

NUCLEAR CULTURAL HERITAGE

Position statement
Thurso, 12 September 2019

NUCLEAR CULTURAL HERITAGE

Position statement,

Edited by Eglė Rindzevičiūtė

This position statement summarises the discussion that took place as part of the AHRC research networking project "Nuclear Cultural Heritage: From Knowledge to Practice" in Thurso, Scotland, 12 September 2019. This project explores the emerging field of nuclear cultural heritage. It aims to establish links between national and international nuclear cultural heritage researchers, the heritage sector and the nuclear sector. The P.I. and director of the project is Dr Eglė Rindzevičiūtė, Associate Professor of Sociology at Kingston University London, UK.

The opinions expressed in the document are not necessarily those of the authors' employers.

Contributors:

Sam Alberti, National Museums Scotland
Will Bell, Sellafield Ltd
Robert Bud, Science Museum London
Ele Carpenter, Goldsmiths, University of London
Oliver Carpenter, Science Museum London
Wayne Cocroft, Historic England
Frank Dittman, Deutsches Museum
Philip Greatorex, Sellafield Ltd
James Gunn, Dounreay Site Restoration Ltd
Rodney Harrison, University College London
Jonathan Hogg, University of Liverpool
Sandra Kemp, Lancaster University
Susan Molyneux-Hodgson, Exeter University
Eglė Rindzevičiūtė, Kingston University London
Linda Ross, University of the Highlands and Islands
Anna Storm, Linköping University
Adivi Verma, Nuclear Energy Agency (NEA), OECD



(cc) Authors

Design: (cc) Jonas Žukauskas
Photography (cc) Jonas Žukauskas (cc) Anna Storm (cc) Wayne Cocroft

Suggested citation:
Rindzevičiūtė, E., ed. (2019) Nuclear Cultural Heritage: Position Statement.
AHRC Research Networking Project, AH/S001301/1.
Kingston upon Thames: Kingston University.

NUCLEAR CULTURAL HERITAGE

Position statement,
Thurso, 12 September 2019

This statement responds to the need to define nuclear cultural heritage as a category for research and practice.

The nuclear industry has a past: a legacy of technology and infrastructure, records, and communities.

Sometimes termed the “Atomic Age,” the twentieth century was an era characterised by the dawn of molecular, atomic and sub-atomic discoveries with applications in many scientific and engineering fields.

The history of nuclear power has been important at an international, national and local level providing meaning and aspiration and fuelling widespread hope and anxiety. It has been a mainstay of cultural as well as engineering life and industrial life. Therefore, nuclear power can be understood as a public technology.

Its history was an important part of the late twentieth century and preservation and interpretation of its material culture is critical for present and future generations.

This position statement on nuclear cultural heritage will serve as a basis for dialogue on shared concerns that cut across very different organisational and governmental sectors and inform social practices, resulting in better decisions on the future of nuclear heritage as well as decisions on nuclear technology.

The following pages outline some of the challenges and issues that need be addressed by the stakeholders of nuclear cultural heritage.

IDENTIFYING NUCLEAR CULTURAL HERITAGE

Nuclear cultural heritage is an expansive concept because it encompasses cultural and industrial values. UNESCO's definition of cultural heritage refers to "the legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations" (1972). Industrial heritage, which was defined by the International Committee for the Conservation of the Industrial Heritage (TICCIH) in 2003, refers to "the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education."

Accordingly, nuclear cultural heritage can be defined as anything that has come into contact with nuclear science and technology: a vast and hybrid field, including, but not limited to, nuclear power reactors, research reactors, nuclear weapons, nuclear propulsion systems, and isotope technologies in medicine and precision measurement. Identification of nuclear cultural heritage can take different forms: collecting, storing, archiving, preserving and caring for representative artefacts of nuclear material culture, mapping and safeguarding sites, preparing and selecting documentation, recording intangible practices, and establishing and keeping new archives. Each of these fields and corresponding practices require expertise that spans a broad range of professional and disciplinary sectors.

