ASSET MANAGEMENT PLAN FOR THE PROPERTIES IN THE CARE OF SCOTTISH MINISTERS

2018

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

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INTRODUCTION

This Asset Management Plan sets out our approach for the asset that is the properties in care of Scottish Ministers, a unique cultural asset for the people of Scotland now and in the future. The properties in the care of Scottish Ministers are a nationally valuable cultural, social, environmental and economic asset. We fulfil a stewardship role for Scottish Ministers and the people of Scotland in caring for and providing public access to these sites.

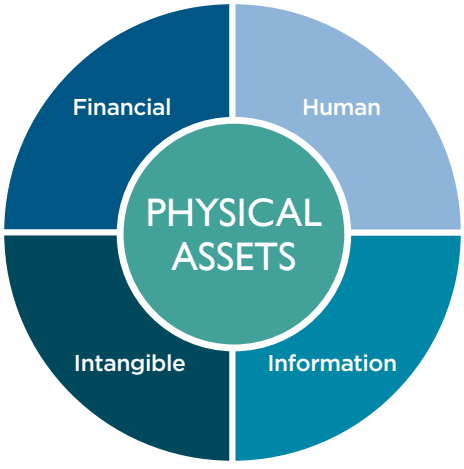
This Asset Management Plan

Our aim is to deliver economic, social and environmental benefits to the people of Scotland from the properties in care of Scottish Ministers without compromising the cultural significance of the assets. We will achieve this by delivering our four key asset management objectives.

The properties in care cannot and should not exist in isolation. The properties are the result of human interaction with their environment and they must continue to fulfil that role to sustain and augment their cultural value. They are places to be enjoyed and cherished, and are part of a cultural heritage tapestry which extends to every corner of Scotland.

The properties in care give a great deal more than they take from us and we must strive to maintain an equilibrium that does not see their cultural value diminished.

We believe that about seven to eight million visits are made to properties in care each year. About half of these are charged for through admissions at our 77 staffed sites while public access to more than 250 properties is free.



We have a statutory obligation to conserve and provide public access to the properties in care and facilitating access to the properties in care. Our aim is to make it possible, and increasingly easy, for anyone to engage with and enjoy Scotland's properties in care both now and in the future.

The HES Access Policy sets out how we achieve this. As the lead public body for the historic environment and the largest operator of paid visitor attractions in Scotland, we are an important public face to the world and take our leadership and enabling role seriously.

The challenges facing Scotland's historic environment are not insignificant and we are not immune from that. It is, therefore, more important than ever that our purpose and rationale for decision making is clear and transparent.

Traditional models of conservation based solely on existing and narrowly defined historic fabric are evolving. Intangible cultural traditions, the value placed on places by local communities and those traditions perpetuated through the act of care are creating a new conservation purpose and challenging our traditional perspectives.

"An asset is an item, thing or entity that has potential or actual value to an organisation"

ISO 55000

1.0 CULTURAL HERITAGE ASSET MANAGEMENT – CHALLENGES, OPPORTUNITIES AND INFLUENCES

Asset Management Planning for cultural heritage assets is a developing field with relatively few asset management plans for large historic property portfolios produced. The diversity of cultural heritage asset portfolios often exhibit a remarkable diversity and in doing so, a range of challenges.

There are nearly 300,000 identified heritage assets in Scotland. About 57,000 of these have formal protection through designation. Scottish Ministers' collection represents 0.12 per cent of these heritage assets and 4 per cent of scheduled ancient monuments. By definition, the portfolio comprises properties of national significance, but the quality and importance of many of these sites are of international significance. The collection comprises nationally iconic and diverse sites such as Calanais and Skara Brae to Edinburgh Castle and Stanley Mills.

Generic asset management approaches for non-cultural assets are driven by life costs and a definitive life cycle for an asset. This is not a valid policy basis for a portfolio of culturally significant assets where our approach is to minimally intervene in order to preserve the authenticity of that asset and where we can perpetuate its holistic significance. Nevertheless, many of the approaches developed can be applied to our asset management approach and this is the approach we have followed.

ISO 55000 is an international standard covering management of physical assets. Initially a Publicly Available Specification (PAS 55) published by the British Standards Institution in 2004, the ISO 55000 series of Asset Management standards was launched in January 2014. In developing an asset management approach for HES, we have adopted the central principles of PAS 55 and ISO 55000. We have also looked in detail at the approaches taken by other bodies who manage similar assets.

We are grateful for the willingness of our colleagues to share their experiences in approaching asset management of cultural heritage sites.

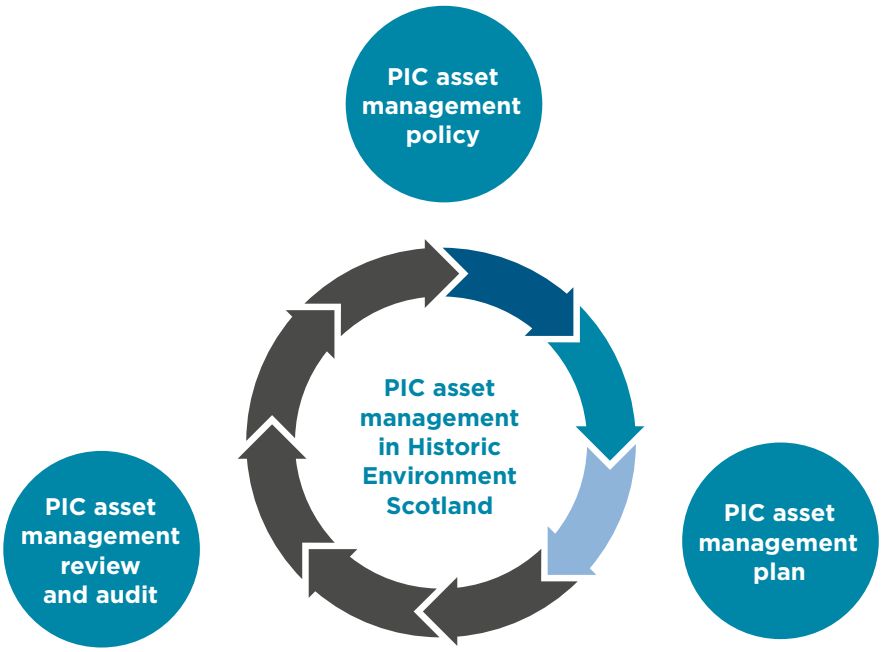


FIGURE 1: The HES PIC Asset Management Framework
Based on PAS55:2008/ISO 55000

The *PIC Asset Management Policy* sets out the high-level guiding principles in relation to asset management in Historic Environment Scotland. This *PIC Asset Management Plan* sets out the parameters for delivery. This includes contextual drivers, key objectives in delivering policy, challenges and opportunities, how we deliver asset management in terms of resources and processes, our decision-making approach and our standards.

Our commercial performance in 2016-17 has been the best on record, welcoming the highest numbers of visitors to internationally recognised sites such as Edinburgh Castle. VisitScotland see the next 18-24 months as a period where consumer behaviour may change and the industry in Scotland needs to remain focused on being flexible in response.

Authenticity of experience, being 'off the beaten track', digital connectivity and fluid travel arrangements are identified as emerging trends, as well as wellbeing and making informed sustainable lifestyle choices.

Cultural heritage tourism is increasing, with film and media continuing to encourage visitors to Scotland, spanning literature and television in particular.

It is, therefore, important that we are alive to changing demands on our assets and proactively manage potentially degradative impacts of increased visitation while enabling access.

1.1. Objectives of the AMP

The *PIC Asset Management Policy* sets out the guiding principles in relation to asset management in Historic Environment Scotland.

The properties in care of Scottish Ministers represent some 6,000 years of Scottish history and include a number of iconic sites of international significance. While we employ some accepted asset management principles in delivering our objectives, there are key differences in the outcomes we expect and therefore our approach requires specificity to the assets we care for. We accept that this requires bespoke solutions to our particular challenges and embrace this.

Our asset management approach is underpinned by eight key principles set out in our *Asset Management Policy* document:

- A conservation ethic driven by our Conservation Principles and exacting technical standards.
- A risk-based approach in managing the safety of our visitors and staff and in safeguarding the cultural significance of the asset whether known or yet to be discovered.
- A holistic approach to managing our assets and considerate of our stakeholders.
- A knowledge-based approach driven by research, understanding and experience.
- Ensuring we meet and exceed our regulatory and statutory compliance obligations.
- A focus on providing access unless conservation or safety reasons prevent this.

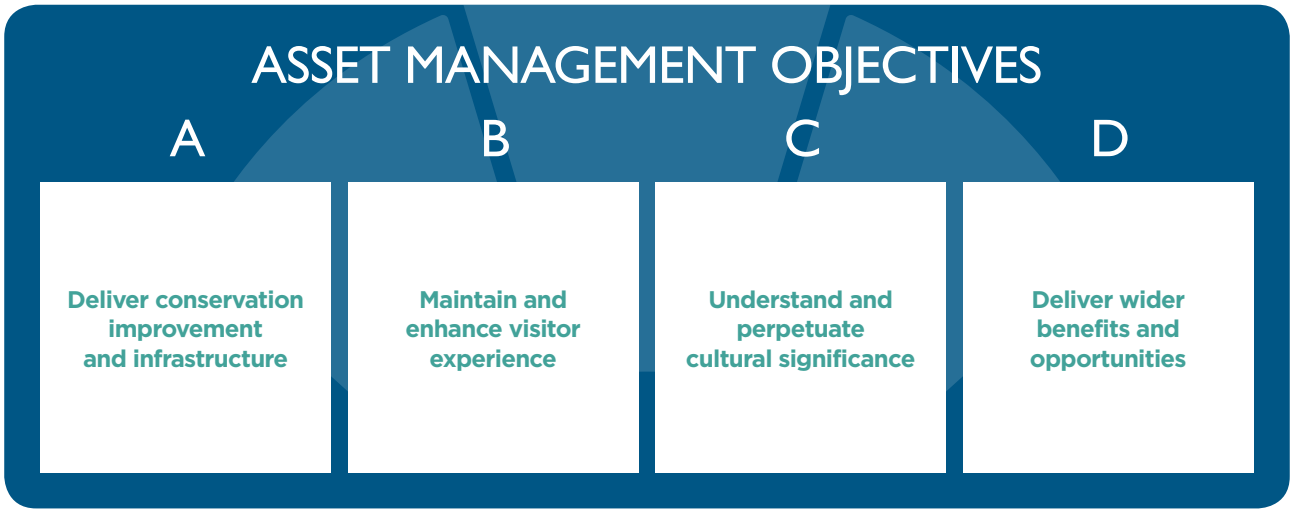


FIGURE 2 : Asset Management Objectives for Historic Environment Scotland

- Adding value in pursuit of our broader corporate objectives through our asset management.
- Acting in a demonstrably sustainable manner and leading by example at every opportunity.

At the heart of our approach to asset management and decision-making sit our four key asset management objectives. These four objectives help to clarify our focus and assist us in prioritising our resources and decision-making.

Our asset management is intended to:

- Ensure the properties in the care of Scottish Ministers are managed strategically to fulfil Scottish Government strategic objectives, *Our Place in Time* and HES obligations under the Scheme of Delegation.
- Ensure that the operations and activities at the properties in the care of Scottish Ministers and associated assets deliver access and wider social, economic and sustainability benefits to the people of Scotland.
- Provide transparency and accountability for our decision-making and operations by ensuring the condition, statutory compliance, operations and interventions associated with the assets are appropriately recorded, monitored, reported and reviewed.
- Provide a framework for decision-making and prioritisation of investment across the assets that is based on relevant assessment of data, links to the Corporate HES Investment Plan and provides an investment strategy for each of the assets.

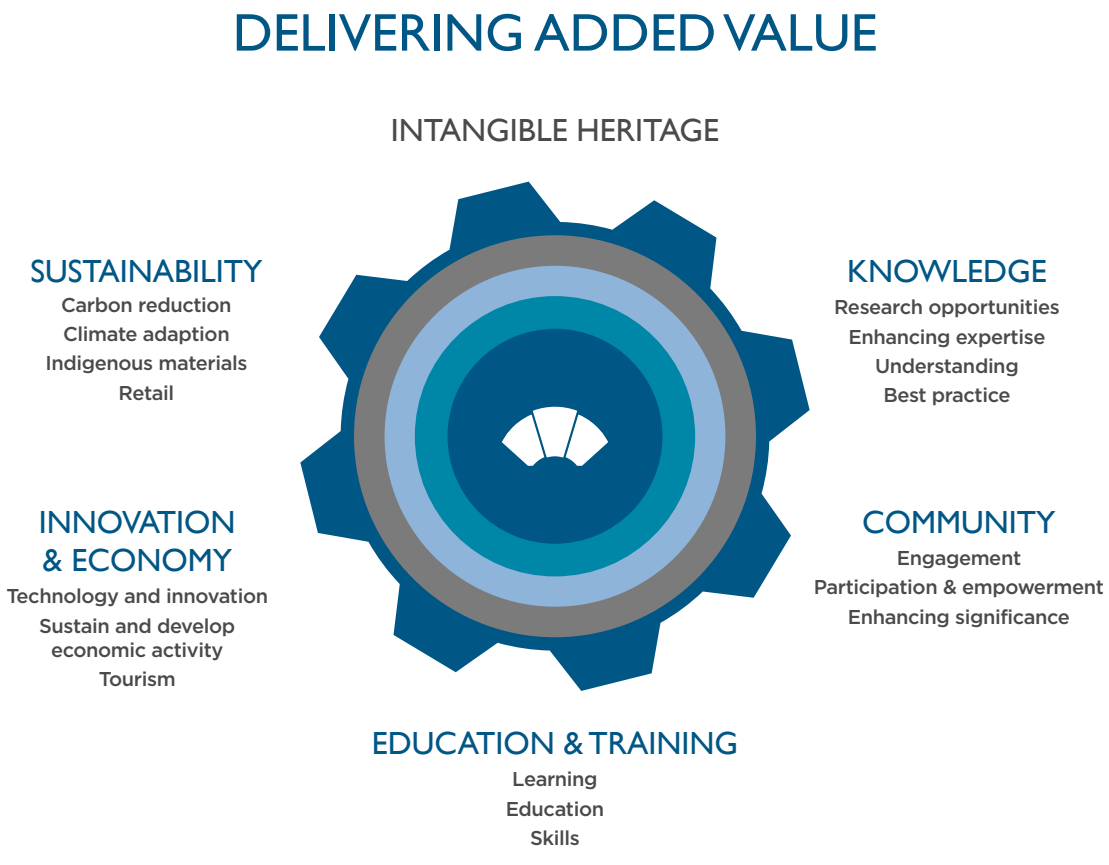


FIGURE 3: Adding value through the management of our assets

1.2 Adding value through asset management

We believe that the activity we undertake in delivering asset management has the potential to add broader value.

