



Clore Leadership-AHRC Online Research Library Paper

From ethics to enterprise: understanding and doing sustainability in the conservation of cultural heritage

Author: Sarah Stannage

Supervisor/s: Andreas Pantazatos,

Dept. of Archaeology, University of Cambridge

Year paper completed: 2023

Leadership Content Theme/s: Qualities of Leadership, Climate

Leadership

AHRC Subject Area/s: Heritage Management, Policy Arts Management and Creative Industries

A note on contents:

Since 2005 Clore Leadership and AHRC have partnered to offer a diverse range of cultural leaders the opportunity to produce a piece of extended research relating to leadership and to their specific cultural discipline. These papers, published from 2023 onward on the Clore Leadership-AHRC online research library, reflect an important contribution to the field and we are extremely pleased to make them available to practitioners, scholars, and other interested parties. We recognise that this research library contains a range of terminologies and outlooks: these are reflective of the significant and ongoing changes within the cultural sector over the past 20 years. As such we urge readers to recognise that the authors' thinking and language may have shifted since completion of these papers, or may be in the process of shifting as consequence of their enquiries.

Unless otherwise stated, research papers included in the Clore Leadership-AHRC Online Research Library have not been formally peer reviewed or published in an academic journal.



2023

From ethics to enterprise: understanding and doing sustainability in the conservation of cultural heritage



Sarah Stannage

CLORE FELLOW 'Living Places'

2010/11

1/31/2023

About the author:

As a Clore Fellow 'Living Places' and Fellow of Royal Society of Arts, I often draw on my professional experience and track record for co-production and community-led work.

I originally trained as a conservator with a first-class honours degree in conservation and restoration from Lincoln, I went on to post-graduate study achieving distinctions in sustainable development policy and environmental decision making as well as strategic finance and business. I have over 20 years of experience in heritage and museums, working at chief executive level in the charity sector and across a range of different settings including urban renewal, coastal and countryside regeneration.



Having spent several years in Peterborough with Opportunity Peterborough (an Urban Regeneration Company) I project managed several heritage-led regeneration schemes, including the RIBA award winning Cathedral Square Public Realm development, and coordinated growth plans including Peterborough's Integrated Development Plan (IDP 2006), which contributed to its Environment Capital status and securing Growth Area Funding (GAF III) for the region. As Head of Heritage responsible for museums, collections and sites at risk of climate change and encroaching development including Flag Fen, I played an early and instrumental role in supporting the conservation of the internationally significant Bronze Age discoveries at Must Farm.

In 2018, I was appointed as the first Executive Director of the International Institute for Conservation of Historic and Artistic Works (IIC), a Learned Society established in 1950 by a group of extraordinary men and women, a number of whom were part of the WW2 'Monuments Men' and saved internationally important collections from being lost forever. In this role I will be focusing on the strategic development of the Institute in its mission to bring together conservators and cultural heritage specialists around the world - educating, enabling, and recognising excellence.

In 2021, I helped convene the three leading international bodies for conservation of cultural heritage (IIC, ICCROM and ICOM-CC) to release a Joint Commitment for Climate Action at the UN climate conference COP26 in Glasgow. In the same year I established the first international open knowledge edit-a-thon on climate change in cultural heritage with universities and students around the world coming together to edit the world's largest online encyclopaedia, Wikipedia. In 2022, I was delighted to work with colleagues on the Scientific Committee for the international conference, Climate-Culture-Peace, funded by the British Council and DCMS. As a member of the expert panel for 'Net Zero: climate action in heritage', a large multi-disciplinary project with 5 innovation sites in Brazil, Egypt, Iran, Sudan and Uganda, I am honoured to work with project teams to champion climate resilience, peace-building and sustainable development outcomes. I am looking forward to supporting the programme's international symposium and creating an open access publication for the sector later in 2023.

