assist carrying out various aspects of the work such as:

- Automating the analysis and summarisation of user survey responses to identify key themes and insights more efficiently.
- Assisting with the identification and segmentation of user groups.
- Generating draft focus group discussion guides and interview questions based on survey findings.
- Producing initial outlines and drafts of the annual user needs reports.
- The consultant should set out their approach to using genAI and other technologies to deliver this project as part of their tender, noting that NHSF will require them to:
 - Be transparent about any use of AI-generated content or analysis.
 - Maintain human review and oversight to ensure the accuracy and reliability of AI-produced outputs.
 - Adhere to data privacy and security best practices when feeding user data into AI systems and only use systems and tools that have been agreed with NHSF in advance.
 - Consider the potential biases that could be introduced by relying too heavily on AI, and take steps to validate and correct any problematic outputs.

Deliverables

(see Annex A)

- Year 1 research plan (Annex A updated in light of tender proposal, data review, and consortium input)
- Identified user segments and communication channels
- Year 1 survey – design, implementation, interim report
- User journeys for each user segment
- Year 1 focus groups for each user segment
- Year 1 user needs report
- Year 2 data review
- Year 2 research plan review/updates
- Year 2 survey with interim report on findings
- Year 2 focus groups/interviews
- Year 2 user needs report
- Year 3 data review
- Year 3 research plan review/updates
- Year 3 survey with report on findings
- Year 3 focus groups/interviews
- Year 3 user needs report

Timeline

The research will be conducted between November 2024 and February 2027, with key activities aligned to the project schedule provided in Annex A.

Qualifications and experience

The consultant should demonstrate:

- Expertise in user needs research and analysis
- Experience in the heritage science, digital humanities, or related fields
- Proficiency in both quantitative and qualitative research methods including surveys and focus groups
- Strong analytical and report-writing skills
- Ability to work collaboratively with diverse stakeholders
- Understanding of FAIR data principles and digital research infrastructures

Budget

The total budget for this work is £50,490 inclusive of expenses and VAT, broken down over the three years of the project as follows:

Year 1 (November 2024-August 2025): £21,000 (estimate 35 days)

Year 2 (September 2025-August 2026): £18,270 (estimate 29 days)

Year 3 (September 2026-February 2027): £11,220 (estimate 17 days)

Payment will be made monthly in arrears according to a schedule linked to the agreed project deliverables in Annex A.

Form of tender submissions

Tenderers are asked to submit:

- A **summary of their experience** and why they are suitable to carry out the research

- A **project design** which expands on the information in Annex A and proposes an innovative methodology that can effectively capture the evolving needs of the HSDS user community over the period November 2024 to February 2027.
- A **task list** that addresses the activities and outputs listed in Annex A, identifies who would carry out the tasks and the number of days per person allocated to each task.
- A **budget**.
- A **risk log**.
- A Gantt chart and/or **timetable** for each year's activities.
- Names and contact details (email address) of **two referees** for whom work has been carried out in the last three years.
- Confirmation of **availability** to start work on this project in the week starting 25th November 2024.

Selection process

Applications to be submitted by email to administrator@heritagescienceforum.org.uk by noon on 20th November 2024.

Online interviews: 22nd November 2024.

Contract and reporting

The successful consultant will be contracted to NHSF as a sub-contractor under NHSF's contract to the University of York.

The terms of the contract between NHSF and the University of York will also apply to the sub-contractor (user needs consultant).

The project will be managed by the NHSF Project Manager. Regular meetings will be set up to support the consultant, monitor progress against the tasks according to the timetable, and receive reports from the user needs consultant.

Other information

- AHRC [funding call to provide Digital Research Services](#) for RICHeS (including webinar)
- National Heritage Science Forum [background on RICHeS](#)

Annex A

UN consultant activity	Output	Schedule (month from Sep24)
Review existing UN data (held by AHRC)	Knowledge baseline - Which users have engaged with (RICHeS) HSDS to date. - What intelligence exists about what users want from the HSDS component of RICHeS.	3 (Nov24)
Revise UN research plan and agree with consortium	Agreed method in light of existing data and consortium input. Consortium buy-in and understanding of intersection of different elements of project.	3-4 (Nov-Dec24)
Identify potential users and segment (3-4 segments envisaged)	User population and target samples; communications routes. - (Estimated population is 2,000; based on this, 325-500 responses needed for 95-99% confidence).	3-4 (Nov-Dec24)
Survey script design, build, pilot	Consortium-informed survey Qs, e.g. - information on users - test proposed elements of DRS - user input on elements requiring quantification - test experience and readiness to engage (including support needs)	4-5 (Dec24-Jan25)
Survey launch, promotion, monitoring	Generates raw data Initial insights in draft to consortium	5-7 (Jan-Mar25)
UN survey analysis report	Report on UN Review findings with consortium Identify next steps	7 (Mar25)
Focus groups x3: design, recruitment, implementation	User journeys for each segment Address Qs from survey findings	8-10 (Apr25-Jun25)
Focus group analysis and report	HSDS proposal - behaviour, attitude, certainty/uncertainty	10 (Jun25)
Yr1 UN data review (project and RICHeS IHQ)	Yr2 baseline	13 (Sep25)
Yr2 UN research goals	Consortium-agreed methodology to cover longitudinal data and new elements to test	13 (Sep25)
Yr2 user identification	Adjustments to population to account for stage of development of HSDS	14 (Oct25)
Yr2 survey script, design, build, pilot	Consortium-informed survey Qs, e.g. - information on users - test elements of HSDS developed in yr1 - test future needs/areas for development - test experience of engagement and ongoing support needs	14-15 (Oct-Nov25)
Yr2 survey launch, promotion, monitoring	Generates raw data Initial insights in draft to consortium	15-16 (Nov-Dec25)

Yr2 survey analysis and report	Report on UN #2 Consortium identification of areas requiring further testing	17 (Jan26)
Yr2 focus groups/interviews for detailed insights with analysis and report	Address queries or areas of uncertainty from survey findings or next stage of HSDS development. Report to consortium	18-20 (Feb-Apr26)
Yr2 UN data review (project and RICHeS IHQ)	Yr3 baseline	25 (Sep26)
Yr3 UN research goals	Consortium-agreed methodology to cover longitudinal data and new elements to test	25 (Sep26)
Yr3 user identification (segments)	Adjustments to population to account for stage of development of HSDS. Focus shift to evaluation (link to IHQ)	26 (Oct26)
Yr3 survey script, design, build, pilot	Consortium-informed survey Qs, e.g. - evaluation from users - test developed elements of HSDS - test experience of engagement and ongoing support needs	26-27 (Oct-Nov26)
Yr3 survey launch, promotion, monitoring	Generates raw data Insights in draft to consortium	27-28 (Nov-Dec26)
Yr3 survey analysis and report	Report on UN #3 with reference to IHQ evaluation methodology and engagement activity	29-30 (Jan-Feb27)

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