Our corporate approach to asset management is therefore underpinned by levering additional cultural, social, environmental and economic benefits. Our approach to the delivery of conservation and maintenance reflects that corporate approach.

KNOWLEDGE

Our work provides opportunities for technical, scientific, archaeological and historical research within HES and with our partners. The knowledge we gain from this work is often applicable to a broader range of interests. We will ensure that we maximise the potential opportunities presented and disseminate our knowledge to others.

Historic Environment Scotland has a statutory basis for delivering research and we see it as a fundamental part of our role. We define research as the process of gathering and analysing information to create new knowledge and understanding.

We use research to:

- understand and manage the historic environment
- create an evidence base for our work
- develop specialist knowledge and expertise
- care for and promote the value of the historic environment
- inform our collections, recording, designation and consents, and advise decisions.

We have a long-standing reputation for our research activity and see this area of increasing importance to both the assets in our care and the broader historic environment. The Engine Shed provides a new tangible focus for collaboration, delivery and dissemination of that research in conservation terms, while historical research around our properties and collections informs our decision-making and interpretation.

We deliver an annual customer insights programme and collate substantial insight data. The results are being used to develop our audience-focused visitor experiences, admissions products and marketing and are shared with key partners in the tourism sector to understand broader trends.

COMMUNITY

Our properties are national in importance and local in presence. We recognise that the assets we care for are for the benefit of the people of Scotland, now and in the future, and we must consider the views of our many stakeholders.

We shall ensure that local communities in particular shall be engaged where decisions are to be made in relation to properties in care, and understand that the relationship of communities with a particular place adds to its cultural significance.

We will be open and transparent in dealing with the many stakeholders who have an interest in the properties in care and be open and responsive in our relationships. We will actively engage with local communities in the management and use of properties.

EDUCATION AND TRAINING

Our properties and collections are a rich educational asset in themselves and their care and management present opportunities for training and development – from perpetuating centuries-old craft traditions to visitor management.

Historic Environment Scotland has a key role in maintaining traditional craft skills. We deliver this through training and qualification initiatives across the sector, and through employing a range of skilled craftspeople across Scotland. We require these skills to fulfil our conservation purpose, but also for the broader benefits they bring to Scotland's historic environment more broadly.

Investment in the technical training and education of our staff is of critical importance. Our default position is to provide access to accredited, quality training, and, where this is not available, to be working towards its provision. We are in a strong position to support the broader sector in providing access to training and education and will do so wherever possible.

By facilitating access during our conservation work, we can maximise the technical education potential of

our activity, often in highly specialised areas. We shall maximise opportunities for training and education outcomes through our conservation work for both internal staff and the broader sector.

We are a significant tourism operator and have a unique national position to provide education and training opportunities for our own staff and new entrants to the sector.

Our aspirations as an organisation that invests in its people as a key asset align with the potential benefits to others in the sector and further afield. We have the potential to provide opportunity and change lives through delivery of our work.

INNOVATION AND ECONOMY

We have a tradition of using our work to drive and facilitate technological innovation. That innovation can be internal, in partnership with others and also assisting SMEs to grow. We have a particular interest in digital documentation and visualisation, and increasing the application of digital technologies for asset management of cultural heritage. We will continue to work with others to maintain Scotland's position as a world leader in this area.

The delivery of conservation work across Scotland provides for employment and economic activity in many forms. The employment of local staff to conserve and operate our properties, as well as the local procurement of contractors, is a positive outcome of our asset management approach, particularly in rural and remote areas.

Our commercial and tourism partners range from commercial organisations – hotels, tourism business and service providers – to other heritage bodies, DMOs, Business Improvement Districts, local authorities, regulatory bodies, local event providers, other attractions and visitor related operators.

We are focused on delivering our objectives, but understand that we have significant opportunity to deliver additional benefits to a wide range of partners.

SUSTAINABILITY

The properties in our care are unique, sustainable assets in themselves, but also provide rich opportunities to lead by example in the use of low-carbon indigenous materials, ethical procurement and social enterprise. The use of local traditional skills and approaches in new build at our properties will also follow this approach.

We shall use traditional materials on a like-for-like basis in repairing historic fabric and seek to use them in any new build undertaken on our estate to demonstrate their continued relevance and to perpetuate their supply. We shall seek to recycle materials where possible and pursue collaboration with other bodies in maximising efficient use of materials.

It is our intention to map properties in care to identify material types and sources where possible in order to better understand the significance of the asset and aid in the conservation process.

Where possible, we shall access and use indigenous traditional materials and will maximise the opportunity to highlight the cultural traditions and sustainable benefits of using such materials.

Stirling Castle

Where it is not possible to source or procure materials of Scottish origin, we shall be cognisant of the carbon footprint of such materials within Europe. Where materials are sourced outwith Europe, we shall set the highest standards in ensuring that ethical procurement assurances are pursued.

We shall particularly focus on natural stone products in this regard should these be required to be imported, regardless of origin, and ensure they are sourced from socially and environmentally ethical producers.

The Procurement Reform (Scotland) Act 2014 places a sustainable procurement duty on public bodies including sustainable procurement reporting. As the major 'procuring' part of the organisation, we have the potential to lead on significant new aspects to develop a range of benefits from smarter procurement. This will have benefits for the communities in which our monuments are located and assist to stimulate local economies where possible.

Making Things Last – the Circular Economy Strategy for Scotland was published in 2016. It features strongly in the recently published SG draft *Climate Change Plan (2017)*. We have an opportunity to work with SG-funded Resource Efficient Scotland to develop projects as a 'major player' lead public body.

This approach to procuring goods and services has the potential to deliver cost savings, carbon savings and help fulfil our requirement under the Public Bodies Climate Change Duties, as well as develop exemplar projects with benefits to the wider historic environment sector. This will strengthen our role to lead in this key area across a wide geographic area.

INTANGIBLE CULTURAL HERITAGE

Cultural heritage includes traditions or living expressions inherited from our ancestors and passed on to our descendants, such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts.

We recognise the cultural significance of the traditions, materials and techniques employed in caring for properties particularly and seek to ensure these traditions are perpetuated and encouraged.

1.3 Scotland's changing climate

Scotland's climate is changing and it has a significant impact on the current and future management of properties in care.

These altered precipitation patterns and increased frequency of extreme and unpredictable weather events impose additional stresses on buildings that could not have been foreseen during the construction or subsequent consolidation of historic sites.

The changing climate is leading to changes in the way building fabric weathers, with decay of stone seeing a progression from moderate chemical weathering to strong chemical weathering necessitating an increased frequency of intervention and shorter time gaps between repairs.

The changes to our weather patterns observed over previous decades are set to continue and accelerate, and related issues such as rising sea level will have a more significant impact on parts of the estate.

Other impacts will include changes in vegetation and drainage patterns that could threaten the visibility, integrity and management of historic landscapes and archaeological remains; and changes in the type and distribution of pests that threaten the integrity of historic buildings and their collections.

2.0 PROPERTIES MANAGED BY HISTORIC ENVIRONMENT SCOTLAND

2.1 Asset Schedule

The schedule of the properties in care cared for by HES on behalf of Scottish Ministers is available on the Scottish Government website and enclosed in the appendix. These properties represent some 4,000-plus years of Scottish history.

In addition to this properties in care, HES manages additional assets on behalf of Scottish Ministers, being the Palace of Holyroodhouse, Her Majesty's official residence in Scotland, and Bute House, the official residence of the First Minister.

The Palace of Holyroodhouse is owned by HM in right of the Crown. We fulfil Scottish Ministers' obligations in maintaining and presenting the property or occupation by the sovereign. The Royal Collections Trust is responsible for its presentation as a visitor attraction.

Bute House is leased to Scottish Ministers by the National Trust for Scotland and HES manages the conservation and maintenance of the fabric and collections as well as a visitor facing role.

HES also owns and leases a range of ancillary property outside of properties in care. Neither Bute House or these ancillary properties are in the scope of this asset management plan.

2.2 The basis of state care

Properties in care are in state care through a number of mechanisms, including ownership, lease and guardianship. The majority are held in guardianship, a legal mechanism that allows for the owner to retain property title; the management and care of the asset is taken on by Scottish Ministers due to the importance of the asset for future generations, and in order to provide access for learning and enjoyment.

The 1979 Ancient Monuments Act gives Scottish Ministers, as the guardian, further powers and obligations, including the core aims of the preservation of the monument and the provision of public access.

The legislation also provides further clarification of the situation regarding the role of Ministers relative to the Guardianship function, i.e. the duty to maintain the property (Section 13(1)); the power to do all such things as may be necessary for the maintenance of the monument and for the exercise by of proper control and management (Section 13(3)); the ability to control the times of public access in the interests of safety or the maintenance or preservation of the monument (Section 19(2)); and, the provision of facilities and information or other services for the public access (Section 20(1)). The obligations of Scottish Ministers are passed to HES for delivery.

Fort George

2.3 Overview of the properties in care

There are 336 properties in the care of Scottish Ministers. Figures 4 & 5 illustrate the make up of the properties.

Pictured clockwise:
1. Mousa Broch
2. Stanley Mills
3. Loanhead Stone Circle

Secular	31 per cent
Roman	6 per cent
Prehistoric ritual	15 per cent
Prehistoric domestic/defensive	10 per cent
Industrial	2 per cent
Ecclesiastical	25 per cent
Crosses and carved stones	11 per cent

FIGURE 4: An overview of the properties in care by typology

- Roofed monuments 34 per cent
- Low masonry and field monuments, standing stones 33 per cent
- Unroofed monuments with high masonry 33 per cent

FIGURE 5: An overview of the properties in care by structural form

2.4 Statements of cultural significance

Cultural significance is the term generally used to mean the sum of the heritage values that people ascribe to a place. Each property in care has a Statement of Cultural Significance. These statements are key management documents informing our care and operation of any particular site.

Our framework for assessment is divided into six categories or values:

- evidential value
- historical value
- architectural and artistic value
- landscape and aesthetic values
- natural heritage values
- contemporary (social and community) values.

These values do overlap with each other and the template is to be regarded as a framework rather than a straitjacket. The categories relate closely to similar evaluation frameworks used across the cultural heritage sector.

The assessment addresses all aspects of the monument/place i.e. fabric, tangible and intangible associations, collections, finds, natural heritage, gardens and historic planting, landscape setting and known or potential buried archaeological remains.

As well as assessing this range of more "objective" heritage values, the assessment also attempts to address the range of more "subjective" values which make the place important to people. These can include aesthetic or emotional connection, the feelings evoked by a place and the contemporary or use values which pertain to the site. Articulating these values, which often matter very much in how people perceive and value a place, is often quite challenging.

Cultural significance influences our asset management, particularly asset condition monitoring and conservation works, in two main ways:

- Statements of Significance provide general information for individual sites
- the input of Cultural Resources Advisors on specific projects and at a more detailed level than in Statements of Significance.

Consideration of cultural significance is designed to address both risk to loss of cultural significance without intervention, and opportunities to enhance cultural significance as a result of new insights and understanding of specific sites. Given the difficulty of comparing or ranking cultural significance between sites, this dimension of our asset management framework will typically be incorporated as part of our conservation assessment, becoming more prominent if either risk or opportunity are escalated.

2.5 Acquisition and disposal

The power of acquisition and disposal of properties in care is retained by Scottish Ministers. The Historic Environment Scotland operational guidance sets out the role of HES in this regard. In outline, the role of Historic Environment Scotland is to provide specialist advice to Ministers on request to inform the process of consideration.

Claypotts Castle

3.0 CONSERVATION & MAINTENANCE SYSTEMS

3.1 Workflow and process

Our approach to asset management has at its core a cyclical approach of inspection, understanding, prioritisation, planning, delivery and continuous improvement.

The conservation needs of the assets are determined through our condition survey programme. Monument Condition Indicators (MCI) are one of the criteria used to assess the needs and vulnerability of the monuments. A Monument Condition Indicator was calculated for each monument as part of our Baseline Condition assessment in 2015.

The MCI represents the collective urgency of actions required at a monument together with the risks presented to the cultural significance or physical access to the monument by not carrying out these actions. It is an Urgency x Risk score with an in-built measure of the potential loss of cultural significance and access for each element surveyed at the monument.

The Urgency is attributed as a numerical value between and one and six, representing defined time bands ranging from immediate to within 10 years.

The Risk is attributed as a value between one and three, quantifying the risk of no action as either serious, significant or negligible. These measures are currently being refined as we develop the survey delivery tools and refine the process.

