

# - RESEARCH STRATEGY 2022-27 -

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# NATIONAL MUSEUMS SCOTLAND RESEARCH STRATEGY 2022-27

1. AIM		. 2
	RODUCTION	
2.1.	National Museums Scotland	. 2
2.2.	Purpose, parameters and review	
3. STF	RATĖGIC CONTEXT	. 2
3.1.	National context	. 2
3.2.	Organisational context	
3.3.	Regulatory context	
	NCIPLES	
4.1.	Cohesive and connected research	
4.2.	Inclusive research	
4.3.	Collaborative research	
4.4.	Sustainable research	
5. PRI	ORITY THEMES	
5.1.	Scotland's Material and Natural Heritage	
5.2.	Biodiversity and climate change	
5.3.	Colonial Histories and legacies	
5.4.	Museum research	
6. RES	SEARCH CULTURE	
6.1.	Drivers	
6.2.	Enablers	
6.3.	Methods	
6.4.	Researchers	
6.5.	Facilitation	
6.6.	Governance	
	ASURING SUCCESS	
7.1.	Outputs	
7.2.	Outcomes	
	PENDIX A: Topics	
8.1.	Taxonomy / systematics	
8.2.	Genetic monitoring	
8.3.	Environment and evolution	
8.4.	Scottish design and innovation	
8.5.	Material histories	
8.6.	Object meanings	
8.7.	Collectors and collecting	
8.8.	Migration	
8.9.	Fashion	
8.10.	Inclusive museums	
8.11.	Digital museums	
	Heritage Science	
	PENDIX B: Research Ethics and Integrity	
10 API		. <u>-</u> 12

### 1. AIM

To deliver world-class, sustainable and cohesive research on and around our collections for public benefit.

## 2. INTRODUCTION

#### 2.1. National Museums Scotland

National Museums Scotland seeks to preserve, interpret and make accessible for all, the past and present of Scotland, other nations and cultures, and the natural world. Enacting this mission allows us to realise our vision, which is to inspire people and to address the challenges of our age. The research that we and others undertake on and around our collections is fundamental to these purposes. Research allows us to tell stories that inspire people to make connections between themselves and the world. This is reflected in our brand 'real things, revealing stories' which guides how we research to create impact, meaning and enjoyment and is at the heart of how we communicate and engage with the world.

# 2.2. Purpose, parameters and review

Research is the 'process of investigation leading to new insights, effectively shared' (Scottish Funding Council *et al.*, 2011). At National Museums Scotland, this involves work across disciplines and methods; not only object-based study, but also research that involves our practice and our audiences. It includes our own work, partnerships, and facilitating other people's research.

In tandem with our Collections Development Strategy, this document will guide our research over the next five years, ensuring that our approach is cohesive and sustainable, and we have our present and future audiences in mind as we undertake and facilitate research on and around our collections. Its purpose is to ensure that by 2027 our research is internationally recognised; is connected to our themes, our collecting and our engagement; and that we have a research culture that generates and fosters innovative, multi-disciplinary and multi-professional research as well as the expertise and infrastructure to deliver it.

This strategy is intended for our colleagues, partners, stakeholders and audiences to shape and understand the decisions we make when developing and supporting particular research projects and outcomes. The main body of the strategy is concerned with the intentions and future direction of our research activity, linking it to our strategic aims and outlining the principles, and culture of our research generally. Specific topics for work over the next five years can be found in Appendix A. This strategy will be reviewed by 2027 at the latest.

#### 3. STRATEGIC CONTEXT

#### 3.1. National context

This is an interesting and important time to be considering how we research our collections. The sector is emerging from the challenges of the global Coronavirus pandemic, which will have considerable political and economic consequences throughout the five years covered by this strategy. There are also developments across the heritage sector that are not new but are increasingly important, and so feature more explicitly here than in previous iterations of our approach. Especially important is the Climate Emergency and the colonial roots of our collections; both are reflected in our priority themes below. Issues of nationhood and identities have always been addressed in museums, and they are also reflected in our research.

## 3.2. Organisational context

While National Museums Scotland already has a strong track record in research outputs – ground-breaking museum research in natural science, history and culture – in the previous strategic period (2016–22) there has been a positive step-change in our research infrastructure and external support generated. We also undertake audience research, engaging not only on-site visitors but also online users. Combined, these activities form a healthy baseline from which to integrate these diverse initiatives into a more cohesive and sustainable research culture.