INTELLECTUAL CHALLENGE OF NUCLEAR CULTURAL HERITAGE

Nuclear cultural heritage is an interdisciplinary object and its preservation therefore relies on a number of fields of practice. It is relevant to technical and natural sciences as well as social sciences and the humanities. Forms of nuclear cultural heritage have complex histories: scientific and technological, industrial, economic, environmental, political, cultural, social and military. In terms of spatial reach, nuclear cultural heritage can have local, regional, national, international, transnational and global dimensions. Multi- and interdisciplinary collaborations are fundamental to develop new conceptual tools and gather relevant data required for identifying and understanding the diverse and emerging forms of nuclear cultural heritage.



WHAT IS *CULTURAL* IN NUCLEAR CULTURAL HERITAGE?

As Raymond Williams famously put it, “Culture is one of the two or three most complicated words in English language” (Williams 1976:76). Nuclear cultural heritage encompasses material cultures, representations in popular and professional culture and art practice, as well as a wide range of practices that can be seen as “culture,” such as organisation, architecture, landscapes and seascapes, social movements and politics. Understanding “the cultural” of nuclear cultural heritage requires collaboration between different experts:

Cultural research professionals: those with the knowledge and skills developed in social science and humanities departments of academic research institutions, museums, galleries, heritage organisations, archives, think tanks, creative groups and NGOs.

Experts on the “internal culture” of nuclear engineering and science: nuclear engineers, scientists, archivists, managers and policy makers.

Experts on the “lived culture” of nuclearity: people living in the proximity of nuclear establishments, members of anti-nuclear movements and people exposed to nuclear accidents.

IS NUCLEAR CULTURAL HERITAGE EXCEPTIONAL?

Although nuclear cultural heritage can assume different forms, it is often associated with nuclear weapons in the popular imagination. According to Gabrielle Hecht, since the invention of the nuclear bomb, the nuclear industry has cultivated the notion of “nuclear exceptionalism,” the idea that nuclear weapons technology is fundamentally different from other technologies (Hecht 2006:321). Nuclear research conferred power and prestige on scientists, institutions, states and societies.

This Cold War narrative of nuclear exceptionalism confers symbolic power as well as a historic mission on nuclear cultural heritage: just as steam was pivotal to the social transformations of the nineteenth century, the chain reaction transformed societies in the twentieth century. Additionally, because of its dual use for civil and military purposes, nuclear cultural heritage is linked to national security, commanding public attention in a different way than the industrial heritage of oil and gas energy.

Nevertheless, the idea of “nuclear exceptionalism” is itself part of the history of the Cold War. Indeed, it should not overshadow the conventional and mundane uses of nuclear technology that predated nuclear weapons, such as medical uses in X-rays and radiotherapy and the use of isotopes in high precision equipment. Moreover, nuclear power and technology are dependent on a very wide range of other “conventional” technologies, such as power generation, electronic engineering, architecture, and landscape design. Nuclear cultural heritage enjoys very strong support and loyalty from the nuclear communities, but this is also the case with other forms of industrial and military heritage.

Looking forward, nuclear cultural heritage might be considered as exceptional in terms of the longevity of radioactive waste, taking care of which constitutes an unprecedented techno-scientific, but also managerial and social challenge.



THE STORIES OF NUCLEAR CULTURAL HERITAGE

Nuclear cultural heritage is used to articulate many different types of narratives that make sense of the past and future. They range from stories of scientific ingenuity and technological prowess, economic progress and national power by harnessing the power of the chain reaction, to stories of the global threat of nuclear war.

Other stories include the revelation of Cold War secrets, such as breeder reactors and logistical infrastructure: storage bunkers, missile sites, airfields, and submarine bases. Uranium mining and trade is linked to the histories of colonialism and decolonisation. Prominent critical narratives reveal the destructive power of the bomb and technological accidents, and often focus on non-state actors, such as anti-nuclear environmental and peace movements. Finally, local stories of nuclear sites narrate the technological and social transformation of industrialised areas.