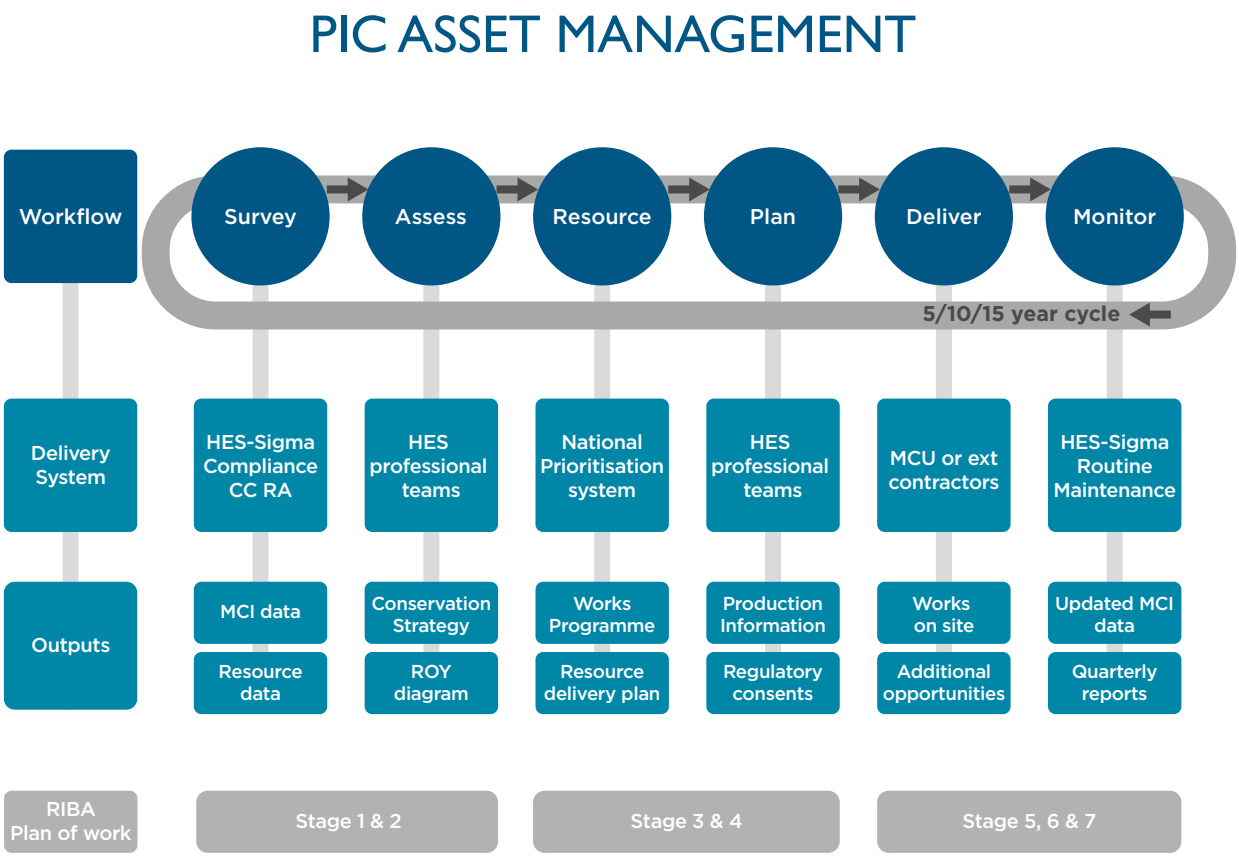


FIGURE 6: Workflow process

3.2 Inspection and Condition Monitoring

Our survey programme comprises various types of inspections carried out on different cycles. In order of frequency for each site, these include regular compliance checks and routine maintenance inspections by Monument Conservation Units, conservation assessments by specialist technical staff, climate change risk assessments, M&E systems audits, and full site condition surveys.

The frequency of the most extensive survey, the Condition Survey has been set on a five, 10 or 15-year cycle. The frequency is based on three factors: monument condition; monument category e.g. standing stone or roofed and occupied building; and number of visitors to the monument each year. Monuments with high MCIs (i.e. those at higher risk) are typically surveyed on a more regular basis.

Monuments with higher visitor numbers are typically surveyed on a more frequent basis due to the risks associated with visitor safety, as well as the potential impact of visitors on the condition of a monument and its surrounding area (i.e. accelerated deterioration through associated 'wear and tear').

It is acknowledged that certain monuments require a greater degree of monitoring and care than others. The frequency of survey cycles typically reduces according to monument type, with Category A monuments (roofed and occupied) predominantly being surveyed on five-year cycles through to Category F monuments (field monuments) typically surveyed at 15-year intervals. This is because larger-scale and more complex monuments (sites with extensive fabric) pose a greater risk associated with fabric loss and visitor safety than small less complex sites such as standing stones.

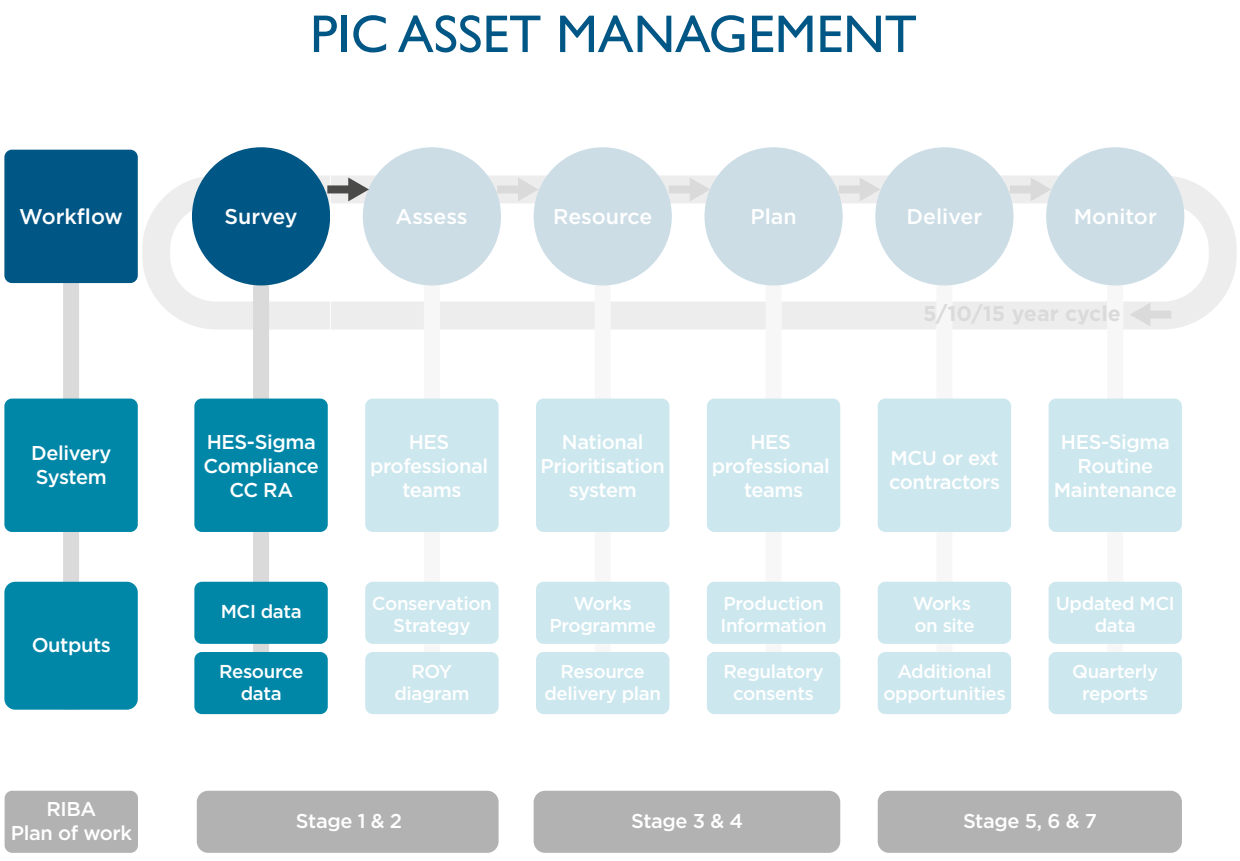


FIGURE 7: Condition Survey Process

Figure 9 illustrates the relationship between survey cycle frequency and each of the factors identified above.

HES SIGMA is the system by which we capture, monitor and report condition data information. It is an integrated digital site assessment system that we have developed with research partners British Geological Survey (BGS) in the last two years.

Based on the BGS System for Integrated Geoscience Mapping (BGS SIGMA) – an integrated work flow underpinned by a geo-spatial platform for data capture and interpretation – the system is built on top of GIS software, and is underpinned by a relational database.

3.3 HES SIGMA: Condition capture, monitoring and reporting system

HES has worked with partners at the British Geological Survey since 2015 to develop this bespoke integrated digital site assessment system that provides a refined survey process.

The HES SIGMA system essentially stores and presents conservation and maintenance information for our sites, with the additional capability to use the information to plan effective programmes of conservation and maintenance by answering the simple what, who, why, where and when questions, either for an individual site or the entire estate at a particular point in time or over a period of time.

It is a live system that can be interrogated in many ways, including geo-spatially, and linked to many other datasets within or external to HES.

Users can populate custom-built data entry forms to record maintenance issues and repair specifications for architectural elements ranging from individual blocks of stone to entire building elevations.

Photographs, sketches, and digital documents can be linked to architectural elements to enhance the usability of the data. Predetermined data fields and supporting dictionaries constrain the input parameters to ensure a high degree of consistency and facilitate data extraction and querying.

FIGURE 8: Five, 10 and 15-year condition survey cycles

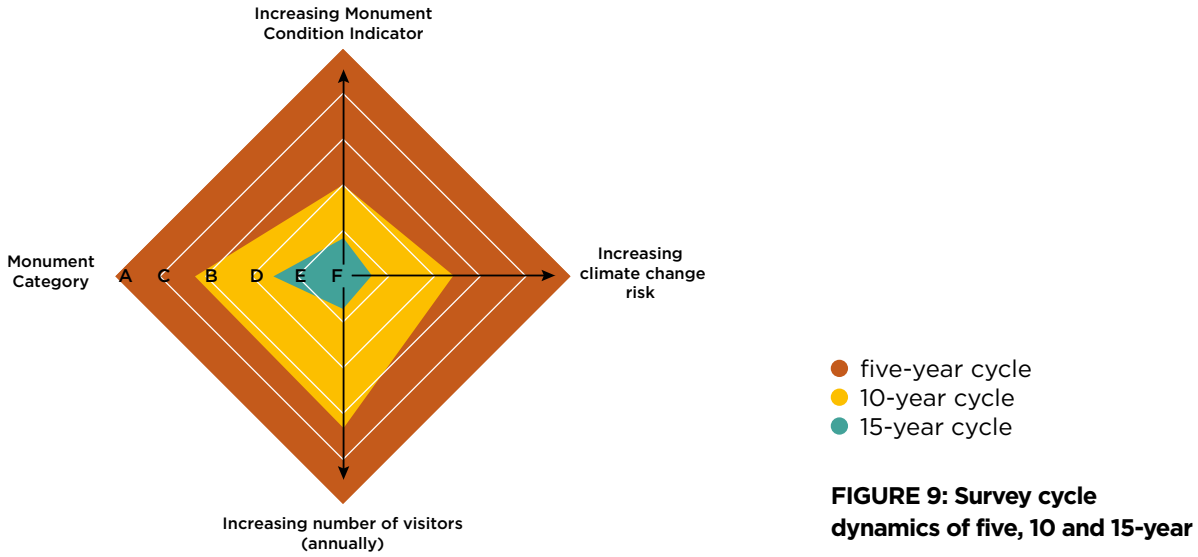


FIGURE 9: Survey cycle dynamics of five, 10 and 15-year

Presenting the data within GIS provides a versatile planning tool for scheduling works, specifying materials, identifying skills needed for repairs, and allocating resources.

The overall condition of a site can be monitored accurately over time by repeating the survey at regular intervals (e.g. every five years). Other datasets can be linked to the database and other geo-spatially referenced datasets can be superimposed in GIS, adding considerably to the scope and utility of the system.

This is a considerable advance for HES and potentially for the broader sector — our longer-term vision is for a fully integrated 3D asset management system specifically designed for heritage assets.

Key to HES SIGMA is the capture of the data used to measure condition. The methodology for calculating this condition indicator is set out in the HES document *Baseline Condition of the Properties in the Care of Scottish Ministers, October 2015.*

Essentially, the condition of each element is recorded spatially within the condition data capture process as a Monument Observation Point (MOP) and is given a Condition Indicator. This indicator measures the urgency of the action required together with the risk presented to the cultural significance or physical access to the monument if that action were not to be carried out.

HES will use this newly developed survey methodology to ensure a consistency of approach and provide a means to store and present conservation information for historic sites included in the HES estate. The system will allow HES to plan effective programmes of maintenance and repair works, and to monitor the condition of the estate over an extended period of time.

This approach provides the flexibility required for surveying historic sites and enables delivery of live condition survey information, which enables high-quality reporting as required under the Scheme of Delegation.

The key features of HES SIGMA are:

- Individual architectural elements are recorded as separate entities associated to individual sites (e.g. buildings) and are fully linked to the site which they belong by means of a unique identifier, GPS location and data fields with supporting 'site hierarchy' dictionaries.
- Predetermined data fields and supporting dictionaries guide and restrict the range of conservation and maintenance properties that can be recorded, ensuring a high degree of consistency in the dataset.
- Conservation and maintenance properties can be recorded for the different architectural elements of an individual site.
- Once the survey is complete, the recorded data can

be interrogated directly in the database or visualised within a Geographic Information System (GIS).
- A report generator tool enables the data to be output in the form of tailored Microsoft Word documents, thus suiting any project requirement.

HES SIGMA allows data to be downloaded to the tablet field device at base, including other data files, maps and photographs. On-site observations made by the field operative relating to condition and maintenance issues are recorded against architectural elements.

Prior to recording observations, the location of the architectural element is identified by clicking on the desired position within the site polygon to create a new 'field observation point' (FOP). Once the FOP has been created, a 'Switchboard' form automatically opens allowing the user to enter additional location information using 'site hierarchy dictionaries'.

Each site has pre-developed 'site hierarchy dictionaries' to ensure consistency across the dataset and between users, and to provide the ability to monitor maintenance issues on the same architectural element over time. This also allows for data analytics on an ongoing basis by conservation staff.

On the 'Switchboard' form location information and architectural element descriptions are input; photographs, sketches and samples (e.g. stone, mortar) can be attributed to the architectural element described; and access to the more detailed data entry forms for recording condition and maintenance 'issues' is provided.

Photographs taken in the field along with sketches can be retained in the system and handwriting recognition and field selection is used for data input.

'Description', 'Risk', 'Urgency' and 'Condition Indicator' observations on condition and maintenance issues are attributed to each architectural element in the 'Condition Survey' form. Actions can be recorded, again using a pre-determined dictionary of actions and a timescale attributed.

The specialist skills required may also be identified to quantify resource requirements and generate work packages for specialist conservators, engineers etc.

HES SIGMA field data is uploaded to the central database on return from the field. It is also designed to automatically generate standard reports from the field survey such as work packages.

3.4 HES SIGMA Analytics

One of the output reports that HES SIGMA will automatically generate will be a site or floor plan showing the MCIs of all the elements assessed (MOPs or Monument Observation Points).

These will be coloured in red (high MCI), orange (medium MCI), and yellow (low MCI). By identifying areas where there are concentrations of the same colours a prioritised plan of works for each monument can be developed.

For example, a tower or an elevation with a high concentration of high risk elements (reds) can be identified as an individual or package of work that requires a scaffold and resource to rectify. The individual work packages are then developed and phased for the monument based on the groupings of MOP MCIs, and costed by our Quantity Surveyors with associated resources included.

The system can also be interrogated to spatially show the types of trade and work required e.g. masonry, lead-work, slating etc, with the associated MCI. In this way, we develop a clear resource schedule and identify and map the mix of skills required across the country from an informed data base.

These prioritised plans of work are known as ROY diagrams (Red Orange Yellow) and support the Conservation Strategy for the monument. The ROY diagram is directly related to the MCI digital data and becomes the pictorial expression of the Conservation Strategy for the monument. This is a very powerful tool. The ROY diagram phases of work also form the basis for the projects to be included within the national bids list each year.