Table of Contents

Acknowledgements	3
Context to the report	3
Emerging Narratives	4
Navigating ethics, uncertainty and complexity	4
2. Leading and influencing change	6
3. Innovation and enterprise	7
Concluding remarks	9
References	10

Acknowledgements:

The author would like to sincerely thank Dr Andreas Pantazatos, partner of Cambridge Heritage Research Centre and Assistant Professor in Heritage Studies, Department of Archaeology at the University of Cambridge for his kind supervision and providing good guidance throughout. I would also like to thank all those who were interviewed including: Lorraine Finch, Caroline Rawson, Dr Paul Lankester, Alice Tate-Harte, and to Aparna Tandon and Oge Okpalanozie for signposting projects and sharing so many useful insights. I would also like to convey my appreciation to colleagues at the International Institute for Conservation of Historic and Artistic Works (IIC), the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and the International Council for Museums – Conservation Committee (ICOM-CC) alongside Henry McGhie (Curating Tomorrow) for taking part in the Climates of Change round table meeting.

In conducting the semi-structured interviews and identifying initiatives and project examples, the author followed the code of conduct for 'Good Research Practices'.

Context to the report

The work of conservators brings us into every possible setting - from remote archaeological sites in forests, to museums and iconic buildings in towns and cities. Conservators and conservation professionals have a crucial part to play in the intersect between science, art, environment, and community, giving the profession a unique insight into how the climate emergency is affecting cultural heritage, communities and the wider environment.

We know that sustainability and sustainable development are rapidly becoming important, if not interchangeable concepts and goals for society. However, notions around continuity, conservation and preservation, within cultural heritage policy can seem at odds with global climate agendas focused on change, adaptation and transformation. This conflict, as reported in a provocation essay shared by the Climate Heritage Network in February 2022ⁱⁱ, is contributing to a wider perception that the field is resistant to change and is slow to engage with climate agendas.

Likewise, it is becoming increasingly hard to ignore the call for action against climate change by the IPCC (Inter governmental panel for climate change) that global emissions, including Green House Gas emissions (GHGs) must peak by 2025 to achieve the 1.5 degrees target to limit global warming. ⁱⁱⁱ Yet we understand little about the state of emissions within the UK conservation sector, or even globally, and even less about whether any progress is being made towards achieving Net Zero.

With a huge upsurge in public interest and concern about climate change, we're each left wondering whether 2023 will be the year we can make positive change happen? Will the need for transformation, change our response and decision-making around loss and damage of cultural heritage within the sector? Is the absence of ethical or even transformative frameworks and the lack of a credible pathway to net zero, undermining the sector's response to the climate emergency and wider engagement in

Clore Leadership Programme/ AHRC Sarah Stannage, FRSA

Date: 31 January 2023

international climate discourse? And is there a role, need or opportunity for enterprise within the sector to accelerate solutions?

These are just some of the questions the report wrestles with and it's against this backdrop that the study is being undertaken, knowing quite critically time is running out.

The author undertook to explore the different ways sustainability and in particular, environmental responsibility, is understood by the sector. Over a three-month period, several people with their finger on the pulse of sustainability in conservation were interviewed, including conservators, conservation scientists and senior leadership teams from a range of different heritage organisations within the UK and further afield. Through these conversations various projects and initiatives were highlighted. Two of the initiatives referenced in this report were once at the centre of industrialisation within the UK and Uganda, where local heritage in mining, engineering and railways has left a culture that now closely identifies with sustainable growth, innovation and enterprise. And finally, the study undertook an international round table event that included climate advisors and the main signatories to the 2021 Joint Commitment for Climate Action in Heritage Conservation with representatives from three of the leading international bodies for conservation of cultural heritage: IIC, ICCROM and ICOM-CC.

This report is not intended to provide a detailed 'state of the sector' report to understand how the sector is responding to climate change or sustainability agendas. The aim of the report is to provide a small snapshot of the diverse experiences and insights within the sector, and to consider how these insights and emerging narratives might inform leadership responses to some of the most pressing and profound challenges and opportunities facing the sector.