There is a need to develop new critical narratives for nuclear cultural heritage, as it is informed by cultural, national and gendered values. A particularly significant challenge is to open up and decolonise nation-centric and Eurocentric narratives of the history of nuclear power. Preservation of archives associated with nuclear production will help inform future narratives and interpretations associated with nuclear exceptionalism

LOCATIONS OF NUCLEAR CULTURAL HERITAGE

The sites of nuclear cultural heritage correspond to the life cycle of nuclear technology, ranging from its intellectual conception, to its testing, implementation, operation and decommissioning. Such locations are diverse geographically and socially: mining sites especially for uranium, nuclear research establishments, radium research institutes, medical institutions, fuel and weapons production facilities, test sites, power stations, military logistics and deployment sites, closed and open atomic cities and local communities, and waste stores.

WHAT IS NUCLEAR CULTURAL HERITAGE FOR?

Culture plays a central role in contemporary societies and so does nuclear cultural heritage. Cultural heritage is not limited to an object that is valued and is being preserved. Rather, it is a process during which social values and knowledges are shaped and transmitted to the future. Cultural heritage is based on the values of openness, access and participation. In this respect, several uses of nuclear cultural heritage can be discerned:

- Understanding the political and social past
- Transition from nuclear to post-nuclear communities (creative economy, cultural tourism)
- Preventing loss of knowledge by informing nuclear management and policy practice, particularly in the process of decommissioning
- Informing better decision making regarding the design of new nuclear sites and technologies

RESOURCES FOR NUCLEAR CULTURAL HERITAGE

Nuclear cultural heritage is an emergent field that requires:

Interdisciplinary expertise, enabling communication across the highly specialised and internally differentiated field of nuclear science and technology (energy, the military, medicine, nuclear physics)

Mediators, enabling engagement with the public aspect of the technology: archives and libraries, heritage agencies, curators, artists, museums, galleries, film, digital media, school curricula, local heritage societies, and other social actors

Maps and archival directories, enabling the visibility of the field of nuclear cultural heritage and facilitating management and policy decision making.

International platforms and networks, enabling a dialogue among experts and citizens from different countries as well as cooperation between key cultural institutions, including archives, that are engaging with nuclear cultural heritage.

Funding, particularly joined up support for multidisciplinary projects from a wide range of funding bodies for the arts and culture, archives and libraries, social science and science and engineering, and the environment. Funding is urgently required to develop new forms of archiving, documentation and preservation of special media formats that are part of decommissioning process.



AUDIENCES OF NUCLEAR CULTURAL HERITAGE

Nuclear cultural heritage audiences have the potential to grow in the future. The audiences range from the communities around where nuclear facilities existed, to the families of former members of staff and local history groups, members of social movements and researchers. There are nationally significant scientific, engineering and political figures whose commemoration commands attention. Internationally, there is a need to remember where high level nuclear waste is stored and who created it. Indeed, interest in the history and the future of nuclear power is alive and growing. The unexpected success of the HBO series *Chernobyl* (2019) suggests that global audiences are alert to nuclear topics. Industrial heritage and dark tourism attract new types of museum and heritage site visitors, particularly younger generations. Art mediation has strong potential for attracting diverse audiences. Particularly important is the decolonisation of the heritage sector, which is required to better address social inequalities and widen cultural participation.

CARING FOR NUCLEAR CULTURAL HERITAGE

According to UNESCO, caring for cultural heritage means making decisions on what is worth preserving, what the consequences of changes are, and what changes are acceptable, as well as identifying values that inform heritage management (Managing Cultural World Heritage, 2013). Some challenges with regards to the care of nuclear cultural heritage are:

- Safeguarding objects, sites and samples that were contaminated (for instance, Marie Curie's laboratory, and the challenge of understanding the cultural importance of highly symbolic nuclear structures such the Dounreay Fast Reactor (DFR) and Windscale Advanced Gas Cooled Reactor (WAGR) spheres within the historic landscape).
- Strategies for managing decay (for instance, slowly rusting Cold War nuclear logistical sites).
- Documenting decommissioning in the archives (the process of collecting nuclear cultural heritage might offer new insights, uncover new types of relevant data and establish good practices of information management).
- Development of data gathering and preservation techniques: interviews that link oral accounts with objects and places, spatial scanning, mapping etc.
- Ethical framework: in terms of gathering nuclear material culture, writing the narratives and managing tourism.
- Environmental planning: integration of physical structures in the landscape so that they are not lost.
- Encouraging the creation of new values through technoscientific, artistic and social innovation.