Hence, there is a clear and direct relationship from the works and resource requirements back through to survey data captured on site.

3.5 The Rae survey project

The First Minister announced in 2010 that Scotland would deliver the Rae Project – digitally documenting all the historic assets in State care, comprising 345 of Scotland's most important places.

This project remains live and underpins our approach to asset management in Historic Environment Scotland. The systematic documentation of highly accurate spatial survey data both serves as an archival record, but also as the foundation for active management of the estate.

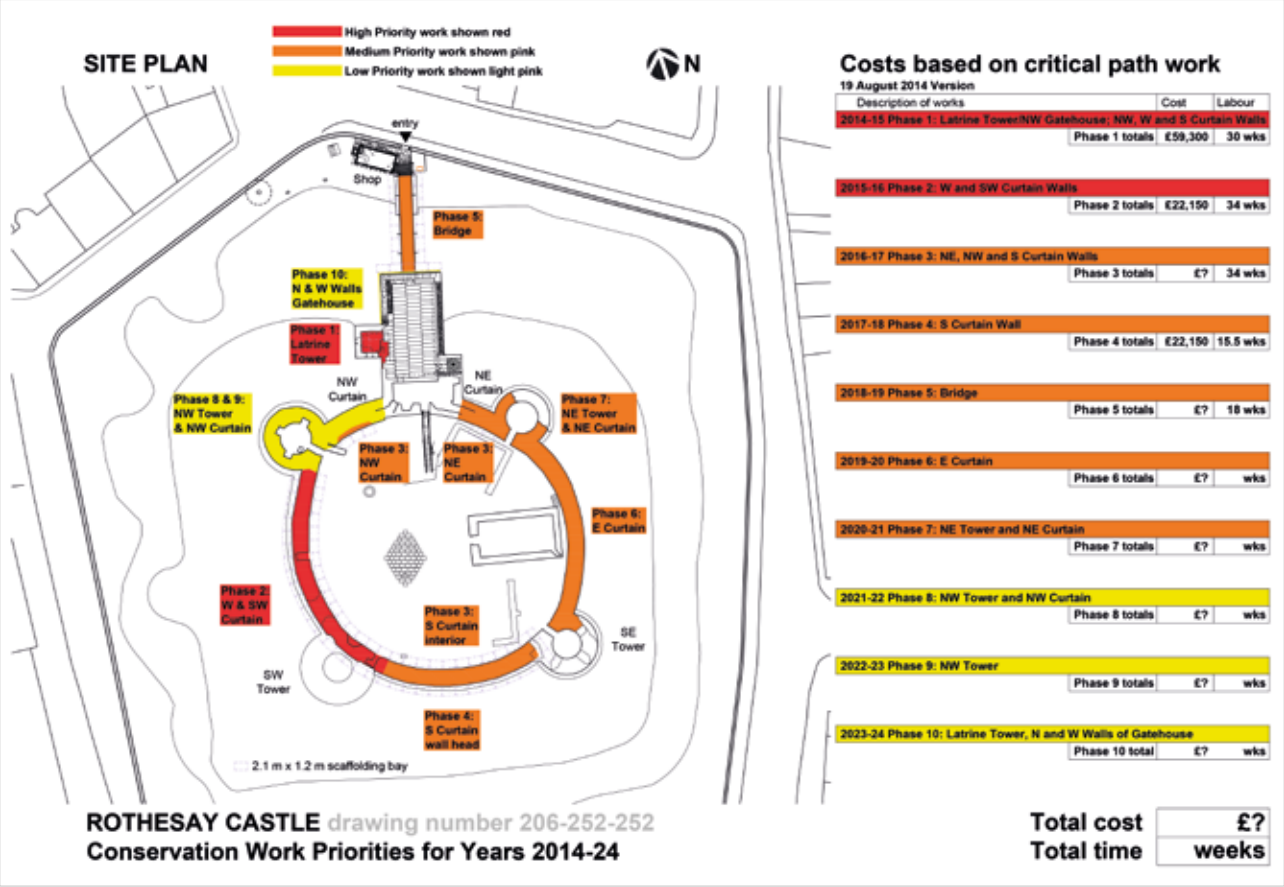


FIGURE 10: ROY diagram showing work packages and phases of works directly related to spatial coloured MCI data

3.6 Properties in Care Asset Management System (PICAMS)

There is presently no bespoke heritage asset management system available and while there are many high-quality systems available, they are based on asset obsolescence and renewal, which is obviously counter to the objectives of conservation.

Mindful of our focus on the documentation of digital assets and where this might go in the future, we are delivering a system that will fulfil our needs but also allow us flexibility in the future as technology evolves, particularly around integration of 3D spatially based models for asset management in terms of a recognisable user interface.

The Properties in Care Asset Management System (PICAMS) Programme is a strategic initiative to develop and implement an enterprise-level information management system for Conservation Directorate. The objective of the PICAMS Programme is to put in place streamlined, robust, fully digital workflows by integrating and linking a range of data infrastructures that are currently disparate and have limited interoperability. This is a critical management and delivery tool to support HES in complying with the requirement to develop an Asset Management Plan as part of its Scheme of Delegation obligations. Although HES is already moving in this direction through the ongoing implementation of the SIGMA field survey tool to support monitoring, audit, analysis and reporting for the PICs, the scope of the PICAMS Project involves a broader remit across all of Conservation Directorate's core activities.

Additional drivers include demonstrating compliance with statutory requirements in connection with Building Information Modelling (BIM) and climate change, while also facilitating business transformation by rationalising and streamlining the way in which Conservation Directorate undertakes its work.

At the heart of PICAMS sits a relational database. The condition survey tool HES SIGMA is the critical component in the system and therefore the first element to be developed and tested. Other datasets held within HES include digital image archives, drawing archives (digitised and CAD), designation information, site management information, archaeology datasets and climate change information.

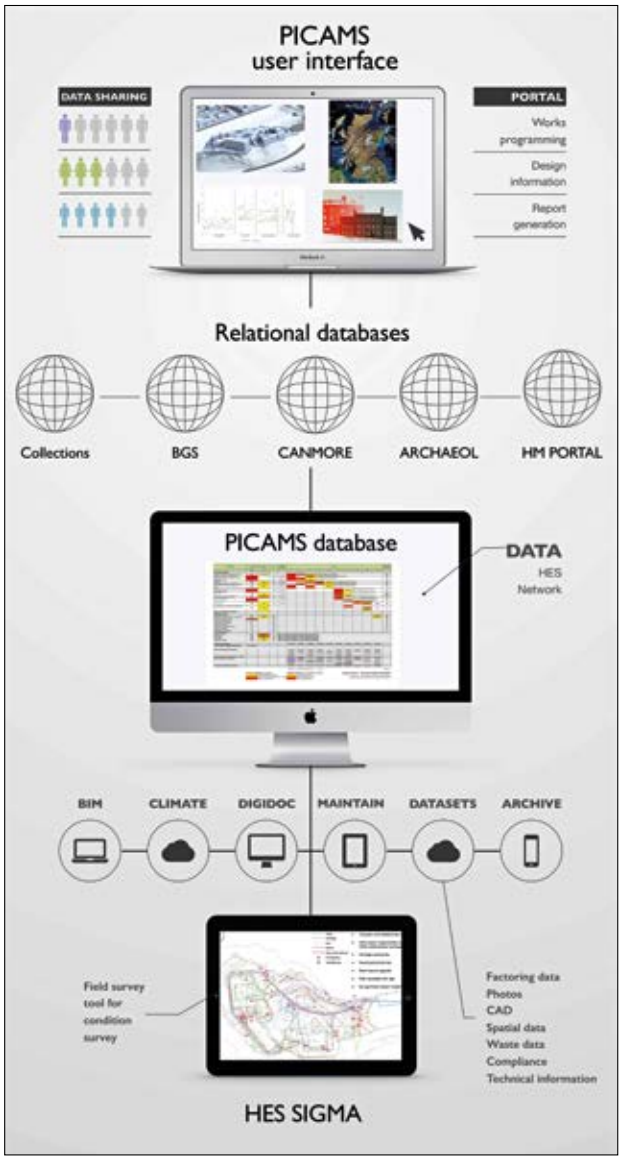


FIGURE 11a: Properties in Care Asset Management System - PICAMS

The initial development of the HES SIGMA survey tool has been completed and is being used as a default condition survey system.

The PICAMS Programme Preliminary Phase involving baseline analysis of the existing Conservation Directorate business processes, data structures and technologies is due to complete in April 2017, with the IT architecture design phase following on immediately. It is hoped a solution will be developed and implemented within two-three years.

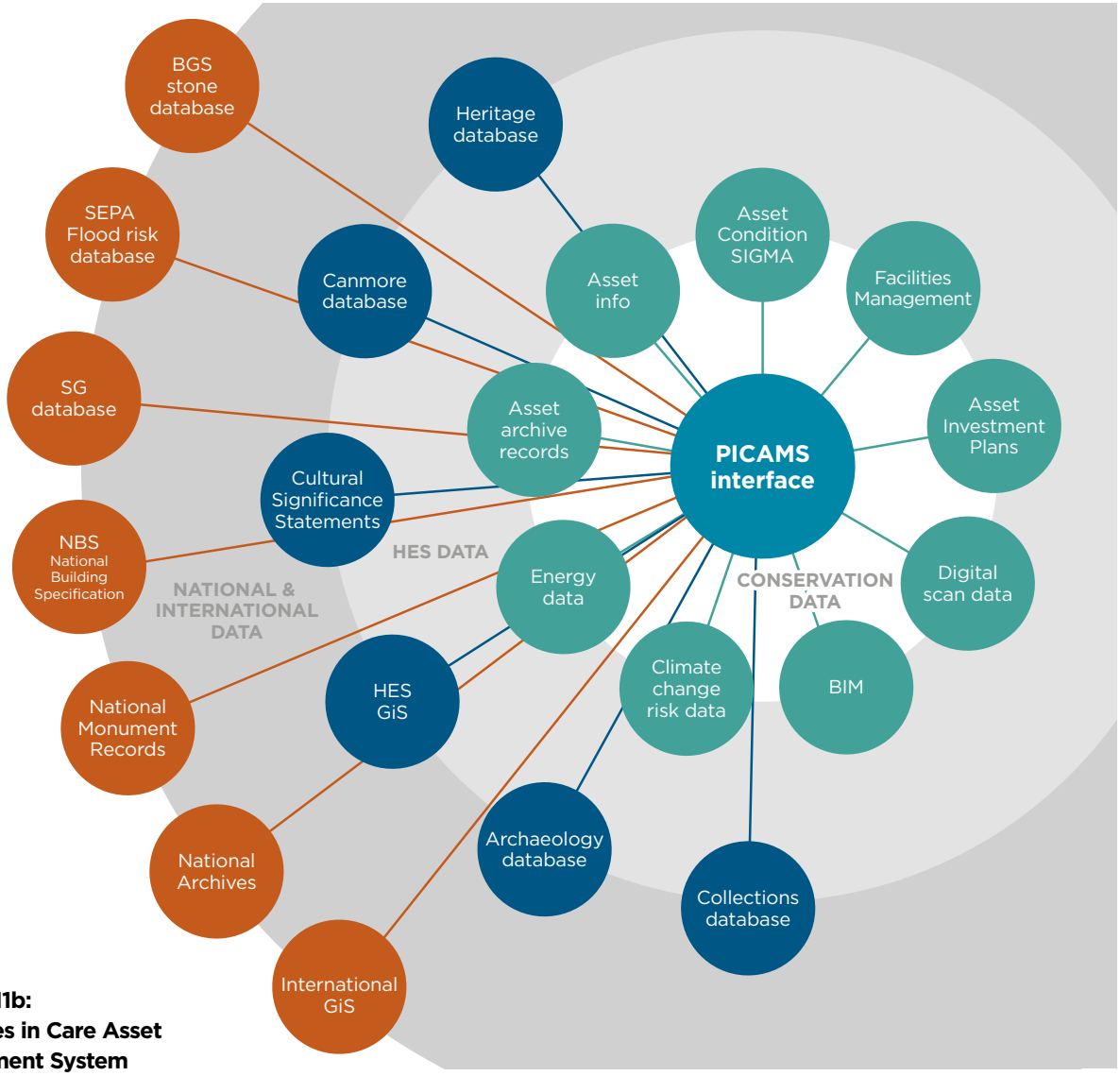


FIGURE 11b:
Properties in Care Asset Management System

3.7 Digital data and Building Information Modelling (BIM)

Digital sits at the heart of HES' corporate ambition and the application of digital technology in research, management and stewardship of historic environment assets is also core to our work in asset management. HES, with key partners, has developed a sectoral leadership role in this area over the past decade.

At a very simple level, the creation of high-quality spatial survey data is an important output in itself, but our application of digital technology in the delivery of asset management goes much beyond this.

Accurate survey and modelling from physical and archival evidence can provide new perspectives.

The UK Government has promoted BIM and its application actively since 2011, with the Scottish Government following a similar line, stipulating that public capital projects are to be using BIM by April 2017. The UK's BS/PAS 1192 standard is acknowledged as the leading global standard for building information management, and is due to form the basis of an international ISO standard.

The use of BIM and related digital information management processes in the heritage sector is in its infancy. In Scotland, we are currently leading the heritage application of BIM. Historic Environment Scotland confirmed its approach to BIM assessment grading in April 2017.

4.0 PRIORITISATION OF CONSERVATION AND MAINTENANCE ACTIVITY

The natural process of decay and a changing climate, combined with finite resources mean that prioritisation is inevitable.

Corporately, Historic Environment Scotland uses a matrix approach to inform the allocation of resources in relation to properties in care. For conservation and maintenance, we use a simple prioritisation tool as a primary filter to allocate available resources nationally.

This filter allocates resources on a needs basis driven by risk.