Emerging Narratives

1. Navigating ethics, uncertainty and complexity

Many countries, including the UK, are still dealing with the economic and health consequences of Covid-19 alongside climate emergencies, growing conflict and social unrest. Possibly now more than at any other time in living memory, current and emerging leaders are working in what is termed a VUCA environment – volatile, uncertain, complex and ambiguous contexts. As we live through a period of global adjustment, leadership must, therefore, be able to respond to and navigate an increasingly complex and changing world. iv

In dealing with complexity and uncertainty, every sector and discipline will need to work out the boundaries of their knowledge and skills. This is just as relevant to the conservation sector as any other.

Certainly, from the interviews undertaken there was a general view that the sector needs to push beyond its existing knowledge and skills base is important. In conversation with interviewees pushing our knowledge and skills is critical if we are to deal with the magnitude and scale of the issues before us, particularly where conservation is responding to disasters caused by conflict and/ or climate disasters.

Date: 31 January 2023

The interviews indicated that conservation professionals are increasingly turning to areas like social research to help tackle highly complex and interdisciplinary issues, and to gain a deeper understanding around the context behind conservation practice, especially in VUCA environments.

Understanding the role of community was felt to be important by all interviewees alongside the need for utilising more sustainable or 'ethical' conservation strategies that consider economic, environmental, political, and societal parameters. Interestingly ethics was not located by interviewees in the context of a code of ethics for conservation practice, such as ICON's Conservation Standards and Ethical Guidelines ', for example, but in its broader power to make sense of conservation and its relationship with the environment and community.

Working with communities and people from different cultures, countries or backgrounds will inevitably provide a rich base of diverse perspectives but could also result in a range of ethical challenges that are not commonly encountered when conducting purely lab based, scientific research, in conservation. It is therefore important that there is a good understanding within the profession of the potential ethical dilemmas that might arise, such as utilising community knowledge and providing appropriate attribution and acknowledgement to the community (or communities) in projects or studies.

One such programme that embodies this shift towards interdisciplinary and participatory community-based research within the sector is ICCROM's 'Net Zero: Heritage for Climate Action', a project the author is familiar with and is led by Aparna Tandon (ICCROM). The project, potentially a first of its kind, is a 2-year programme that seeks to find equitable pathways for decarbonisation and climate action by implementing heritage-based mitigation and adaptation strategies on the ground to reduce the impacts of climate change. 'Net Zero' involves project teams working with communities in 5 innovation sites located in Brazil, Egypt, Iran, Sudan and Uganda, and employs a mix of social science and participatory methodologies, such as questionnaires, community mapping and focus groups alongside climate science modelling and data gathering tailored to local contexts to empower local communities to form their own climate stories.

Given the natural limits of our individual knowledge, informed and responsible decision-making means accepting that the knowledge of others is valid and needed. Vi The practice of shared decision-making is well established in many fields and is becoming more common in heritage conservation. However, as little as a decade ago, thinking on this subject was very different as evidenced in ICCROM's 'Sharing Conservation Decisions' report (2018), which noted the distinct absence of "community in decision-making" The report marks a paradigm shift taking place within conservation. However, as highlighted by the report and through the various interviews for this study, if we are to advance conversations with communities in this space, we need to start to speak about loss and damage of cultural heritage caused by climate change. It is important to note that a new 'loss and damage' fund covering cultural heritage was agreed by world leaders at the United Nations' (UN) climate conference COP27 in November 2022. Viii

IIC's president Julian Bickersteth in his concluding remarks at IIC's most recent biennial Congress, 'Conservation and Change: Adaptation, Response and Leadership' in September 2022 drew together opinion and the wider acknowledgment within the sector that "conservation is not a question of preserving stasis – but managing change and sometimes accepting what will be lost"ix.

2. Leading and influencing change

The IIC's congress theme exploring change as well as leadership was indeed apt and timely for the sector.