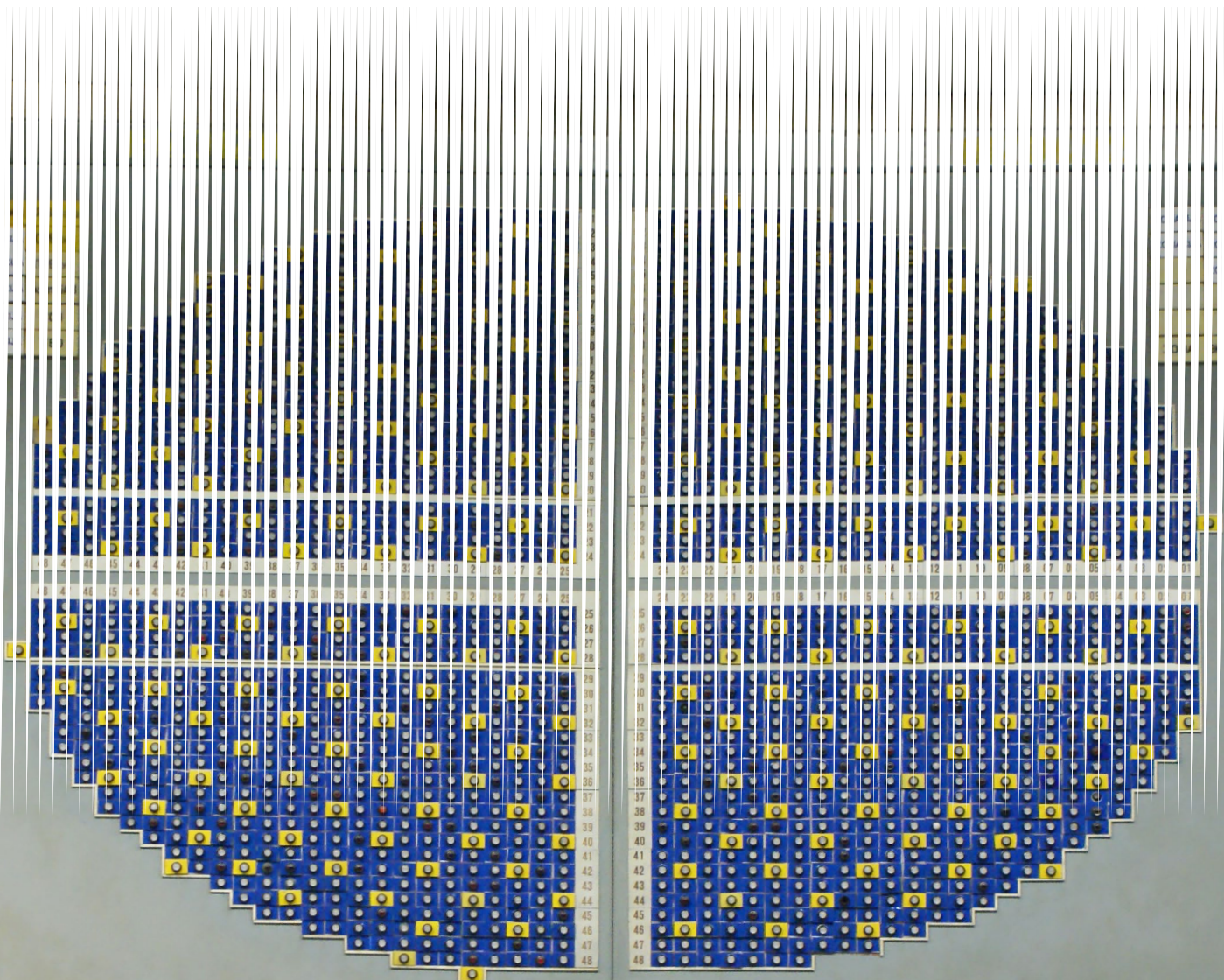
RISKS

There is a risk of low awareness of nuclear cultural heritage that will lead to the irreversible loss of information as aging nuclear sites approach retirement and decommissioning. A viable institutional framework is required to ensure competent collection and preservation of nuclear legacies. This is particularly important with regards to nuclear infrastructure, museum collections and archives.

The risk of being inaccessible both physically and intellectually: how to promote and animate nuclear cultural heritage collections and sites so that they could speak to different audiences?

The risk that heritage is identified exclusively with the past and is not seen as vital resource for the future. This is particularly relevant for the nuclear industry, which