

Research

Strategy



Image: Bamboo a tool to combat climate chang - Avijit Ghosh - Winner, ISH Photo competition 2021



**THE BARTLETT
INSTITUTE FOR
SUSTAINABLE HERITAGE**

The ISH Research Strategy 2021 is published in the twentieth year of the UCL Institute for Sustainable Heritage (ISH).

Written to showcase our research ambition, interests and strengths, we invite you contact us to explore shared research interests and to find out more about us, our expertise and facilities.

Our Vision

At our community -focussed institute, our vision is a world that engages with heritage, appreciates its value and participates fully in its protection. We will explore the potential of citizens to engage with the possibilities of heritage to make life more sustainable. We will impact directly on professional communities by supporting heritage groups, companies and decision-makers through our research and teaching.



Image: Sustainable Heritage MSc students in Malta - Mark Kearny

Our Values

Through our lived experience, these are our values:

- Collaborative spirit
- Holistic understanding of institutional and societal values
- Recognition and nurture of talent
- Entrepreneurial thinking
- Innovation (research and teaching)
- Transformational (transformed student experience)
- Impact (addressing global challenges)
- Academic leadership and excellence
- Open and thoughtful interdisciplinary research engagement
- Excellent teaching, with a particular focus on the integration of research and teaching



Image: Arte Consiente - Alexander MacFarlane - ISH Photo competition 2019

Sense of our ambition

In 2001, the then Centre for Sustainable Heritage launched the idea of cultural heritage at the disciplinary crossroads of research and teaching. Over the following decade, it embraced the contribution of all disciplines and partners to further understanding, access and protection of cultural heritage.

After its re-launch as the UCL Institute for Sustainable Heritage (ISH) in recognition of its singular achievements: the AHRC/EPSRC Science and Heritage Programme (2007-2015) and the EPSRC Centre for Doctoral Training in Arts, Heritage and Archaeology (2014-2022), by 2030 ISH will be widely acknowledged as the global leader in cross-disciplinary collaborative heritage research and innovative teaching. The sustainability of our heritage and the benefits derived from cultural heritage by humanity at a global, national, community and individual level will be enhanced as a direct result of the work of ISH. We will achieve this by directly addressing grand societal challenges such as:

- Sustainable development
- Equality, inclusivity and social justice
- Improved wellbeing
- Climate change and emergency
- Technological developments relevant to modern and digital heritage



Image: SEAHA students working on a project



Image: Eroded path - Avijit Ghosh - ISH Photo competition 2021

What we might become

To achieve this vision, ISH will deliver the following objectives:

- To develop cross-disciplinary research approaches, questions and methods
- To foster innovative, research-led teaching
- To explore the interface of arts, humanities, natural, social and physical science disciplines through research and teaching
- To advance together heritage research theory, practice and policy
- To further entrepreneurship and innovation in the heritage domain
- To be recognised for excellence in specific areas of scientific expertise within the heritage science domain
- To cultivate strong research partnerships within UCL and beyond
- To be acknowledged leaders in pedagogical innovation
- To broadcast our academic work systematically through policy, professional, practice and public platforms
- To promote heritage research and science research through public engagement

We will achieve these objectives by focussing on 3 linked pillars of research and development that are: (i) visionary; (ii) aligned to the National Heritage Science Strategy and the European Strategic Research Agenda for Cultural Heritage; (iii) relevant to the heritage sector and (iv) built on our current research strengths.

The pillars are: i) heritage management; ii) heritage science and iii) heritage policy. Each pillar addresses strategic, urgent, novel and complex research questions that are distinct for each pillar. However, to maximize impact and to answer complex research questions, synergies across the pillars is essential.