In light of these developments and in the context outlined above, National Museums Scotland has set out a new strategic plan, laying out five aims, which will guide and be enabled by our research:

- i. Our audiences will be more diverse, and more people will connect with our collections and their stories.
- ii. We will be recognised as the world leader and preferred national partner for the interpretation of and engagement with Scotland's material heritage.
- iii. We will be well advanced on the path to a carbon neutral footprint and a respected resource for understanding climate and biodiversity challenges.
- iv. The unique potential of our collections, expertise and programmes will be shared and valued internationally.
- v. We will be financially secure, supported by diverse income streams and confident in continuing to invest in our people, places and collection.

Other National Museums Scotland strategies are refenced throughout, especially the Collections Development Strategy and our audience development planning.

# 3.3. Regulatory context

Underpinning our activity in this area are our ongoing statutory duties as laid out the National Heritage (Scotland) Act 1985, which compels the Board of the National Museums Scotland to ensure staff 'carry out research' and to ensure 'that the objects are available to persons seeking to inspect them in connection with study or research'.

We will operate within the mandates of the public bodies who support our research, including the Scottish Government National Performance Framework, the National Lottery Heritage Fund and United Kingdom Research and Innovation (UKRI). Our approach to research ethics and integrity is outlined in Appendix B; we subscribe to All European Academies' (ALLEA) 2017 European Code of Conduct for Research Integrity and other relevant codes and guidance, which are listed in Appendix C.

UKRI identifies National Museums Scotland as an Independent Research Organisation. This identifies significant research activity and capacity and enables access to government-derived research funds, notably through the Arts and Humanities Research Council and the National Environment Research Council. We will seek to maintain this status.

# 4. PRINCIPLES

We will undertake high quality, multi-disciplinary, collaborative, impactful research: not just communicating but also generating new knowledge. All our research aspires to be world-class in terms of its originality, significance and rigour. National Museums Scotland is creative (we are innovative and thrive on good ideas), inclusive (we are open, friendly and enabling), collaborative (we are enquiring, receptive and well connected) and forward

thinking (we look for the big picture as well as the detail). These values run through our research principles:

#### 4.1. Cohesive and connected research

We will render our overall research programme cohesive by focusing on our three priority themes (below), exploiting where beneficial the multi-disciplinary nature of our collections and expertise, spanning the arts, humanities, social and natural sciences, with Scottish narratives being a particular strength. As a multidisciplinary family of museums, we are able to draw specific advantages from interdisciplinary work and perspectives. Answering thematic, cross-cutting research questions will be facilitated by foundational work in heritage science and user studies.

In order to make the best use of our resources and expertise, and to render our outcomes distinctive and relevant, we will ensure that our research is thematic and integrated with other areas of practice. Our research will thereby be creative, stemming from and feeding back into our collection development. It will continue to advance the care, interpretation, display and engagement with the collections.

#### 4.2. Inclusive research

We research for public benefit, now and in the future; audiences are therefore at the heart of our endeavours, and we will align our research activities with our audience development ambitions, reflecting our Strategic Aim (i). Our aim continues to be to research in order to inspire, inform and challenge our audiences now, and in the future. They include our visitors, online users, heritage networks and research communities. Our research will befit the diversity of these audiences; we will also use research to understand our audiences and thereby inform our audience development.

We will reach these national and international users via a range of research outputs, including our collections information system, books, peer-reviewed publications, conferences, digital media, talks and other programming, exhibitions and displays. Where possible we will reach these audiences with open access to our research outputs. As far as possible we will involve local national and international communities in our research, for example deploying 'citizen science' methodologies.

#### 4.3. Collaborative research

We will work collaboratively, both within and beyond the organisation: partnership will be central to our success, and to using our resources effectively. Wherever appropriate, we will look to lead or partner in collaborative research projects, and we will be proactive and strategic, in initiating and stewarding partnerships.

In accordance with Strategic Aim (iv), we will therefore engage international and national museum, third sector, higher education, industry and community partners. Where feasible and beneficial we will partner with industry, and with for-profit research bodies (for example in audience research).