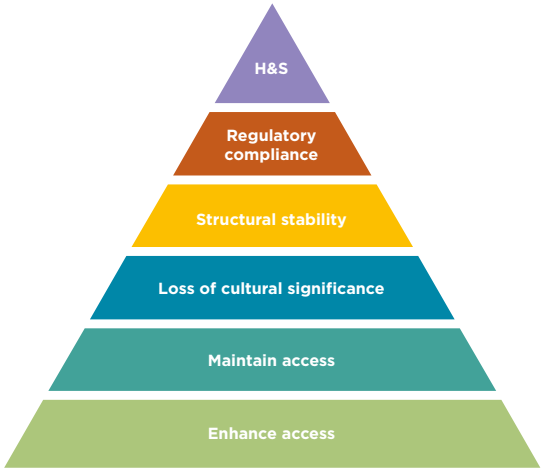


FIGURE 12: Resource prioritisation hierarchy

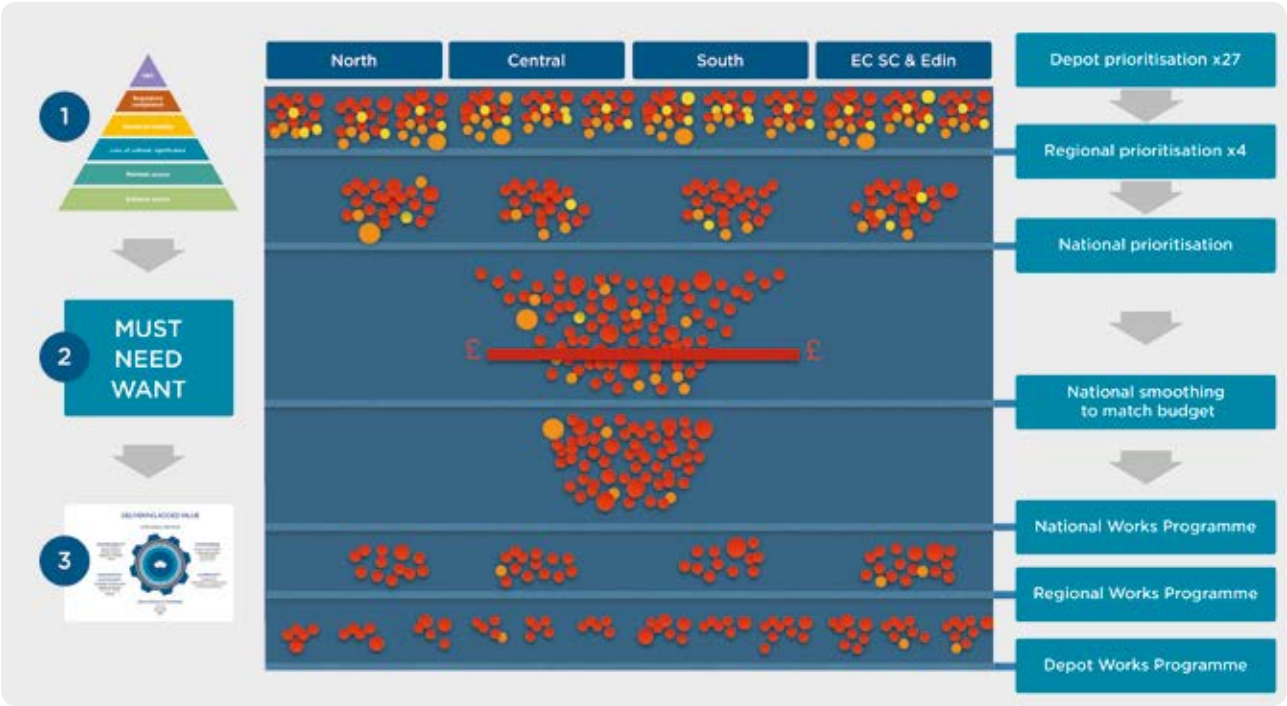


FIGURE 13: Works prioritisation process

The process of filtering the required works to match the available budget is illustrated in Figure 13.

The red, orange and yellow dots represent the high, medium and low-priority projects shown on the ROY diagrams for each of the 336 monuments across the 27 depots. These are filtered regionally and then nationally using the prioritisation triangle above as the primary filter, together with consideration of added benefits and a professional assessment of MUST, NEED, WANT applied at each filter stage in the process.

4.1 Planning and delivery

Project proposals are assessed and developed as part of the Corporate budget process. On allocation of resources, work schedules are produced along with drawings, specifications and necessary consents secured from statutory authorities.

Our conservation principles, standards and technical specifications are used throughout to guide our project development and execution. The teams are supported by the Technical Research and Science teams. This close working relationship ensures that our standards are maintained and appropriate interventions are based on current research outcomes. Designed interventions are subject to internal scrutiny.

Conservation Directorate deliver asset management on behalf of HES to:

- fulfil HES obligations under the Schemes of Delegation for properties in care of Scottish Ministers and associated collections
- deliver a range of statutory compliance functions in relation to these properties
- deliver relevant projects for other parts of HES as clients
- fulfil HES obligations in relation to climate change
- act as Agent for HES in relation to regulatory consents
- deliver conservation and maintenance works to a high standard and meet the aspirations of this *Asset Management Plan*
- manage available resources within agreed parameters.

The outline delivery structure is shown below.

Conservation and maintenance work is delivered across Scotland by our Monument Conservation Teams working from 27 depots. Each squad generally looks after around 30 properties. Depot locations are designed to minimise travel distances for regular inspections and planned works, and these are periodically reviewed to ensure maximum efficiency.

Resource requirements need to be flexible and it is not uncommon for multiple squads to be deployed on larger projects, or specialist staff to support and augment projects as required. HES recruits and trains apprentices on a rolling programme to fulfil our own needs and to support training in the broader sector.

The majority of the Monument Conservation Units function as masonry squads; there are also a small number of squads that provide gardening, grounds maintenance and facilities maintenance services to specific sites (e.g. Antonine Wall, Edinburgh Castle, Holyrood Park).

The Head of Estates assesses resource requirements required against planned works on an ongoing basis. Depending on the nature, scale and timing of works, these projects are either delivered using our in-house conservation team, sub-contracted to external contractors or a mixture of both.

External sourcing is typically used for some specialist services, and for activities where the level of demand and / or the cost does not justify in-house resource.

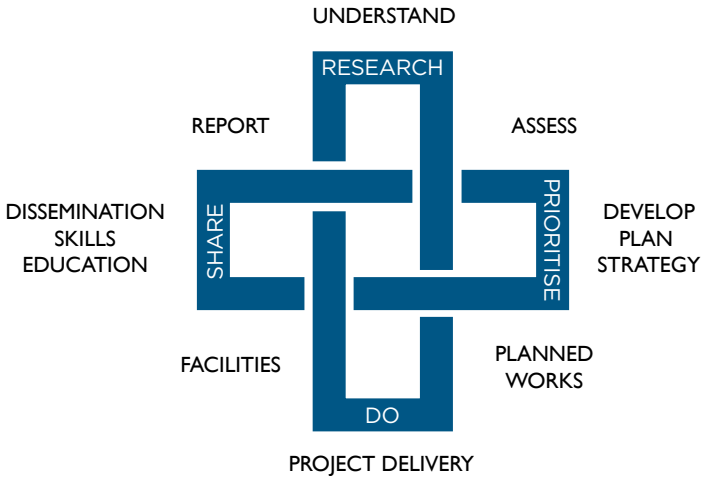


FIGURE 14: Delivery model for Conservation

Projects for external delivery or requiring procurement of goods and materials are developed and procured in line with HES guidelines and the Scottish Public Finance Manual.

4.2 Reporting

Through the use of HES SIGMA for regular condition surveys of monuments, measures are in place to monitor and assess change in condition of the estate.

Maintaining properties in care at their current MCI is not considered to be a desirable or sustainable course of action. Although this would halt any short-term deterioration to the monuments that might occur through everyday weathering of building fabric, it does not address the vulnerability of the monuments to progressive climate change and increasingly severe weather events. In the longer term, taking such an approach would result in a decline in the condition of the monuments.

We have identified 'desirable' condition targets for monuments and the associated investment required to improve the condition of the monument to these 'desirable' levels of condition. This allows for forward planning and quantified tracking of condition (improvement or decline).

Data gathered from HES SIGMA can be used to calculate 'desirable MCI' targets, which can subsequently be used as a way to track progress on improving condition.

Following an initial period of SIGMA data acquisition and investment tracking, these two factors (desirable MCI and investment) can be analysed to allow for more refined investment planning associated with future condition improvements.

REPORTING REQUIREMENTS UNDER THE SCHEME OF DELEGATION

The *Annual Report on Properties in the Care of Scottish Ministers* may include:

- Consideration of the objectives of the Asset Management Plan and a report on activity, including what works have been undertaken over the year across the Estate and Collections of Scottish Ministers.
- What resources have been deployed, including a financial breakdown of activity and how this is spread across the country against income generated from Minister's assets. This information will also relate to value for money and resource efficiency objectives under the Corporate Plan, and how our activity has been prioritised.
- A schedule of the estate and any changes in status, acquisitions or disposals.
- A schedule of Scottish Ministers collections highlighting significant accessions, disposals and inward and outward loans.
- Information relating to any unusual incidents or activity, including major fabric losses, thefts or damage.
- An assessment of estate and associated collections' condition using methodology defined under the Scheme of Delegation from Scottish Ministers to

Schoolchildren on the island of Barra participating in events and education activities organised by HES around the building and lighting of a kiln to produce mortar

Historic Environment Scotland. This element will review future resource needs and how these will be prioritised and delivered.

- A summary of any amendments or changes to the internal conservation principles and standards.
- A report on the technical training and development activity of our staff, and an outline of skills, expertise and resources. A summary of conservation research, education and training activity in contributing to broader objectives of HES and Scottish Government.
- An outline of our condition assessment targets and our performance against target.
- A forward look that shall identify strategic issues, trends or considerations relating to the estate and its collections, particularly in relation to longer-term conservation challenges.
- Our performance in relation to climate change objectives of the Climate Change Scotland Act 2009 under Section 44, particularly in relation to risk management assessment and mitigation.
- Site closures or restrictions to public access to the estate of Scottish Ministers.
- In general terms, the report shall fulfil a number of requirements of the Scheme of Delegation from Scottish Ministers to Historic Environment Scotland and be delivered in a spirit of openness and transparency.
- In addition, the Annual Report will include a copy of the report from the Chair of the Peer Review Panel to the HES Board as per the terms of reference of the Panel and assessing our performance.

The *Annual Report on Properties in the Care of Scottish Ministers* will be approved by the Board and submitted to Ministers on an annual basis. The report will be published on the HES website. The specific metrics will be agreed with Scottish Ministers.

We will actively seek to share our experience with others and will host an event to achieve this, and to contribute to our own continuous improvement.

Under the Scheme of Delegation, HES will produce an annual Conservation Report. The purpose of this is to provide a report and assurance to the Board of Historic Environment Scotland of conservation and maintenance works undertaken in relation to Scottish Ministers Estate and Associated Collections.

In turn, this will be used by the Board to provide assurance and information to Scottish Ministers. Operational reporting on progress shall be made to the Chief Executive and the Senior Management Team on a regular basis.

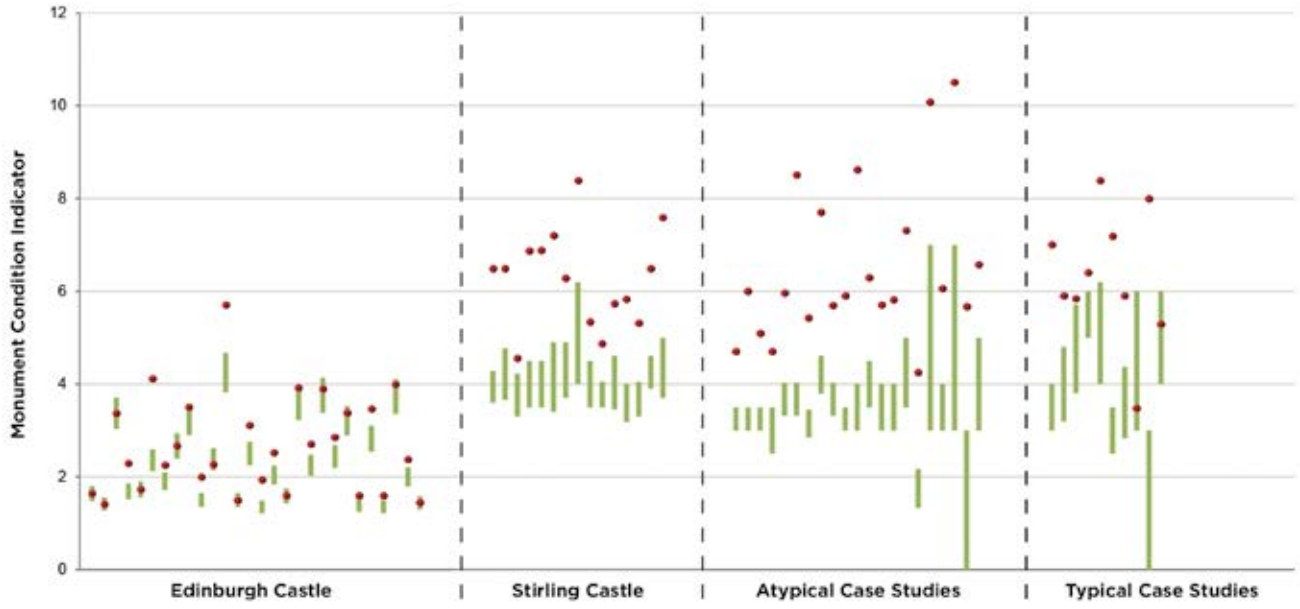


FIGURE 15: Monitoring condition at properties in care. Current condition marked in red with 'desirable' position in green. Multiple entries for larger sites reflect multiple buildings on site.

5.0 MEETING CONSERVATION CHALLENGES

The assets that Scottish Ministers care for are often by their nature challenging to deal with. Culturally significant, often fragile, standing ruinous structures, often of massive proportions, they are often particularly susceptible to decay.

- Large-scale investment of resources in conservation and consolidation (historically using Ministry of Works direct labour) deployed in the 1920s and 1930s and subsequent major repair campaigns have now come to the end of their life.
- Many of the techniques and materials employed in monument conservation are very different now and, in some cases, long-term deterioration has resulted from previous interventions.
- Climate change over the past 20 years has markedly accelerated decay and will continue to do so, and can lead to catastrophic failures in extreme events.
- Increasing visitor pressure can risk damage to the assets we are seeking to protect.

In delivering our national obligations, we need to take difficult and often challenging conservation decisions. It is our policy not to avoid making challenging decisions, but rather make proactive and informed choices based on a sound and holistic understanding of the asset.

In considering such challenges:

- we shall fully understand the significance of the asset to inform our decision making
- we shall engage relevant parties, including local communities in the process
- we shall conduct formal options appraisals
- we shall seek external perspectives where the intervention or approach is significant or potentially contentious
- we shall consider the financial requirements and value of options
- we shall undertake formal options appraisals in relation to these assets with a view to informed decisions on the current and future care of these assets.