emphasises scientific and technological innovation. However, a secure informational basis is required for future decisions concerning nuclear waste management, as well as new nuclear sites and technologies.

Risk that lack of resources to help preservation will result in loss of artefacts and documentation defining nuclear cultural heritage.

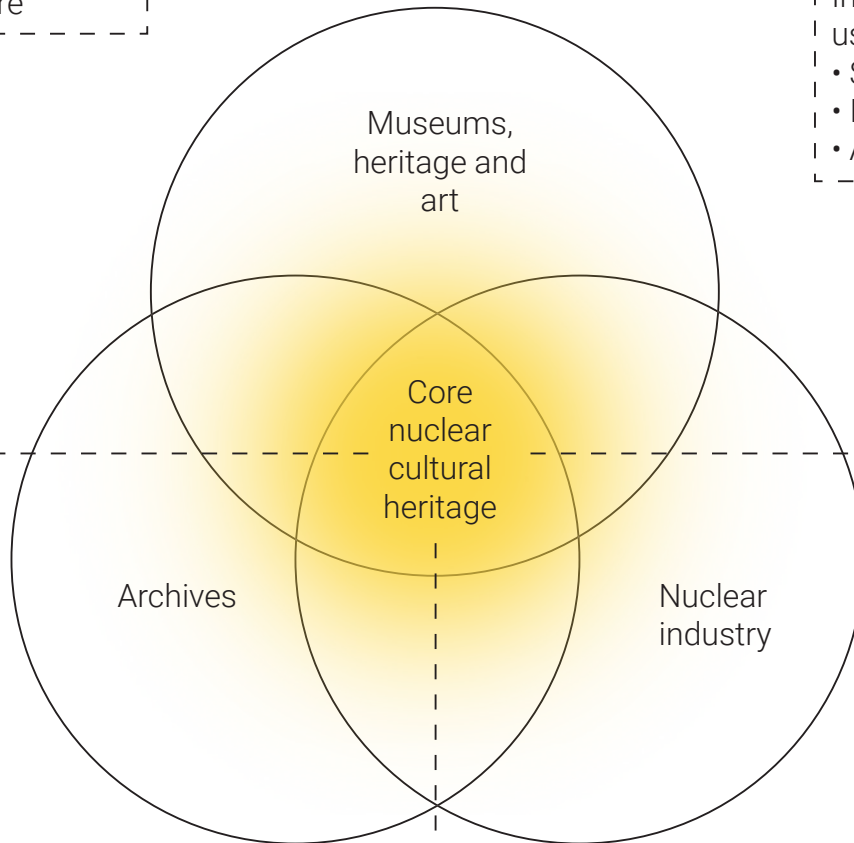


Public use value for society:

- Science and technology heritage
- Architecture and landscape heritage
- Local, regional, national and global history
- The Anthropocene: culture and nature
- Intelligent future

Internal operational use value:

- Safe operation
- Innovation, R&D
- Accountability



External engagement value for the industry:

- Public communication
- Stakeholder engagement
- Scientific diplomacy