Where appropriate, we will apply our approach to participatory practice to our research work, engaging with communities within Scotland and beyond, thereby stimulating knowledge coproduction. We will work with collaborators with varied research backgrounds including practice-led research, lived experience and other forms of expertise.

We will document and digitise in order to provide access to our collections and knowledge. We will be transparent about our approach, our findings and data. We view research

facilitation as a form of partnership, and will expect researchers engaging with our collections and practice to exhibit the same transparent and collaborative approach, for example those who work with us in the Heritage Science Hub.

#### 4.4. Sustainable research

Our research activity will be forward thinking in its sustainability, taking into account the environment, our organisation, and available resources. Reflecting our Strategic Aim (iii) we will decrease the carbon footprint of our research, and contribute to our path to Net Zero. Ensuring digital access to our research and outputs will be carbon-efficient. More broadly, as in all our activities, we will understand and measure the environmental impact of our research projects, and align them to the organisation-wide carbon management.

We will plan our research thoughtfully, considering dependencies and benefits across our and other organisations. We factor into our decision-making available networks, skills and expertise, and how to enhance and amplify them.

Further to our Strategic Aim (v) we will consider the immediate and longer-term financial impact on our organisation and our partners, making measured applications to external funding bodies, especially UKRI and other bodies providing overhead costs. Where beneficial and feasible within our existing infrastructure and we will seek support for contract researchers or, if it does not jeopardize our operational delivery, buy-out of permanent staff. We will steward supporter relationships carefully and cultivate colleagues' stakeholder liaison skills to ensure we provide good value, internally and externally. We will deploy our research management resource and expertise carefully, and consider all significant research activity centrally.

Alongside our collections our greatest resource is our expertise. We will therefore consider the maintenance and development of staff research skills when selecting and planning initiatives. We will work to improve the confidence of our staff to identify and undertake research and innovation in their practice. We will ensure staff have the appropriate skills, experience and time to develop, deliver and win funding for research and supervise high-quality research projects. This encompasses the recruitment and retention of appropriately skilled staff, the provision of training, and the proper development and management of research careers. Finally, especially in the likely economic landscape of the five years in question, we will be responsive to changing circumstances, opportunities and stakeholder needs.

#### 5. PRIORITY THEMES

Three themes will ensure our research is both cohesive and relevant to our present and future audiences; they run through the more granulated topics, which can be found in Appendix A. By 2027, the majority of our research will be clustered around these themes and topics, and we will have a healthy pipeline of exploratory and major projects that integrate our research with collecting and engagement. These themes will apply and connect across our collections and our sites, and run across the National Museums Scotland Collections Development Strategy in order to synergise these activities.

# 5.1. Scotland's Material and Natural Heritage

It is our statutory duty to research and interpret Scotland's natural and material heritage. With an unparalleled collection, over 300 years in the making, we are already a recognised leader in telling Scotland's natural and human histories, a position we will cement and grow over this strategic period, further to Strategic Aim (ii). This theme underpins those below: our stories start with and in Scotland.

We will use our collections, our expertise and our voices to generate new knowledge about Scotland's environments, cultures and identities and thereby re-present the material history of Scotland, its place in these islands, this continent and the world, and provide new understandings of its natural environment. We will study Scottish biodiversity and geodiversity, from deep time to the present day; as well as the material history of Scottish localities and identities, creativity and ingenuity, lives and experiences, from prehistory to the contemporary. These research activities will be distinctive and world-class.

Our research in this period will thereby lay the foundations for rethinking the Scotland Galleries at the National Museum of Scotland, as well as enhancing our understanding of the stories we tell at the National War Museum, the National Museum of Rural Life, and the National Museum of Flight.

# 5.2. Biodiversity and climate change

The global environmental emergencies involving the climate and biodiversity are the most significant challenges facing humankind. Our collection is a rich resource for generating knowledge and enhancing understanding, comprising 300 years of collecting, providing invaluable data sources for measuring biodiversity change over time in the particular geography of what is now Scotland and beyond. As well as storing samples, our scientists undertake scientific fieldwork to provide evidence-based research, which contributes to the effort around the world to better understand human impacts on the environment. We house powerful evidence of changes in land use (for example, soil from archaeological assemblages) and the industrialisation of Scotland, and the energy technologies that contributed to accelerated global warming.