Stonemasonry demonstration at the craft fair at Craigmillar Castle

6.0 ENSURING HIGH STANDARDS AND CONTINUITY OF CARE

Care of our assets and those in the broader historic environment requires the appropriate knowledge, skills and materials. A critical part of our stewardship and success in achieving our objectives requires us to ensure we have the necessary expertise to deliver our work. By the nature of what we do, the skills we require are often specialist and not easily attainable.

HES has a much broader role in relation to perpetuating traditional skills to the benefit of Scotland's historic environment more generally, and the inter-dependencies of our internal requirements and the needs of the external sector are increasingly permeable.

The creation of the Engine Shed, Scotland's national building conservation centre, marks a significant investment in technical research, education and standard raising in the sector. HES is part of the sector caring for traditional forms of construction and our approach is to be part of that learning and development environment, learn from others and share our experiences.

Increased transparency in what we do and how we do it is core for HES and, particularly, in relation to our conservation work and asset management.

The qualification development across the SCQF framework for traditional materials, skills and technical and scientific investigation has been designed for the sector as a whole and will, of course, be of benefit to HES too.

A significant resource needs assessment was delivered in 2016 to consider training and development needs of our staff now and in the future.

It is our aspiration that a structured framework of development will be delivered for all of our staff. It is our ambition that HES, as a leading public body, is seen as a learning organisation and an employer of choice. We are currently designing training and development plans for teams and individuals which will be piloted and delivered in 2017.

We will continue to operate our stone masonry training facilities in Elgin and Stirling. These award-winning centres of excellence have an increasingly international standing and also provide training opportunities for the private sector.

We will work with our key educational partners – Forth Valley College and the University of Stirling – to continue the development of accredited training for the benefit of all in the historic environment.

We build in training and development opportunities to all our projects where appropriate to maximise the added value of our asset management.

Our work in maintaining our skills and expertise is recorded in the annual conservation report.

Stirling Castle

7.0 STANDARDS AND ASSURANCE

7.1 Compliance

Historic Environment Scotland is required to fulfil a range of operational, legislative and regulatory frameworks in relation to the properties in care and our operations. This covers a vast number of areas of responsibility ranging from managing visitor safety to testing M&E systems and managing bats at our sites.

The legislative frameworks include: Occupier's Liability (Scotland) Act 1960; Health and Safety at Work (Scotland) Act 1960; Workplace (Health, Safety and Welfare) Regulations 1992; Waste (Scotland) Regulations 2014; Construction (Design and Management) Regulations 2015; Fire (Scotland) Act 2005 and Fire Safety (Scotland) Regulations 2006; Fleet, plant and equipment management; Factories Act 1961; Historic Environment (Scotland) Act 2014; Ancient Monuments Act 1979; Equality Act 2010; Climate Change (Scotland) Act 2010; Nature Conservation (Scotland) Act (2004); Electrical Regulations and CoSHH regulations.

7.2 Compliance management roles and responsibilities for physical assets

Internal delegation from the Chief Executive assigns responsibilities in relation to compliance and properties in care, principally discharged through the Director of Conservation, Director of Commercial and Tourism and Director of Corporate Services. This delegation is extended to senior managers in operational teams.

In January 2017, a new Estates Compliance Management process was established with a new estates compliance team to collate, audit, monitor and report on all areas of compliance across the estate and estate operations. This comprises a Compliance Manager and three regional Facilities Managers who sit within the regional teams.

The objective of the Estates Compliance Management process is to ensure that compliance is achieved and maintained across all estate operations and establish a nationally consistent approach. It will highlight areas where we are non-compliant and the risks associated with this. It will also identify actions and resources required to achieve compliance. We are developing a live data status reporting system for key areas of safety critical compliance.

The Compliance team will provide a Compliance Status Report to the Head of Estates every quarter. An annual update report will be included within the Annual Conservation Report.

Residual risks and resource requirements to mitigate known risks beyond available budgets will be passed to SMT for consideration for action or acceptance. The Compliance team will work closely with the regional works teams on delivery and the HES H&S team on relevant issues.

7.3 Visitor Safety Management

The safety of visitors at our sites is paramount. Our legal obligations and responsibilities under the Occupier's Liability (Scotland) Act 1960 are clear. We seek to manage risks to visitors at our sites in a way that is sensitive to the heritage value of our properties and landscapes and does not unduly restrict public access. We are committed to promoting a sensible and proportionate approach to managing visitor safety across our estate.

It is often difficult to balance the benefits and risks experienced by visitors to our properties, many of which were originally designed to keep people out. We have developed a range of techniques, drawing on the vast experience of other organisations, that minimise the risks without damaging the assets. We use the framework set out by the Visitor Safety in the Countryside Group (VSCG) as a basis from which to manage visitor safety at our sites.

The VSCG Guiding Principles, endorsed by HSE, are:

1. Fundamentals

- take account of conservation, heritage, recreation, cultural and landscape objectives
- do not take away people's sense of freedom and adventure
- avoid restrictions on access.

2. Awareness

- ensure that your visitors know the risks they face

- inform and educate your visitors about the nature and extent of hazards, the risk control measures in place, and the precautions that they themselves should take.

3. Partnership

- recognise that people taking part in similar activities accept different levels of risk
- recognise that risk control measures for one visitor group may create risks to others
- work with visitor groups to promote understanding and resolve conflict.

4. Responsibility

- it is important to strike a balance between user self-reliance and management intervention
- it is reasonable to expect visitors to exercise responsibility for themselves
- it is reasonable to expect visitors not to put others at risk
- it is reasonable to expect parents, guardians and leaders to supervise people in their care.

5. Risk control

- assess risks and develop safety plans for individual sites
- risk control measures should be consistent
- risk control measures should take account of wider benefits to society
- monitor the behaviour and experience of visitors to review visitor safety plans
- make sure that your work activities do not expose visitors to risk.

Operationally, visitor safety assessments are carried out across all our properties to ensure a safe and healthy standard of practice for both visitors and staff. These are conducted by our three regional H&S advisors. Once the advisers complete a detailed inspection of a site, residual risks are considered in collaboration with the regional teams to agree a reasonable solution. A summary of identified residual risks are raised at the Corporate H&S Forum. A thorough risk assessment for each site is then published and reviewed regularly.

This risk assessment approach allows us to prioritise between and within sites and allocate resources accordingly. Each solution to mitigate the risk at a particular location is considered using the Appropriate Controls Matrix in the *Managing Visitor Safety in the Historic Built Environment – principles & practice* publication. This considers the appropriateness of physical or management interventions relative to the heritage value of the asset.

Immediate hazards identified are dealt with instantly at local level, either by removal or rectification of the hazard or by closing the area where the hazard is located. The routine inspection programme carried out on a daily / weekly / fortnightly cycle (depending on risk level) by our MCU highlights and escalates any site safety issues such as loose masonry or trip hazards.

All H&S incidents and near misses are recorded on our electronic Prime reporting system with alerts to senior staff. Status reports are provided by the H&S team and discussed each quarter at the Corporate H&S Forum.

We operate a well-established site closure process whereby all staff have authority to close a site or part of a site if they encounter a situation that endangers the safety of staff or visitors to the site. The closure notice stays in place until the risk has been mitigated. All full and partial site closures are recorded and reported immediately to the Head of Estates and SMT. An update report on site closure status is provided to the Head of Estates each month. This is reported on an annual basis as part of the Annual Conservation Report.

7.4 Conservation principles and standards

Recognised principles of conservation are enshrined in the numerous international charters that have developed over many years and reflect an evolving approach. Our principles are informed and in some instances aligned with these charters, but they also recognise our specific circumstances and particularly how our approach can realise other benefits without compromising our conservation objectives.

HES Conservation Principles for Properties in Care were published in October 2015. They comprise eight key principles that underpin our approach and decision making:

1. The purpose of conservation is to perpetuate cultural significance.
2. The cultural significance and the history of the

monument's evolution will be understood before interventions are considered.
3. Our approach to dealing with climate change will be pragmatic and informed.
4. We will respect context and authenticity and avoid dislocation of historic fabric from its setting.
5. Conservation takes precedence.
6. We will ensure the availability of the appropriate knowledge, skills and materials to fulfil our conservation purpose.
7. Our approach will be respectful of those who have gone before and retain that authenticity.
8. Conservation interventions will be recorded and archived to help those who come after us, and we will share our experiences.

HES Conservation Standards articulate the intended outcomes of our conservation and maintenance work in relation to the Estate of Scottish Ministers and the other assets for which Historic Environment Scotland is responsible.

This guidance has been prepared to develop continuity in the conservation approach taken to the wide variety of structures and landscapes for which we are responsible. The range of modern structures that we are responsible for can be maintained and upgraded differently, although we would wish some of the approaches, especially regarding sustainability and materials, to still apply.

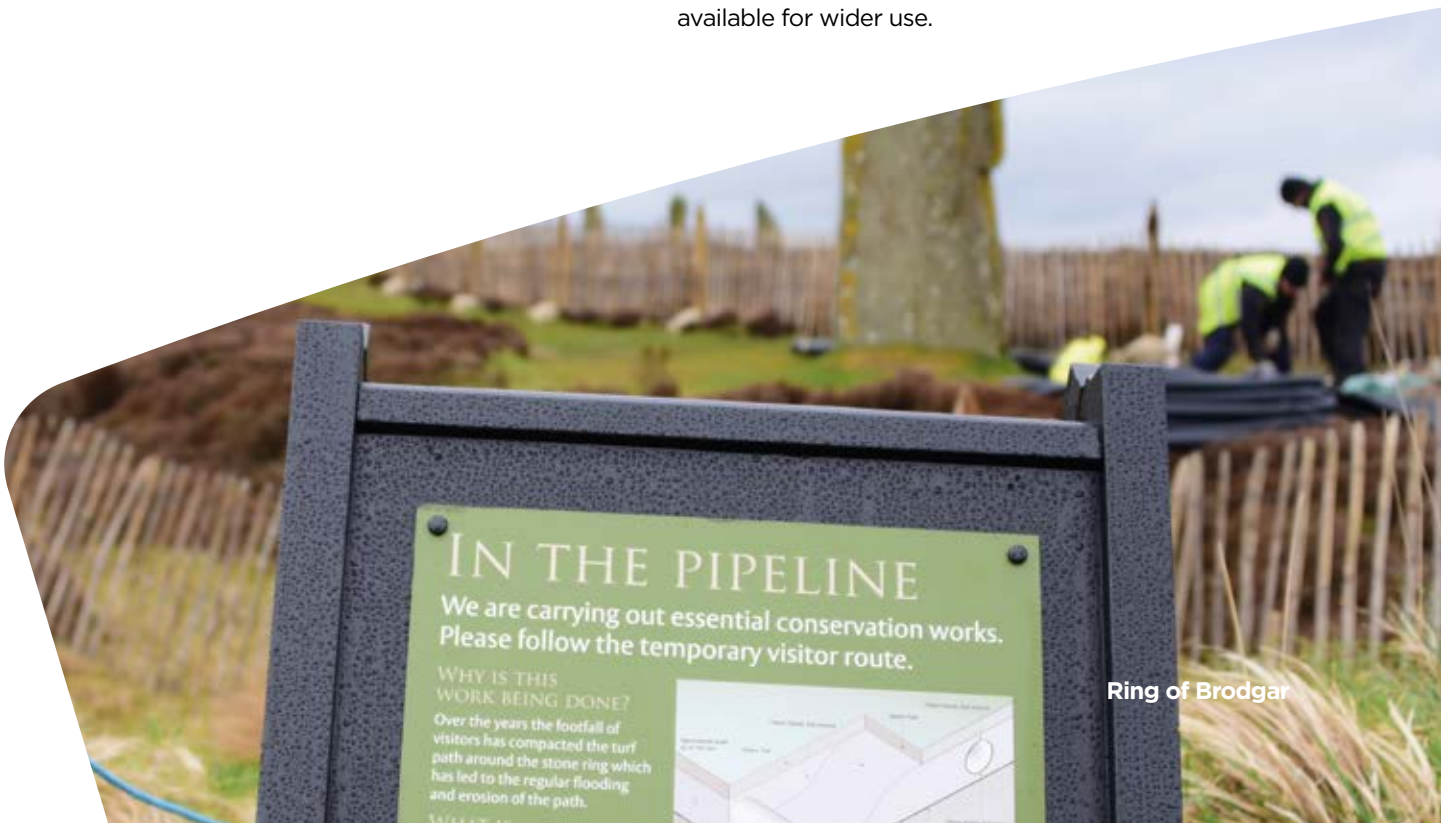
These conservation standards will also be used to read across to technical conservation training and education delivered to our staff. They are intended to reflect good practice for fabric repair and intervention without being prescriptive. They sit alongside our Conservation Principles and supporting Technical Specifications.

TECHNICAL SPECIFICATIONS

Our Principles, Standards, and Specifications are designed to read across to our Technical Research Framework and our Technical Conservation Education framework and course design delivered through the Engine Shed to the broader sector and our own staff to fulfil our broader obligations to raise standards across the broader sector.

The majority of our specifications can use or build on the content and structure of the industry standard National Building Specification (NBS). NBS is built upon the common Uniclass construction classification and, looking to the future, has been designed with BIM at its centre. It also matches the UK Government Construction Strategy.

Typical activities in our conservation and facilities management operations are often covered. For some activities, however, we will develop our own specifications to reflect our specialist needs. The format will reflect the NBS style and could in time be available for wider use.



Ring of Brodgar

7.5 Project management and regulatory consents

HES policy and procedure for project delivery is based on the Scottish Government's mandatory policy and procedures for construction works projects that will deliver value for money (VFM). The approach is based upon the Construction Procurement Manual produced by SG Procurement and Finance and is applicable to all bodies which are subject to the Scottish Public Finance Manual.

MANAGEMENT OF CONSENT PROCESSES

Historic Environment Scotland is required to apply for and fulfil a range of consents to regulators in relation to properties in care, the principle regulatory bodies being:

- Scottish Natural Heritage
- SEPA
- Historic Environment Scotland – Heritage Directorate
- local authority planning authorities.

The internal scheme of delegation from the Chief Executive assigns responsibilities in this regard. In most circumstances, the role of agent for Historic Environment Scotland is delegated to the Director of Conservation with an internal operational process in place.

7.6 External peer review

Peer review is a requirement of the Scheme of Delegation from Scottish Ministers to Historic Environment Scotland. It is an assessment of our approach, methods and outputs against the principles, standards and procedures that we set for our work.