Taking a step back for a moment, it can sometimes be quite hard to recognise our own hypocrisy, which came into view during COP27 with climate activists throwing soup at artworks and gluing themselves to the walls of famous museums and galleries to protest the extraction and use of fossil fuels. ^x

Whether we see ourselves as part of an institution, or as individuals, we cannot on the one hand advocate for change and claim to be promoters of climate action^{xi}, whilst also ignoring our own environmental impacts and Green House Gas (GHG) emissions. The fact is, at the date of this report, whether on a national level within the UK or on a global scale, the sector does not have a credible pathway to Net Zero – which became the subject of the international round table, Climates of Change, between the main signatories of the Joint Commitment for Climate Action in Cultural Heritage Conservation in January 2023. XIII The visual minutes from this meeting are included in Appendix 1 but fundamentally there was consensus that establishing a credible pathway and formally engaging with the UNFCCC – the United Nations Framework Convention on Climate Change on Net Zero, is a good idea.

From speaking with Lorraine Finch, co-founder and chair of the UK Icon Sustainability Network and a conservator and long-time conservationist, this is a critical time to be thinking much harder about our environmental responsibility and environmental impacts in the sector. Conservation is facing greater scrutiny with increasing criticism in the use of, for example, single use plastics within packaging for exhibition tours and as highlighted in a recent conference organised by Gallery Climate Coalition (GCC) ^{xiii} the use of energy intensive HVAC – (heating, ventilation and air conditioning) systems in many museum and galleries collection storage facilities. Lorraine very eloquently stated, "there are so many simple, affordable steps that can be adopted by conservators that won't cost the earth" but would ultimately help to reduce environmental impacts. In fact, Lorraine has published a free book about it, 'No Cost/Low-Cost Tips for Sustainability in Cultural Heritage' (2022) covering practical areas such as energy and water use, but also ideas to inspire others to influence change. ^{xiv}

This point around influencing change was very much echoed across several of the interviews undertaken, including with Caroline Rawson, English Heritage conservator for the north of England. In several examples shared, there's a growing sense of individual environmental responsibility, natural efficiency, and empowerment to make change happen on the ground where 'green' initiatives, such as local car share initiatives, can be implemented quite easily. But there is a need for leadership to put in place national level policies to bring forward change at scale that reinforce an organisation's commitment and responsibility to care for the environment.

Environmental responsibility is often defined as a duty to protect the environment, and extends to individuals, as well as businesses, communities, industries and governments. The ideology of environmental responsibility includes preventing pollution, sustainable use of resources, protecting the environment, restoring natural habitats, and ensuring a planet for future generations. *v

As we have seen at the last two UN climate conferences, COP26 in Glasgow and COP27 in Sharm El Sheikh, communities and indigenous people have brought the concerns of environmental responsibility

Clore Leadership Programme/ AHRC Sarah Stannage, FRSA

Date: 31 January 2023

and everyday life into contact with governments and formal institutions, not only to influence international policy and laws but also to lead change regarding the cultural attitudes, ethics, values and knowledge that is held by states and institutions. xvi

This was certainly reinforced during the IIC Wellington Congress 2022, where a group of Māori conservators shared the importance of indigenous knowledge to evolving conservation practice and conservation ethics in the west. Kahutoi Te Kanawa, a conservator in Aotearoa New Zealand, spoke about the word "whakapapa" as a way of understanding a person's or object's place in the world and responsibility to the environment, "it's about the genealogy, the connection between people, between ancestors, and the connection between heritage, it's the connection between our lands, our forests, our waterways, our skies, our rains, our mists, our air that we breathe.... that's why indigenous knowledge is powerful". **xvii

Yet despite this duality and holistic connection between heritage and the environment, policy and practice more broadly in the UK is felt by some, like the Gallery Climate Coalition (GCC), to be out of date or out of touch with the climate issues afoot xviii.

This might be because there are currently very few sustainability or climate change specialists working within the field of heritage conservation in the UK as discovered when searching the UK Accreditation Registrar for Conservators.xix That said during the interviews conducted it became apparent that many of the larger heritage organisations are establishing "green teams" or "climate teams" to help audit activities, establish targets and to standardise and normalise environmental considerations at all stages of decision making.