We will reframe our existing collections as a library of bio/geodiversity and undertake research in order to understand and monitor environmental change and biodiversity loss. We will also research the history of agriculture, land use and the energy industry in transition and developments in sustainable technology, systems and in Scotland, as well as cultural responses to the crises. Together these will further our Strategic Aim (iii), to be a respected resource for understanding climate and biodiversity challenges. Our collection and our multidisciplinary approach form a platform from which we can inspire and inform our audiences across our sites and platforms to work towards a better world.

# 5.3. Colonial histories and legacies

The development of our artefact collections began in the eighteenth century and many of the objects collected since reflect Scotland's imperial and colonial histories, including those associated with the Transatlantic slave trade. These stories are complex, dynamic and many-sided but often they involved exploitation, oppression and violence, particularly against Indigenous peoples. Research helps us to identify, understand, challenge and engage with distinctive Scottish imperial and colonial histories associated with our collections. We are committed to revealing and sharing the full range of stories about imperial and colonial activities associated with our collections, the impact on Scottish society and culture. These are difficult histories and they raise complex questions.

We will carry out further research into the meaning of these collections, their provenances and collecting histories, especially by learning from and collaborating with those communities for whom our objects have special relevance. We will explore our collection to tell new stories about Scotland's international encounters, its imperial and colonial histories and legacies, and the Transatlantic slave trade. We will bring to light new knowledge about our collections, addressing biases and misrepresentations arising from our institutional history.

#### 5.4. Museum research

Underpinning and amplifying all of the above, and our museum practice more generally, we will undertake foundational research to better understand our materials and audiences, which in turn helps us to understand our collections, and ensure our research overall is integrated and relevant.

To understand the care and composition of our collections we will continue to develop a centre of excellence in heritage science. To this end we will seek investment in our research infrastructure, especially at the National Museums Collection Centre. We will develop this facility as an international hub, rendering it more accessible to researchers and thereby delivering more public impact. Where feasible we will explore new technologies to aid in this and the other research themes above. We will take an entrepreneurial approach, seeking support from external bodies where appropriate.

We will seek to understand our audiences, visitors and users and their connections with our collections. We will also explore new audiences using our research, and evaluate the impact of new techniques and technologies of engagement. Our research will thereby underpin our resilience ambitions in Strategic Aim (v).

#### 6. RESEARCH CULTURE

We will build on our tradition of scholarship, the themes outlined in 5 above, our research framework and our developing infrastructure to support and develop a vibrant multi-disciplinary research culture by 2027. Here we outline what is required and what is involved, including drivers, methods and people involved.

#### 6.1. Drivers

Research is firmly embedded and arises from other museum activities. Collection development – including acquisition, disposal, review and lending – drives and requires research. Maintaining and amplifying our existing collections involves research, and in this strategic period we will especially focus on provenance work. Many engagement projects include research on our audiences and practices; most engagement projects involve and drive research, including not only temporary exhibitions but also capital developments. In this period we will undertake research towards the re-development of the Scotland Galleries in the National Museum of Scotland.

# 6.2. Enablers

As established in the sustainability principle above, research expertise and support are fundamental; so too the physical and technical infrastructure, including appropriate built environment and equipment. Our infrastructure enables research, and we will be cognizant of the full range of elements within this when planning initiatives and seeking support. The library and archives are essential, including our Research Repository, as is our ICT infrastructure; this is as true for other researchers as in our own research, so we will work in partnership to provide facilities. We will include careful attention to these amenities, their potential and their limits, when planning our research and supporting the research of others.

#### 6.3. Methods

Our strength is in our multi-disciplinary holdings and multi-professional expertise, and the range of the methods deployed reflects this. We will strive to ensure the appropriate facilities and time are available for the diverse methodologies we employ.

We will engage and facilitate analytical, digital, visual (and enhanced visual), and comparative material culture research. We will use our and others' library and archival holdings to explore provenances and contexts. As identified on our Collections Development Strategy, fieldwork will continue to be an important component of our research. We will undertake and permit destructive analytical research where appropriate and we have sufficient material. We will also undertake ethnographic, observational and other kinds of inperson visitor research, as well as digital engagement. We will develop new modes of practice-based and participatory research methods, especially but not exclusively in relation to Colonial Histories and Legacies (Priority Theme 5.3 above).