The peer review panel will provide quality assurance to the HES Board and onwards to Ministers by assessing and reporting on the quality of HES Estate based conservation activity as set out in the Scheme of Delegation and associated policies and standards.

The reviewers will be invited to assess conservation activity against:

- the project objectives set by the Estates Unit
- adherence to the conservation principles and technical standards set out by the Estates Unit and appended to the Scheme of Delegation
- effective project management from setting objectives, through production information, completion of the programmed works on site, and efficient, safe construction management
- the skills, expertise and training of our teams to ensure staff are equipped to deliver our duties.

Should the advisory group have other areas of relevant expertise then observation or advice in these areas will be welcome.

From time to time, the Chair may request comments from the peer reviewers on other aspects of our operation – for example, strategic proposals for delivering conservation and maintenance of the estate or assessments of prioritisation.

Reviewers will be invited to comment on the delivery of the various operations that make up a conservation project and then propose improvements. Analysis of the response will be aided by an ordered, pro-forma structure.

Further details of the external peer review process can be found on our website.

8.0 DELIVERING OUR CLIMATE CHANGE OBJECTIVES

We have developed a methodology for assessing climate change risk to heritage sites, including a climate change risk register for the HES estate. We are currently undertaking an environmental assessment of all our sites, using a number of environmental criteria such as flooding (fluvial, coastal, pluvial, groundwater), coastal erosion and landslide/slope instability with datasets from SEPA and BGS.

This climate change risk assessment data is one of the key assessment criteria used to inform the prioritisation of investment across the assets, in particular identifying sites for priority action. This new and ambitious area of work will also contribute towards corporate risk management in terms of wider operational factors such as visitor access to sites and public events at our properties.

The physical risks to the fabric of the estate presented by climate change will be best mitigated by increasing the frequency of our pro-active preventative conservation and routine maintenance activities. It will also be necessary to establish a philosophy of adaptation, including alternative conservation approaches and innovation.

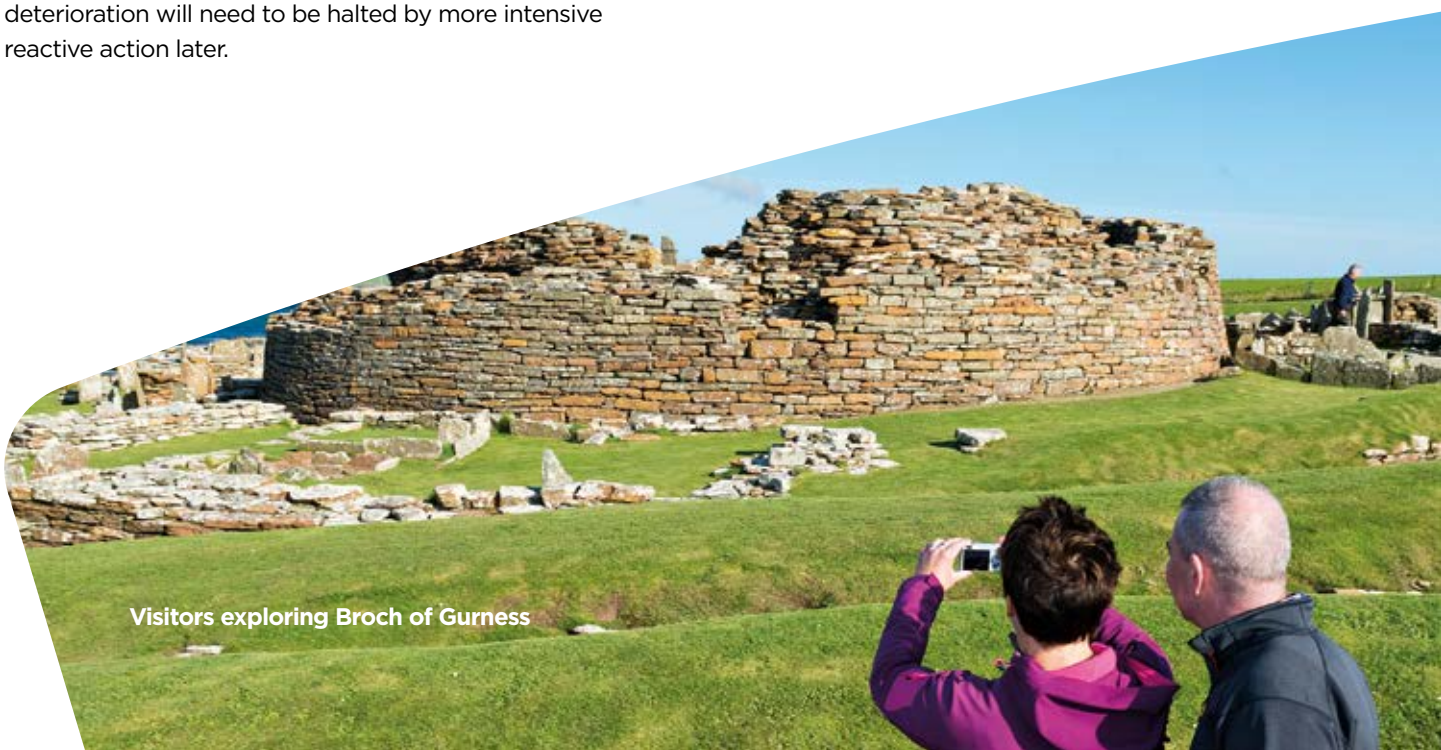
To carry on using philosophies and solutions developed in a more benign context may mean that many sites will have insufficient resilience against future weather conditions, and accelerated deterioration will need to be halted by more intensive reactive action later.

Such evolution of conservation approaches, including innovative adaptive interventions, will be necessary if the assets are to be managed in the proactive way necessary to protect cultural significance and build resilience. This will require both enhanced knowledge through research and site trials and acknowledgement by all involved that a more flexible approach must emerge.

The use of soft capping at a number of sites in recent years is a good example of this adaptive intervention: it recognises the problem of water penetration to open wall-heads, the restrictions on high-level access and the need to find a proactive solution while retaining principles of minimal intervention and reversibility.

8.1 Carbon management

HES is defined as a ‘Major Player’ under Scottish Government Public Bodies Climate Change Duties. Under the Climate Change (Scotland) Act 2010, we are required to have a carbon management programme and “strive to meet or exceed national carbon reduction targets”. We are also expected to act as exemplars and should factor carbon into all business planning and decision-making processes. We report annually to Government on our sustainability.



Visitors exploring Broch of Gurness

Carbon management has been led by the Conservation team to date and has focused on reducing emissions across the estate. Historic Scotland's *Carbon Management Plan (CMP) 2010-2015* set an ambitious 25 per cent reduction target. We achieved a reduction of 17 per cent in the final year.

The programme was severely curtailed by budget constraints in the final two years; in all, only 66 per cent of the planned investment was made, with only 7 per cent of the projects undertaken in the final year. Had the full investment been realised, the CMP target would have been substantially exceeded.

The new *HES Carbon Management Plan* covers the period 2015-2020. It takes a longer-term view, aligning our target with the national 2050 target. The plan takes an ambitious and innovative approach, setting a cumulative carbon budget with a fixed emissions reduction of 11 per cent for the period 2015-2050.

Our approach to carbon reduction on the estate is defined by our hierarchy of controls. These are to:

1. Reduce energy consumption through behavioural change informed by the energy audit process.
2. Upgrade our buildings to improve energy efficiency. Interventions include new heating and lighting systems, insulation and secondary glazing.
3. Diversify our energy supply and innovate using new technologies including renewables at our sites where appropriate.
4. Improve our operational performance through new data systems and linkages, sustainable procurement, audit and reporting processes.

Operationally, energy usage is monitored and reported for each of our buildings every month and reviewed by the regional estates and visitor operations teams every quarter. Seventy-six per cent of the monuments have an energy requirement, with 11 of our sites accounting for 71 per cent of the total energy usage. The data is stored in a dedicated system and managed by the Energy Manager. The linkage of this energy data to other carbon datasets to assist collective reporting on waste, travel and water is one of the ambitions of PICAMS.

Energy audits have been completed for the highest energy use sites and action plans are in place. This energy audit, action and reporting process is managed by our Energy Manager and supported by the local teams and the Green Champions Network, as engagement and ownership of responsibility for carbon reduction at a site level is critical.

Our estates internal audit team will provide a bi-annual report on progress with energy efficiency and carbon reduction projects to the Carbon Management Board, which meet every six months, chaired by the Chief Executive.

This progress will be reported publicly through our annual *Public Sector Climate Change Duties Report*, and our *Sustainability Report* published alongside our *Annual Report and Accounts*.

8.2 Waste Management

Waste is a priority area for action and investment across the management of our assets. We are not presently compliant in waste sorting from our operations under the Waste (Scotland) Regulations 2014. This will be a key focus for us over the next two years.

Waste is the third-highest source of emissions for HES. Despite the publication of a *Waste Prevention and Reuse Plan* for Historic Scotland in 2013, waste remains a particular challenge, in part resulting from the diversity and geographical spread of HES operations.

Priority will be given to improving waste management and assigning total actual costs against each of our waste streams (i.e. landfill, recycling, combustion and composting). Factoring in the true cost of waste to our operations (e.g. retail, events etc.) will improve accountability and stimulate action.

This year we have commissioned a large Waste Audit Project to determine the most efficient delivery model for the organisation.

9.0 ASSET RESILIENCE

9.1 Fire Safety Management

The purpose of fire safety management in HES is to ensure the safety of people and also the stewardship of the structures and collections in HES care.

The HES Fire Safety Management System facilitates compliance with the Fire (Scotland) Act 2005 and Fire Safety (Scotland) Regulations 2006. The Management System is made up of the Fire Safety Policy Statement and a suite of guidance documents published on the HES Intranet setting out fire safety roles for all staff with specific responsibilities.

The objectives of the Fire Safety Management System are to:

- safeguard people from death or injury in the event of a fire
- minimise the risk of fire and to limit fire spread
- ensure that, should any emergency situation occur, the means are in place to effect a safe and organised evacuation of the building
- achieve compliance with the Fire (Scotland) Act 2005 and Fire Safety (Scotland) Regulations 2006
- minimise potential for the fire to disrupt services, damage buildings, contents, equipment or harm the environment.

Operationally, fire safety assessments (FSAs) are carried out across all our properties to ensure an appropriate standard of protection for both visitors and staff. These assess both the fire safety management and fire precautions in place at a site. These are conducted by our HES Fire Safety Advisors.

A fire safety risk matrix has been developed to assist with prioritising risk, focusing primarily on premises and activities that give rise to the most serious risk to life, property and business continuity.

Once the advisers complete a detailed inspection of a site, residual risks are considered in collaboration with the regional teams to agree a reasonable solution. A fire safety audit report is produced, with an action plan for the Head of Estates and the regional team to take forward. Implementation of the action plan is the responsibility of the Fire Precautions Officer. Where completion of action points is delayed for financial or programming reasons, alternative management controls are put in place.

A training programme is in place for all Fire Safety Advisors and those with specific responsibilities in the fire safety management process. The fire risk assessments and action plans are reviewed regularly by the Fire Safety Advisor to a cycle set for each monument based on the risk matrix and included within the report (quarterly, annually, every two years).

Reporting updates are carried out by the H&S team through the Corporate H&S Forum. The Estates Compliance team include updates on the status of all action points from the FSAs in their reporting system: quarterly to the Head of Estates and annually within the *Annual Conservation Report*.

9.2 Security

Security of physical assets, collections, staff and visitors are managed centrally and through regional and asset-based structures as appropriate. Generally, physical security infrastructure is managed by Conservation and visitor security by Commercial and Tourism staff. A corporate Head of Security takes a strategic overview of this area.

9.3 Salvage

We have in place an extensive range of salvage plans related to both our collections and physical assets, particularly focused at sites with extensive or high-status collections. Our Collections teams work with locally based staff to update and maintain operational resilience in salvage planning.

APPENDIX A

SCHEDULE OF PROPERTIES IN THE CARE OF SCOTTISH MINISTERS

Aberdour Castle
Aberlemno Churchyard Cross Slab
Aberlemno Sculptured Stones
Abernethy Round Tower
Achnabreck Cup and Ring Marks
Affleck Castle
Antonine Wall - Bantaskin
Antonine Wall - Barrhill
Antonine Wall - Bearsden Bath-House
Antonine Wall - Castlecary Fort
Antonine Wall - Croy Hill
Antonine Wall - Dullatur
Antonine Wall - Garnhall Farm
Antonine Wall - Kirkintilloch
Antonine Wall - Rough Castle
Antonine Wall - Seabegs Wood
Antonine Wall - Tollpark
Antonine Wall - Watling Lodge
Antonine Wall - Watling Lodge West
Arbroath Abbey
Arbroath Abbey Abbots House
Ardchattan Priory
Ardclach Bell Tower
Ardestie Earth House
Ardoch Roman Camp, Blackhill
Ardunie Roman Signal Station
Argyll's Lodging, Stirling
Arnol Blackhouse No 39
Arnol Blackhouse No 42
Auchagallon Stone Circle
Auchindoun Castle
Ballygowan Cup and Ring Mark Rocks
Baluachraig Cup and Ring Mark Rocks
Balvaird Castle
Balvenie Castle
Barochan Cross
Barsalloch Fort
Beauly Priory
Big Balcraig and Clachan Cup and Ring Mark Rocks
Biggar Gasworks
Bishop's House, Elgin
Bishop's Palace, Kirkwall
Blackhammer Chambered Cairn
Blackfriars Chapel, St Andrews
Blackness Castle
Bonawe Iron Furnace
Bothwell Castle
Brandsbutt Symbol Stone
Brechin Cathedral Round Tower
Brechin Maison Dieu Chapel
Bridge of Oich Suspension Bridge
Broch of Gurness (Aikerness Broch)
Brough of Birsay
Broughty Castle
Burghead Well
Burleigh Castle
Cadzow Castle
Caerlaverock Castle
Cairn Holy Cairn 1
Cairn Holy Cairn 2
Cairn o' Get
Cairn of Memsie
Cairnbaan Cup and Ring Marks
Cairnpapple Hill
Calanais Standing Stones
Cambuskenneth Abbey
Cardoness Castle
Carlungie Earth House
Carn Ban Long Cairn
Carn Liath (Broch)
Carnasserie Castle
Carsluith Castle
Castle Campbell
Castle of Old Wick
Castle of Park
Castle Semple Collegiate Church
Castle Sween
Castlelaw Hill Fort
Caterthuns (Brown and White)
Chapel Finian
Chesters Hill Fort
Clackmannan Tower
Clava Cairns
Claypotts Castle
Click Mill, Dounby
Clickimin Broch
Cnoc Freiceadain Long Cairn
Cubbie Row's Castle
Corgarff Castle
Corrimony Chambered Cairn
Corstorphine Dovecot
Coulter Motte
Craigmillar Castle
Craignethan Castle
Crichton Castle
Crookston Castle
Cross Kirk, Peebles
Crossraguel Abbey
Cullerlie Stone Circle
Culross Abbey
Culsh Earth House
Cuween Hill Chambered Cairn
Dallas Dhu Distillery
Deer Abbey
Dere Street Roman Road - North
Dere Street Roman Road - South
Deskford Church
Dirleton Castle Dogton Stone
Doonhill
Doune Castle and Roman Camp
Druchtag Motte
Drumcoltran Tower
Drumtroddan Cup and Ring Marked Rocks
Drumtroddan Standing Stones
Dryburgh Abbey
Duff House
Duffus Castle
Dumbarton Castle
Dun Struan Beag