In the field of climate research, Dr Paul Lankester, a conservation scientist and climate specialist, who in February 2023 will become part of a dedicated climate team within English Heritage, is undertaking research and climate modelling that will inform decision-making around the maintenance and care of key historic sites in England. Apart from the timely need for the research, Paul also spoke of the need for collective leadership within the sector - not just to influence change but to help others that cannot afford to access specialist knowledge by conducting more open research on climate change within the sector, through a Centre of Excellence in the UK.

3. Innovation and enterprise

It has long been known that the consequences of climate change are unevenly felt around the world. Even within the UK, a recent government report, 'State of the Environment: health, people and the environment report' noted that "too many towns and cities in England, especially those with a strong industrial heritage, have too little green space, too few trees, culverted rivers, poor air quality and are at risk of flooding". **

Yet we know there are communities with strong industrial pasts that have become arenas for innovation and advocacy in relation to sustainability and social justice agendas. From the mass Kinder Scout Trespass movement of 1932 in Manchester progressing rights to access open countryside and clean air to enterprising sustainable consumption initiatives such as the Lewes Pound and the introduction of local currency systems, demonstrating that local action can be responsive in a way that national and international action sometimes cannot.^{xxi}

One stand-out project within the UK that sits on the edge of living heritage conservation but squarely in the centre of promoting local action, enterprise and innovation is 'The Museum of Making', Derwent Valley Mills UNESCO World Heritage Site in Derby, which opened in May 2021. The development explores the history of a site that is widely regarded as the world's first modern factory and celebrates the area's rich history of invention. The project has taken advantage of technology, sustainability and community co-production approaches as being "designed and made" by the people and industries of Derby, including Rolls-Royce and Toyota. During the development local people gained and shared skills through over 36,000 hours of in-kind support equating to almost £1 million. **XIIII The care of the UNESCO World Heritage Site, and use of the site continues through its co-production approach with exhibits, workshops and events, being co-produced with local people to "inspire new creativity and empower the makers of the future".**

Likewise, the 'Net Zero: Heritage for Climate Action' project involves several enterprising teams located in 5 countries, including Uganda. During this project, the author came across the work of the Cross-Cultural Foundation of Uganda (CCFU), which established a museum project "Our Railways, Our History" to recognise and celebrate the story of the railway lines during colonial and post-colonial periods, to explore their role in the lives of Ugandans who lived and worked along them, and their place in the country's future economic and political development. The project culminated in the opening of the first ever Railway Museum in Uganda on the 16 March 2021. CCFU's Executive Director, Ms. Barbra Babweteera Mutambi, noted that the establishment of the Museum demonstrates the Foundation's commitment to preserving historical buildings, sites and monuments sustainably, as well as their value as a form of living, working heritage and the powerful contribution and connection to local enterprise through programmes that promote local jobs and skills.*

A name that cropped up time and again during interviews was Alice Tate-Harte, an enterprising conservator at English Heritage, who has been instrumental in setting up a cross-institutional group to look at sustainability and packing for paintings. The partners involved include Tate, The National Gallery, English Heritage, The National Trust, Liverpool Museums, Glasgow Museums, National Galleries of Scotland, the Courtauld Institute of Art, Manchester Art Gallery, Whitworth Art Gallery, and the National Portrait Gallery. The group includes conservators, conservation scientists, registrars and art handlers from across the UK, and was established with the aim of learning from each other's experiences and combining resources to achieve shared outcomes. The group is also working with GCC and Sustainability in Conservation (SiC). A key aim of the group is to find alternative sustainable materials for the wrapping and packing of paintings. The materials will be given to conservation scientists to test their properties in relation to conservation parameters, and then given to the sustainability experts to assess life cycles. Importantly within the group are scientists who can undertake materials testing but critically the group established contact with Dr Mike Shaver at the Sustainable Materials Innovation Hub at Manchester University who has been able to access SME enterprise funding to undertake lifecycle assessment on polymers. Here we can see the use of innovation and enterprise funding to directly benefit conservation research, but Alice also spoke of the wider relevance of the project, outside of the field, in areas such as retail. The results of the project will be disseminated to the wider conservation, museums and galleries sector later in 2023 but this also highlights the importance of having access to funding and openly sharing data, knowledge and expertise across organisations, disciplines and sectors to maximise the benefits for the common good.