Image: Heritage smells experiment- Cecilia Bembibre

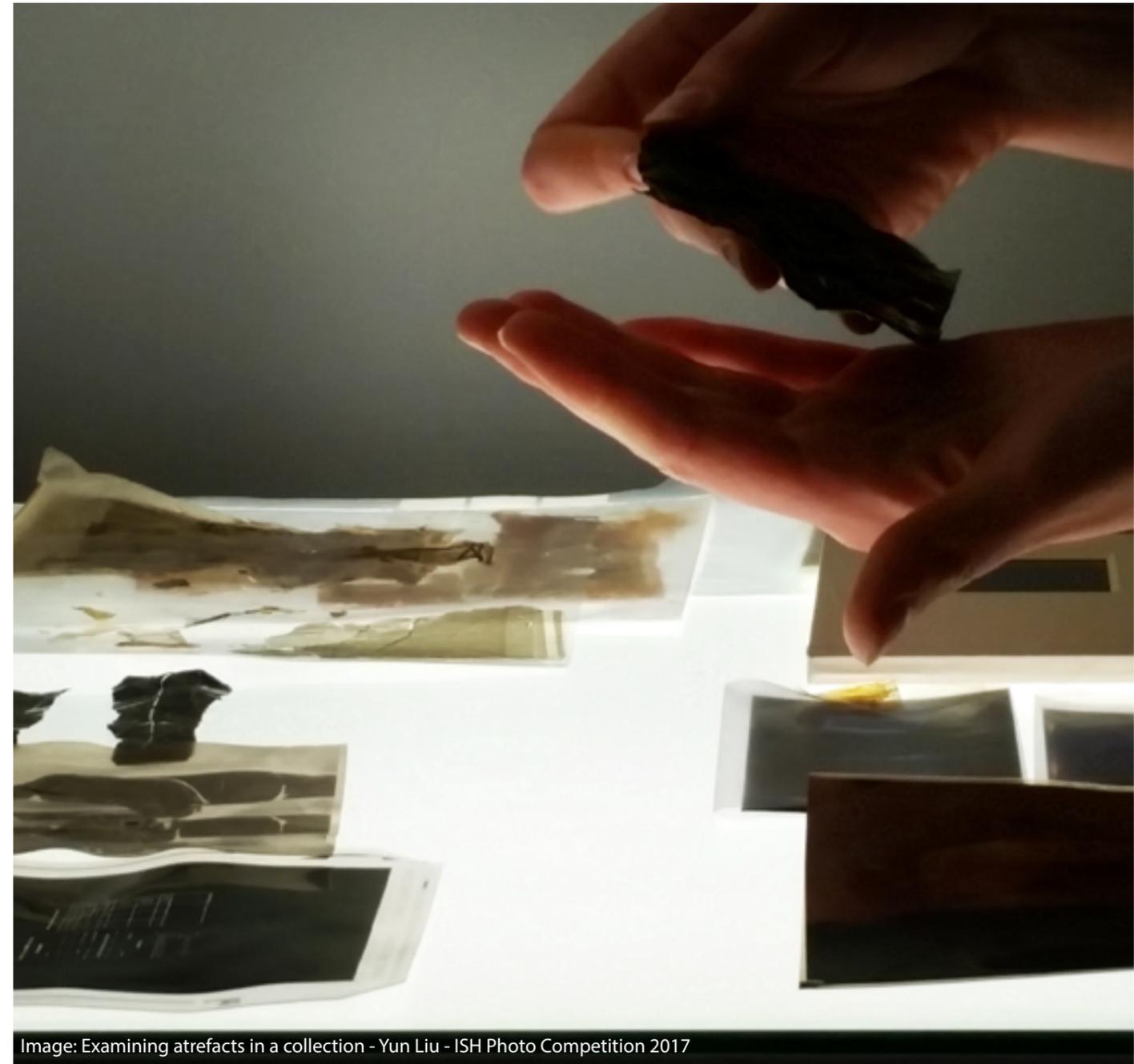


Image: Examining atrefacts in a collection - Yun Liu - ISH Photo Competition 2017

For instance, a heritage science question linked to the ways in which plastic heritage materials degrade, can potentially draw on both physical and social science methods (i.e. for exploring professionals' perceptions of degradation) while resulting in outputs useful for heritage management practices or policies (i.e. national or international standards of conservation of plastic heritage). Similarly, a heritage management question associated with how 'users' make decisions on improving the energy and thermal performance of a heritage building taking into account its values and materiality, may require involvement of engineering expertise in the analysis of the building fabric and can result in the development of tools useful for policy and decision-makers (i.e. modelling tools or guidance). Likewise, a heritage policy question such as how urban heritage futures are imagined by policy-makers can inform future urban policies and frameworks while drawing on methodologies developed by heritage scientists (i.e. modelling).

Heritage Science

Heritage science is the interdisciplinary domain of scientific study of heritage. Heritage science draws on diverse humanities, sciences and engineering disciplines. It focuses on enhancing the understanding, care and sustainable use of heritage so it can enrich people's lives, both today and in the future.

UCL Institute for Sustainable Heritage has been a leader in the development of heritage science since its establishment. Heritage science delivers scientific evidence in support of sustainable management of heritage and its academic understanding. Through synergies with heritage management and heritage policy pillars at ISH, the heritage science pillar enables scientific research of tangible, intangible and digital heritage, always in dialogue with curatorial enquiry. ISH prides itself in being a leading voice in heritage science research infrastructure development as well as in engaging with heritage industries.