### 6.4. Researchers

These methods will be deployed by a range of people, internal and external, including but not limited to curators. Following the UK Research Integrity Office Code of Practice for Research (2009), 'researchers' are defined as any people who conduct research, whether as an employee; as an independent contractor or consultant; as a research student; as a visiting or emeritus member of staff; or as a member of staff on a joint or honorary contract. At National Museums Scotland research is undertaken, managed and commissioned across the organisation. We now have specified research roles; they are largely inhabited by post-doctoral researchers and currently within the Collections Directorate, but with the potential to be situated elsewhere.

We have an excellent track record of delivering doctoral research, especially but not exclusively funded by the Arts and Humanities Research Council and the Natural Environment Research Council, which we will strive to maintain; we will ensure they have career-enhancing experiences, and we will support them as they seek to progress in their profession. Collaborative studentships are an excellent way of answering detailed, research-intensive questions and maintaining academic partnerships. Students from other HE institutions come and work with us on placements and can help us generate research outputs. We are committed to ensuring that these placements are properly supported, either as core part of an accredited course or externally funded via a grant.

Like the post-graduates working with us, our Research Associates play an active and important role in delivering our research programme. We will work to ensure we have a balance of these experts across the collections, and that our relationship with them is mutually beneficial. Doctoral students and Research Associates alike will therefore be strategically and actively managed to ensure their research outputs are relevant, undertaken according to our principles, and help to fulfil our ambitions.

For the benefit of all these researchers and the outputs they develop, we will help to build confidence in colleagues as to what good research practice looks like with opportunities for core research skills such as identifying gaps in knowledge, opportunities for research and development (see also 4.4 above). We will seek to ensure appropriate training is available for all those active in research, including grant applications and impact. We will continue our multidisciplinary seminar series to amplify our research internally and to stimulate dialogue across the organisation. We will also work in this period to raise awareness of research integrity and ethics throughout National Museums Scotland. Our research will follow and contribute to our Equality, Diversity and Inclusion commitments.

#### 6.5. Facilitation

We undertake research ourselves and our research ambitions are supported by facilitating others' research on and around our collections. In this period we will ensure that this work is

tactically managed and tracked, and in keeping with our principles and themes. To this end, we will refine our output capture mechanisms.

We will actively encourage, cultivate and facilitate external researchers, whether independent, or from other organisations, to utilize our collections and in-house expertise to further their research and outputs. We will continue to also support visits from scholarly academic groups, providing specialist sessions.

The resource involved and outcomes from research facilitation will be carefully considered, and charged for in accordance with our stated policy on charging for collection activities and facilities use. We will balance the research interests of our visitors, collaborators and partners with our own staff research interests and plans (and take measures to ensure the integrity of the collections is not jeopardized). Co-authorship of those who facilitate and contribute will be required where justified, following the guidance of the UK Committee on Publication Ethics.

We will also facilitate others' research by digitising our collections and providing as much open data as we can, and sourcing new equipment and skills to achieve this. We will prioritize digitization in those areas where there is an identified function for the data. We will undertake research loans where no other method is possible. As a site for collaboration and partnership we will develop the National Museums Collections Centre as an international research hub, with improved facilities and access to the collection.

#### 6.6. Governance

Research is undertaken by staff across the organisation on behalf of the Board of Trustees with support and full involvement of other stakeholder departments, and authorised by the relevant Heads of Department, Directors of Function and the Director according to resources involved. Research planning is undertaken on a departmental level within operational planning and budgeting. Major research projects – those with significant resource or risk – must be approved by the Executive Team using the internal approval process.

The Research Strategy Group, chaired by the Director, involving Trustees and supported by the Research and Academic Liaison Manager, oversees research projects and outputs and discusses key strategic matters. The Research Strategy Group will therefore oversee the delivery of this strategy. The Research Ethics and Integrity Committee, also chaired by the Director, convenes when necessary to assess more detailed matters of ethics and integrity, including evaluating required ethical clearance and matters pertaining to consent.