Concluding remarks

The diverse conversations and interviews have yielded a number of areas where there is consensus of opinion, and they point to the vital and distinctive contribution our sector can make to tackling climate change: helping to navigate uncertainty and complexity; bringing leadership and influence to promote positive change; and inspiring innovation and enterprise for the common good.

Conserving living heritage is often linked to the notion of continuity, which, as highlighted earlier, has been presented as being at odds with transformation agendas within climate policy. Yet this perception is firmly challenged by this report. Many conservation professionals inherently care about sustainability and fundamentally projects like the 'museum of the making' and 'net zero: heritage for climate action' show that conservation of living heritage, and culture and heritage more broadly, has an important role to play in promoting enterprise and innovation within societies, as well as developing fair and inclusive pathways for climate action to take place within communities.

The outturn of this report is not to point fingers or to recommend a leadership response that doubles down on efforts to promote a single narrative that culture and heritage is the missing link in climate policy – it might be, but it rather misses the opportunity that cultural inheritance gives people a love of place and identity that inspires positive action in communities. Cultural heritage can bring forward solutions to help tackle some of the biggest societal issues we face today.

For civil society, governments and business, this report presents an acute reminder that culture, in all senses of the word, cannot wait. There is a need to cultivate the capacities and capabilities of our communities to deal with loss and damage of cultural heritage but also to bring heritage, enterprise, and innovation together for the benefit of a better future for all.

The report therefore puts forward the following recommendations for consideration:

- A Centre of Excellence (CoE) for climate heritage conservation within the UK and potentially internationally where the primary role is open research and knowledge management, improving and sharing expertise and knowledge resources relating to climate change and sustainability, so that in turn it can help museums, galleries, libraries, archives and heritage sites, including voluntary and community run organisations, access critical information within regional and local contexts throughout the UK. The CoE could comprise a functional or cross-functional and interdisciplinary team with expertise drawn from not just national organisations but also academia and business to capture new knowledge and practices. It could be set up as a physical or even virtual team but should have a permanent rather than just a project status.
- Defining a credible pathway to net zero for the sector that builds on the Joint Commitment for Climate Action (2021) between IIC, ICCROM and ICOM-CC by providing equitable pathways for climate action and that meet the UN's climate targets to limit global warming to 1.5 degrees Celsius.
- Working more closely with existing enterprise funding agencies within the UK to support capacity building programmes for community-based climate action as well as making the case for dedicated innovation funding to support a range of open research projects and initiatives that accelerate solutions for the sector and for the benefit of society.

References

- Potts, A et al (2022). Can cultural infrastructures be drivers of people-centred climate action? Accessed Online: 1 September 2022

 https://agenda21culture.net/sites/default/files/resiliart_event_provocation_21_feb_2022_-_rev_a21c.pdf
- iii Article on IPCC Special Report (9 August 2021) Retrieved 11 January 2023 IPCC report: global emissions must peak by 2025 to keep warming at 1.5°C we need deeds not words (theconversation.com)
- ^{iv} University of Cambridge Institute for Sustainability Leadership (CISL). (2018). *Rewiring Leadership: The Future We Want, the Leadership We Need.* Cambridge, UK. Retrieved from:
- ^v ICON UK Conservation Standards and Ethical Guidance. Retrieved on 12 January 2023 online from: <u>Conservation Standards and Ethical Guidance (icon.org.uk)</u>
- vi Evans, el al (2007) 'Governing local sustainability'. Journal of Environmental Planning and Management.
- vii Heritage, A. and Copithorne, J. (Eds) *Sharing Conservation Decisions: Current Issues and Future Strategies. ICCROM 2018. Retrieved 1 September 2022 from:* https://www.iccrom.org/sites/default/files/2018-05/sharing conservation decisions 2018 web.pdf
- viii Climate Heritage Network press release. Climate Heritage Neotwork lauds landmark Culture Outcomes at COP27; Redoubles Efforts to Win More Holistic Recognition. Retrieved on 12 January 2023 from: Climate Heritage Network lauds landmark Culture Outcomes at COP27; Redoubles Efforts to Win More Holistic Recognition Climate Heritage Network
- ix IIC 29th biennial Congress 5-9 September 2022, Conservation and Change: Response, Adaptation and Leadership congress proceedings. Accessed online 1 December 2022 <u>IIC Wellington Congress 2022 in person and online | International Institute for Conservation of Historic and Artistic Works (iiconservation.org)</u>
- * Gayle, D. 19 October 2022, 'Just Stop Oil activists throw soup at Van Gogh's Sunflowers'. Retrieved 10 January 2023 <u>Just Stop Oil activists throw soup at Van Gogh's Sunflowers | Just Stop Oil | The Guardian</u>
- xi <u>Statement: Museums and Climate Activism International Council of Museums International Council of Museums (icom.museum)</u>
- xii Joint Commitment for Climate Action IIC, ICCROM and ICOM-CC, (October 2021). Retrieved on 12