Dun Carloway
Dun Dornaigil
Dun Telve
Dun Troddan
Dunadd Fort
Dunblane Cathedral
Dunchraigaig Cairn
Dundonald Castle
Dundrennan Abbey
Dunfallandy Stone
Dunfermline Abbey Palace and Nave
Dunfermline Abbey Nether Yett
Dunglass Collegiate Church
Dunkeld Cathedral
Dunstaffnage Castle and Chapel
Dupplin Cross
Dwarfie Stane
Dyce Symbol Stones
Eagle Rock or Hunter's Craig
Earl's Bu, Ophir
Earl's Palace, Birsay
Earl's Palace, Kirkwall
Eassie Sculptured Stone
Easter Aquhorthies Stone Circle
Edinburgh Castle
Edin's Hall Broch
Edrom Church Norman Doorway
Edzell Castle
Eileach an Naoimh
Eilean Mor
Elcho Castle
Elgin Cathedral
Elgin, Pans Port and precinct wall
Eynhallow Church
Fort Charlotte
Fort George Fortrose Cathedral
Foulden Tithe Barn
Fowlis Wester Cross Slab
Glasgow Cathedral
Glenbuchat Castle
Glenluce Abbey
Grain Earth House
Greenknowe Tower
Grey Cairns of Camster
Hackness Battery and Martello Tower
Hailes Castle
Hermitage Castle
Hill O'Many Stanes
Hilton of Cadboll
Holm of Papa Westray Chambered Cairn
Holyrood Abbey
Holyrood Park
Huntingtower Castle
Huntly Castle
Inchkenneth Chapel
Inchcolm Abbey
Inchmahome Priory
Innerpeffray Chapel
Inverlochy Castle
Iona Abbey
Iona Nunnery
Jarlshof Prehistoric and Norse Settlement
Jedburgh Abbey
Keills Chapel and Cross
Kelso Abbey
Kilberry Sculptured Stones
Kilchurn Castle
Kildalton Cross Kildrummy Castle
Kilmartin Crosses
Kilmartin Glebe Cairn
Kilmartin Sculptured Stones and Neil Campbell Tomb
Kilmichael Glassary Cup and Ring Mark Rock
Kilmodan Sculptured Stones
Kilmory Knap Chapel
Kilpatrick Dun
Kilwinning Abbey
King's Knot, Stirling
King's Park, Stirling
Kinkell Church
Kinnaird Head Castle and Lighthouse
Kinnaird Head Wine Tower
Kinneil Old Church Cross
Kinneil House
Kirkconnel Churchyard
Kirkhill Roman Signal Station
Kirkmadrine Stones
Kisimul Castle
Knap of Howar
Knock Castle
Knocknagael Boar Stone
Knowe of Unstan Chambered Cairn
Knowe of Yarso Chambered Cairn
Laggangairn Standing Stones
Lauderdale Aisle, St Mary's Church
Lincluden Collegiate Church
Lindsay Burial Aisle
Links of Noltland
Linlithgow Palace, Peel and Royal Park
Loanhead of Daviot Stone Circle
Loch Doon Castle
Lochleven Castle
Lochmaben Castle
Lochranza Castle
Machrie Moor Stone Circles
MacLean's Cross, Iona
MacLellan's Castle Maeshowe, Chambered Cairn
Maiden Stone
Mar's Wark, Stirling
Mavisbank Policies
Maybole Collegiate Church
Meigle Stones (and Museum)
Melrose Abbey and Precinct
Merkland Cross
Mid Howe Broch
Mid Howe Chambered Cairn
Monreith Cross
Morton Castle
Moss Farm Road Stone Circle
Mousa Broch
Muir o'Fauld Roman Signal Station
Muness Castle
Muthill Old Church and Tower
Ness of Burgi
Nether Largie Mid Cairn
Nether Largie North Cairn
Nether Largie South Cairn
New Abbey Corn Mill
Newark Castle
Noltland Castle
Old Brig O'Dee Orchardton Tower
Ormiston Market Cross
Peel Ring of Lumphanan
Picardy Symbol Stone
Pierowall Church
Preston Market Cross
Quoyness Chambered Cairn
Ravenscraig Castle
Rennibister Earth House
Restenneth Priory
Ri Cruin Cairn
Ring of Brodgar
Rispain Camp
Rothesay Castle
Ruthven Barracks

Ruthwell Cross
Scalloway Castle
Scotstarvit Tower
Seton Collegiate Church
Skara Brae
Skelmorlie Aisle
Skipness Castle
Skipness Chapel
Smailholm Tower
Spynie Palace
St Andrews Castle
St Andrews Cathedral
St Andrews West Port
St Blane's Church
St Bride's Church
St Bridget's Kirk
St Clement's Church, Rodel
St Machar's Cathedral Transepts
St Magnus Church, Egilsay
St Martin's Church, Haddington
St Mary's Church, Auchindoir
St Mary's Chapel, Crosskirk
St Mary's Chapel, Wyre
St Mary's Chapel, Rothesay
St Mary's Church, Grandtully
St Mary's Church, Kirkheugh, St Andrews
St Nicholas Church, Orphir
St Ninian's Cave
St Ninian's Chapel
St Orland's Stone
St Peter's Church, Duffus
St Serf's Church, Dunning
St Serf's Priory
St Triduana's Aisle
St Vigean's Stones (and Museum)
Stanley Mills
Stanydale Temple
Steinacleit Cairn and Stone Circle
Stirling Castle
Stirling Old Bridge
Stones of Stenness
Sueno's Stone Sunnybrae Cottage
Sweetheart Abbey and Precinct Walls
Tantallon Castle
Tarves Tomb
Taversoe Tuick Chambered Cairn
Tealing Earth House
Tealing Dovecot
Temple Wood Stone Circles
Threave Castle
Tolquhon Castle
Tomnaverie Stone Circle
Torhouse Stone Circle
Tormiston Mill
Torphichen Preceptory
Torr a'Chaisteal
Torrylin Chambered Cairn
Trinity House
Tullibardine Chapel
Urquhart Castle
Wanlockhead Beam Engine
Westquarter Dovecot
Westside Church (Tuquoy)
Whithorn Priory
Whithorn Priory Crosses (and Museum)
Wideford Hill Chambered Cairn
Wren's Egg

Annex B
List of areas that must be covered by policies, standards and supporting documents

- Acquisitions and disposals policy
- Conservation principles and standards
- Technical standards covering works to properties in care
- Access principles and standards
- Charging Policy
- Statements of cultural significance for each monument
- Ministerial Use policy

APPENDIX B

ASSET MANAGEMENT POLICY

This policy sets out the objectives and guiding principles in relation to asset management in Historic Environment Scotland.

Historic Environment Scotland is responsible for a wide range of assets, including the properties in care of Scottish Ministers and associated collections, operational infrastructure and extensive historic environment archives.

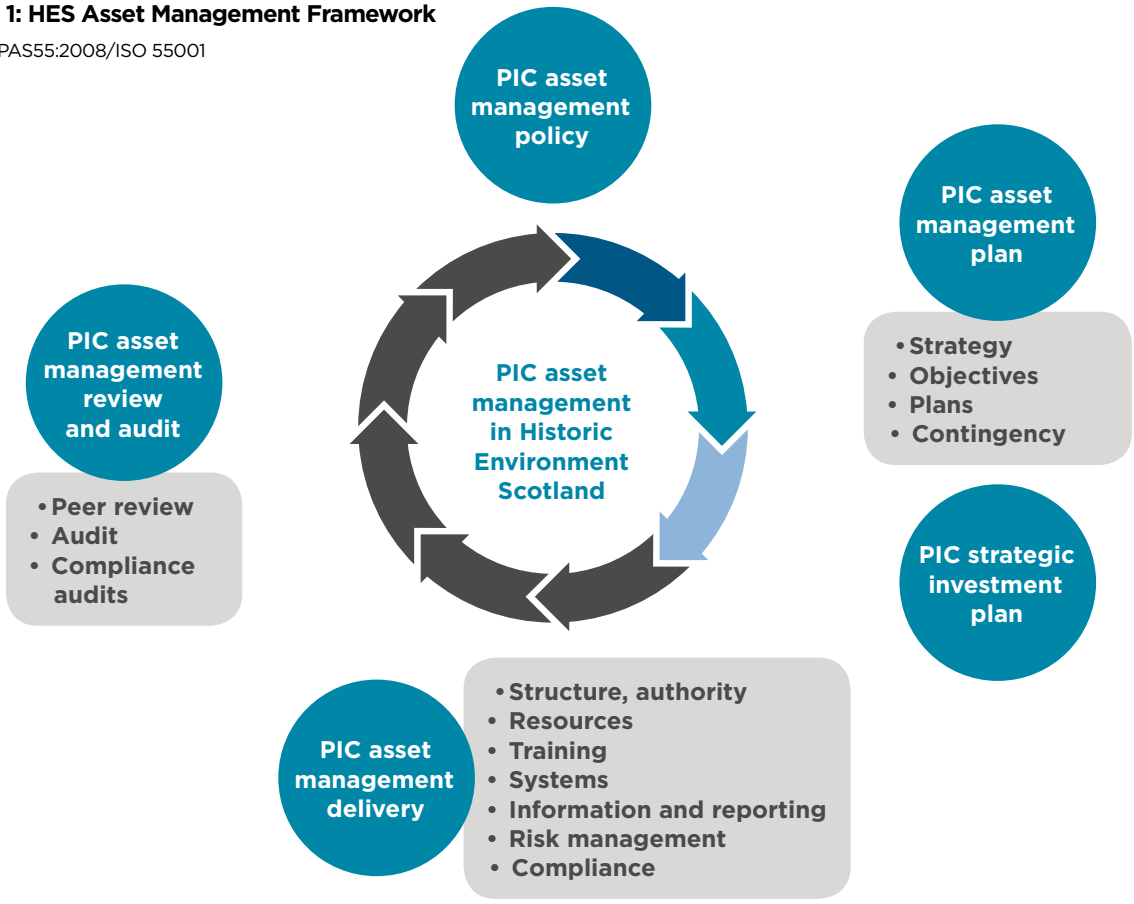
This policy relates to the properties in care of Scottish Ministers and associated collections delivered by Historic Environment Scotland through the Scheme of Delegation provisioned under the Historic Environment Scotland Act.

The properties in care of Scottish Ministers represent some 6,000 years of Scottish history and include a number of iconic sites of international significance. They are often challenging to care for and the impacts of a changing climate pose increasing risks.

While we employ some accepted asset management principles in delivering our objectives, there are key differences in the outcomes we expect and therefore our approach requires specificity to the assets we care for.

We accept that this requires bespoke solutions to our particular challenges and embrace this.

FIGURE 1: HES Asset Management Framework
Based on PAS55:2008/ISO 55001



Our asset management approach is underpinned by eight key principles:

- a **conservation** ethic driven by our Conservation Principles and exacting technical standards
- a **risk-based** approach in managing the safety of our visitors and staff and in safeguarding the cultural significance of the asset whether known or yet to be discovered
- a **holistic approach** to managing our assets and consideration of our stakeholders
- a **knowledge-based** approach driven by research, understanding and experience
- ensuring we meet and exceed our regulatory and statutory **compliance** obligations
- a focus on providing **access** unless conservation or safety reasons prevent this
- **adding value** in pursuit of our broader corporate objectives through our asset management
- acting in a demonstrably **sustainable** manner and leading by example at every opportunity.

The framework for asset management in Historic Environment Scotland is outlined in Figure 1. This policy is delivered through the *PIC Asset Management Plan (AMP)* supported by the *PIC Strategic Investment Plan (PIC SIP)* and operational delivery using the *PIC Asset Management System (PICAMS)*.

The Properties in Care SIP is a component of the broader Historic Environment Scotland Investment Plan.

The objectives of this policy are defined as:

- fulfilling the Scheme of Delegation for Scottish Ministers, and in doing so
- fulfil the obligations of Scottish Ministers in relation to the properties in care and associated collections in state care
- managing and safeguarding these irreplaceable assets for the benefit of current and future generations as custodians in line with our established conservation principles and standards
- providing access to these assets except where conservation needs or safety dictate otherwise,
- realising the benefits of this national resource in supporting broader objectives of cultural identity, socio-economic benefits and health and wellbeing
- ensuring that the tangible and intangible aspects involved in delivering our work are recognised, particularly in relation to traditional skills, materials and local traditions.

Ongoing review and evaluation of performance is required to provide assurance to the Board and ultimately to Scottish Ministers. The reporting requirements are set out in the Scheme of Delegation and augmented by a system of external peer review.

This policy is informed by the Scheme of Delegation from Scottish Ministers to Historic Environment Scotland under the Act, the 1979 Ancient Monuments Act, Scottish Government Historic Environment Strategy and the Historic Environment Scotland Corporate Plan. The Policy is owned by the Board of Historic Environment Scotland.

FIGURE 2: HES Investment Plan

CONSERVATION
Conservation and maintenance of SM Properties in care and Collections under the SOD.

VISITOR FACING ENHANCEMENT
New projects – experiential, developmental.

PROPERTY
HES Archives and PIC Collections, JSH and LH. Houses, depots and stores.

CORPORATE
Other investment requirements including ERDM.

PIC INFRASTRUCTURE
Non historic infrastructure – roads, piers, car parks, water courses and footpaths. Visitor facing infrastructure – toilets, admissions, cafes. Staff welfare.

M&E
Non historic mechanical and electrical systems, gas, water, waste, BMS, renewables.

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

Historic Environment Scotland is the lead public body established to investigate, care for and promote Scotland's historic environment.

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