# 7. MEASURING SUCCESS

Our research and the work we facilitate should make a positive difference. It should be demonstrably world-class (original, significant and rigorous), cohesive (distinctive to National Museums Scotland, connected to our other activities and thematic) and sustainable (resilient and ongoing). Most of all, it should be impactful and have public benefit: that is, it should make a demonstrable contribution to society, the economy and/or the environment. We will assess our success against these ambitions by tracking outcomes and outputs and using the National Museums Scotland Impact Assessment Framework. Especially, we want to ensure that our research inspires people and addresses the challenges of our age, thereby connecting meaningfully with audiences. All research projects will therefore have evaluation built into them, and we will be alive to new developments in understanding research impact.

## 7.1. Outputs

Outputs we will track include the number and range of definable research projects underway, spread across the themes and functions. We will measure the quantity of staff publications and other products, including where possible their reach and impact, and how they connected with audiences (that is, we focus on quality rather than quantity). The Research Repository will be important in this respect. We will seek to track the use of our collections in external publications. And we will measure the number, size and range of external applications and funding secured.

#### 7.2. Outcomes

Outcomes indicating success include cohesive thematic research; multi-disciplinary innovation; new and stewarded partnerships; enhanced methods, including collections practice and audience research; and policy impact. The vibrant research culture outlined in 6 above (including skills development) will evidence success, and, ultimately, whether we have made a significant difference to the stories we can tell with our collection about the past and present of Scotland, other nations and cultures, and the natural world.

# 8. APPENDIX A: Topics

The prescriptive themes outlined in section 5 above are underpinned and informed by a dozen connected topics. Each may contribute to more than one theme or more than one part of the organisation; together they provide a map of the research we undertake, covering the majority of our proactive collecting and research. These topics build on the established strengths of our holdings and scholarship, and are suggestive of future directions. Such groupings will help us to understand where connections can be made between collecting, research and engagement, which will be beneficial for identifying pipeline research projects and long-term programming. Furthermore, topics 10-12 are foundational, providing the basis for the others. This landscape is accurate as at 2022, but may develop during the lifespan of this strategy, whether gradually or through seismic change, in accordance with our commitment to responsivity in 4.4 above.

## 8.1. Taxonomy / systematics

We assess biodiversity by describing new species, tracking and counting species, past and present, within our existing collections and in new specimens we collect, both terrestrial and marine. This allows us to understand recent changes in life on earth. Our research also contributes significantly to the understanding of geodiversity in Scotland and beyond.

## 8.2. Genetic monitoring

We assess biological collections and their genetic resources, including biobanking, ancient DNA and environmental DNA. The Darwin Tree of Life and BioScan programmes will be especially significant in this respect. Like Topic 8.1 above, this comprises a substantial element of our Natural Sciences research, and contributes significantly to Strategic Aim (iii), our Sustainability priority.

# 8.3. Environment and evolution

A major topic across the curatorial departments, we track and explain environmental change from deep time to the Anthropocene, from tetrapods colonising land to the diminution of habitats in the Anthropocene. Scientific, archaeological and historical work contributes to the understanding of changes in land use and natural capital, including agriculture. We explore re-use and recycling, past and present, and study the consequences of environment change in human culture, from eco-fashion to climate justice; as well as the development of more sustainable technologies across different areas of human endeavour.

# 8.4. Scottish design and innovation

Embedded within our collecting history, our multi-disciplinary approach to Scottish design and its encounters with other traditions continues to manifest in our contemporary collecting. From factories to domestic interiors, this topic spans the artefact-based curatorial departments, including renewable technology (which also features in topic 3 above), decorative arts, textiles, instrumentation and popular culture.

#### 8.5. Material histories

With ongoing fundamental research by curators, conservators, and analytical scientists we seek to understand the histories, materiality, and authenticity of our collections. This work is underpinned by scientific analysis of collections from their structure (how they are made and formed) to elemental and molecular level material analysis (what they are made from) as well as study into material culture to understand chronologies of major social and cultural transitions in the place we now call Scotland and beyond.

# 8.6. Object meanings

Much of our work explores the relationship between objects, language and memory. We have a strong track record in understanding how intangible phenomena manifest in material culture, from prehistory through to the present day; we are especially interested for example in the material culture of the Enlightenment – in which Sottish thinkers played leading roles – and the Cold War. This is especially pertinent for cultural history, from interpreting the history of popular culture in Scotland to enduring meanings of royal objects. This topic will also allow us to explore notions of identity and nationhood.