 December 2022: IIC, ICCROM, and ICOM-CC agree Joint Commitment for Climate Action in Cultural Heritage |

 International Institute for Conservation of Historic and Artistic Works (iiconservation.org)
- xiii Gallery Climate Coalition Conference London 2021, Retrieved January 2023: <u>Five key takeaways from the first Gallery Climate Coalition conference in London (theartnewspaper.com)</u>
- xiv Finch, L (2020) Low Cost/No Cost Tips for Sustainability in Cultural Heritage. Retrieved 18 December 2022 Low Cost/No Cost Tips for Sustainability in Cultural Heritage (icon.org.uk)
- ^{xv} Reynolds, Martin (2009). Introduction to environmental responsibility. In: Reynolds, Martin; Blackmore, Chris and Smith, Mark J. eds. *The Environmental Responsibility Reader*. London: Zed Books and The Open University, pp. 1–6.

¹ Berg, C (2019) Sustainable Action: Overcoming the Barriers. Routledge, UK.

- xvii Kahutoi Te Kanawa, part of the Forbes Prize Lecture, IIC Wellington Congress, 5-9 September 2022, Conservation and Change: Response, Adaptation and Leadership'. Retrieved 11 January 2023: https://www.iiconservation.org/congress/
- xviii Ki Culture and Climate Gallery Coalition, International Climate Control Conference (1-2 December 2022). Retrieved 12 December 2022 from: <u>Ki Culture - YouTube</u>
- xix ICON UK Conservation Accreditation Register. Retrieved 11 January 2023 from: <u>Quality conservators Icon The Institute of Conservation (conservationregister.com)</u>
- xx State of the Environment: health, people and the environment. Report UK Government. (2021, p.4)
 Retrieved 1 September 2022 from: https://www.gov.uk/government/publications/state-of-the-environment/state-of-the-environment-health-people-and-the-environment
- xxi Tirelli, L. et al. (2021) Communities vs Climate Change: The Power of Local Action. New Local. Retrieved 1 September 2022 from: https://www.newlocal.org.uk/publications/communities-climate-change/
- ^{xxii} Case Study: Museum of the Making. Local Government Association. London, UK. Retrieved online 1 December 2022 from Museum of Making in Derby | Local Government Association
- ^{xxiii} Happy Museum Case Study (2021) Derby Museum of the Making. Retrieved 11 January 2023 from HM case study Derby-Silk-Museum WEB Mar2016.pdf (apc.org)
- xxiv Cross-Cultural Foundation of Uganda. (21 March 2022) 'Our Railways, Our Heritage'. Retrieved 11 January 2023 from https://crossculturalfoundation.or.ug/2022/05/09/the-uganda-railway-museum-grand-opening/

xvi Climate Heritage Network Press Release, November 2022. [Accessed 1 December 2022] Climate Heritage Network lauds landmark Culture Outcomes at COP27; Redoubles Efforts to Win More Holistic Recognition — Climate Heritage Network