Some examples of heritage science research in synergy with heritage management and heritage policy include:

- Digitisation of heritage: Methods and tools for diverse 2D, 3D, 4D digital capture of heritage for the purpose of study, engagement or conservation of heritage e.g. through digital twins
- Data science for cultural heritage: Data-intensive methods and applications enabling deep

understanding of heritage and heritage processes, including modelling, systems thinking, AI

- Climate change: Understanding and monitoring the effects on cultural heritage, development of future scenarios, modelling and science policy development
- Multisensory heritage: Understanding and enhancement of human interaction with heritage through multisensory experience, whether of tangible or intangible heritage
- Citizen heritage science: Methods and approaches based on participatory methods enhancing the value and experience of heritage by visitors and users while simultaneously delivering innovation
- Experimental heritage science research: Laboratory-based (whether stationary or mobile) research into tangible heritage and its environments, for the purpose of risk assessment and preventive conservation



Image: Dr Katherine Curren in the ISH Laboratory - Tim Crocker

Heritage Management

Heritage Management is a growing 'interdisciplinary field'. As such, it critically uses, integrates and adapts theories and methods from humanities, social, physical and natural sciences in order to evaluate and inform the management processes related to heritage such as documentation, value assessment, protection, access, interpretation, maintenance and sustainable development.

ISH is pioneering participatory approaches to heritage management enhancing the contribution of heritage to socio-economic, cultural and environmental sustainable development and well-being. Current research at ISH in heritage management employs novel socio-technical methods and approaches enabled by synergies with heritage science and heritage policy. Some examples of cross-synergistic heritage management research with heritage science and policy include:

- Heritage values: Who values heritage; how values change over time and affect decision-making on conservation and uses of heritage.
- Heritage dynamics: Deconstructing the complex and dynamic interactions of materiality of heritage with heritage values, place/environment and space, affect, practices, agents, competencies and resources.
- Participatory heritage: Participatory, inclusive and bottom-up approaches to heritage

management (including public engagement, crowd sourcing and citizen science) and social justice.

- Transformative heritage: Heritage-led urban and rural sustainable transformations; contribution of heritage to the sustainable development goals (with emphasis on international development)
- Energy efficiency and heritage: Energy efficiency, heritage values and thermal comfort in historic urban and rural areas
- Heritage risk and resilience (with emphasis on heritage in (post) disaster and (post) war contexts and climate change)



Image: Border jumping - Sebastian Paredes Smith - ISH Photo competition 2019

Heritage Policy

Heritage policy for ISH includes public policy (Government and Local), standards, guidance and advice at international, national, local, neighbourhood, association and group level. Research oriented around this pillar aims to produce evidence-based contributions to the development of heritage policy, supporting partners in policy teams to anticipate strategic challenges and manage change.

ISH has a long history of working with policy groups at international, national and local levels to better understand the real-world challenges facing the governance and protection of heritage, and to ensure that policy groups have access to rigorous and relevant interdisciplinary evidence from heritage science, heritage management and other related fields. With a focus on supporting strategic decision-making and helping policy groups anticipate change over the short and long term, our work in heritage policy combines theoretical perspectives on change, complexity, and the social production of futures, with practices and techniques from strategic foresight and future studies. In working with these fields, research in this pillar connects them to established perspectives on the future within heritage, such as maintenance, stewardship, and care, and, in demonstrating the relevance of these orientations to the future outside the field of heritage, makes the case for a humane and long-term approach to policy development.

Some examples of heritage policy research that intersect with heritage management and heritage science include:

- Anticipation and foresight within the heritage sector: understanding the perspectives on the future that are held by those working within heritage, and developing their capacity to reflexively consider the ideas of the future informing their work.
- Developing new public policy networks: understanding the evolving mechanisms through which activists, campaigners, and researchers connect with policy teams in local, regional and national contexts.
- Developing environmental standards
- Anticipation and foresight within the heritage sector
- Algorithmic heritage



Image: The Westway Trust - Charlie Thorneycroft - ISH Photo competition 2018

Discover our work

Visit our website | www.ucl.ac.uk/bartlett/heritage

Follow us on Twitter | [@UCL ISH](https://twitter.com/UCL_ISH)

Join the ISH Academy mailing list | www.bit.ly/ISH-Academy

This Research Strategy is the result of the collaborative endeavour of ISH academics:

[Alejandra Albuerne](#)

[May Cassar](#)

[Katherine Curran](#)

[Kalliopi Fouseki](#)

[Josep Grau Bove](#)

[Adam Gibson](#)

[Pakhee Kumar](#)

[Scott Allan Orr](#)

[Richard Sandford](#)

[Matija Strlic](#)