# 8.7. Collectors and collecting

All Collections Directorate departments exhibit a strong interest in how our collections were collected and compiled, and in their provenances (and presumed provenances); this topic therefore has a wide thematic spread. We have a particular strength in understanding the compilation, deposition and afterlives of hoards (which are also central to Topic 8.5 above). More broadly, we are interested in the power relations inherent in our collections, for example as a result of colonial collecting, and how the past has been represented in the past.

## 8.8. Migration

Our collections offer unparalleled opportunities to understanding how people who populated the place we call Scotland today encountered the world and *vice versa*. We will research migration in multiple directions, assimilation, influences and conflict from prehistory, the Roman Empire and Viking movements through to colonial and post-colonial migrations and those in the present day. This topic will also explore the Scottish relationship with Europe.

## 8.9. Fashion

Our growing reputation in fashion and design heritage has at its heart the relationship between fashion and diversity. Aligning the curatorial care for our European and world-wide collections has rich potential to connect our understanding of textiles and costume across cultures, especially via contemporary collecting. We will take a Global approach to fashion collecting, research and engagement.

# 8.10. Inclusive museums

We work hard to ensure our sites and activities are welcoming to broad audiences, and as part of this we undertake ongoing evaluation of our visitors and others we engage with. Where this generates new insights and feeds into our other work, it is research and is critical to understanding our collections and practice. We also undertake learning research to understand and enhance the impact of our schools and other programming. These methods run through and underpin much of the other topics above, and are undertaken across the organisation as we seek to understand how our visitors engage with our content.

## 8.11. Digital museums

Assessing and enhancing the modes and quality of engagement with our collections online is important. This includes generating and sharing a range of data about our collections for multiple audiences using tested and innovative channels; in this period, our contribution to the Distributed System of Scientific Collections will be especially significant. We are also committed to developing our own digital literacy as an organisation.

### 8.12. Heritage Science

We will continue to develop our interdisciplinary heritage science research to interpret, conserve, care for and disseminate knowledge about our collections. Central to this work is further developing our heritage science facilities located at the Collections Centre and their use across our collections and as part of the developing UK-wide heritage science research infrastructure further strengthening our unique position as the only facility of this kind in the Scottish heritage sector.

# 9. APPENDIX B: Research Ethics and Integrity

As an Independent Research Organisation National Museums Scotland is required to commit to the terms and conditions of our funders, including UKRI. The standards to which we are committed are conveyed in the 2019 Concordat to Support Research Integrity published by Universities UK. Importantly, the concordat goes beyond the commitment to 'ethical and legal' standards, and forms the cornerstone of understanding of research integrity. It is divided into five key commitments, to which we subscribe at National Museums Scotland:

- i. To uphold the highest standards of rigour and integrity in all aspects of research.
- ii. To ensure that research is conducted according to appropriate ethical, legal, and professional frameworks, obligations and standards.
- iii. To support a research environment that is underpinned by a culture of integrity and based on good governance, best practice and support for the development of researchers.
- iv. To use transparent, robust and fair processes to deal with allegations of research misconduct should they arise.
- v. To work together to strengthen the integrity of research and to review progress regularly and openly.

## 10. APPENDIX C: Codes and Guidance

As well as following good practice in collection, audience and digital work, our research activities will be guided by the following ethical codes, and we will require external researchers to follow:

- i. All European Academies' (ALLEA) European Code of Conduct for Research Integrity 2017
- ii. Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES] 1973/1979
- iii. DCMS Guidance for the Care of Human Remains in Museums 2005
- iv. ICOM Code of Ethics for Museums 2013 (including the ICOM 'Red List')
- v. Museums Association Code of Ethics for Museums 2015
- vi. Nagoya Protocol on Access and Benefit Sharing (updated guidance from the UK Department for Environment, Food & Rural Affairs 2022)
- vii. UK Department for Environment, Food & Rural Affairs
- viii. UKRI Policy and Guidelines on the Governance of Good Research Conduct 2013
- ix. UK Research Integrity Office Code of Practice for Research 2021
- x. Universities UK Concordant to Support Research Integrity 2019