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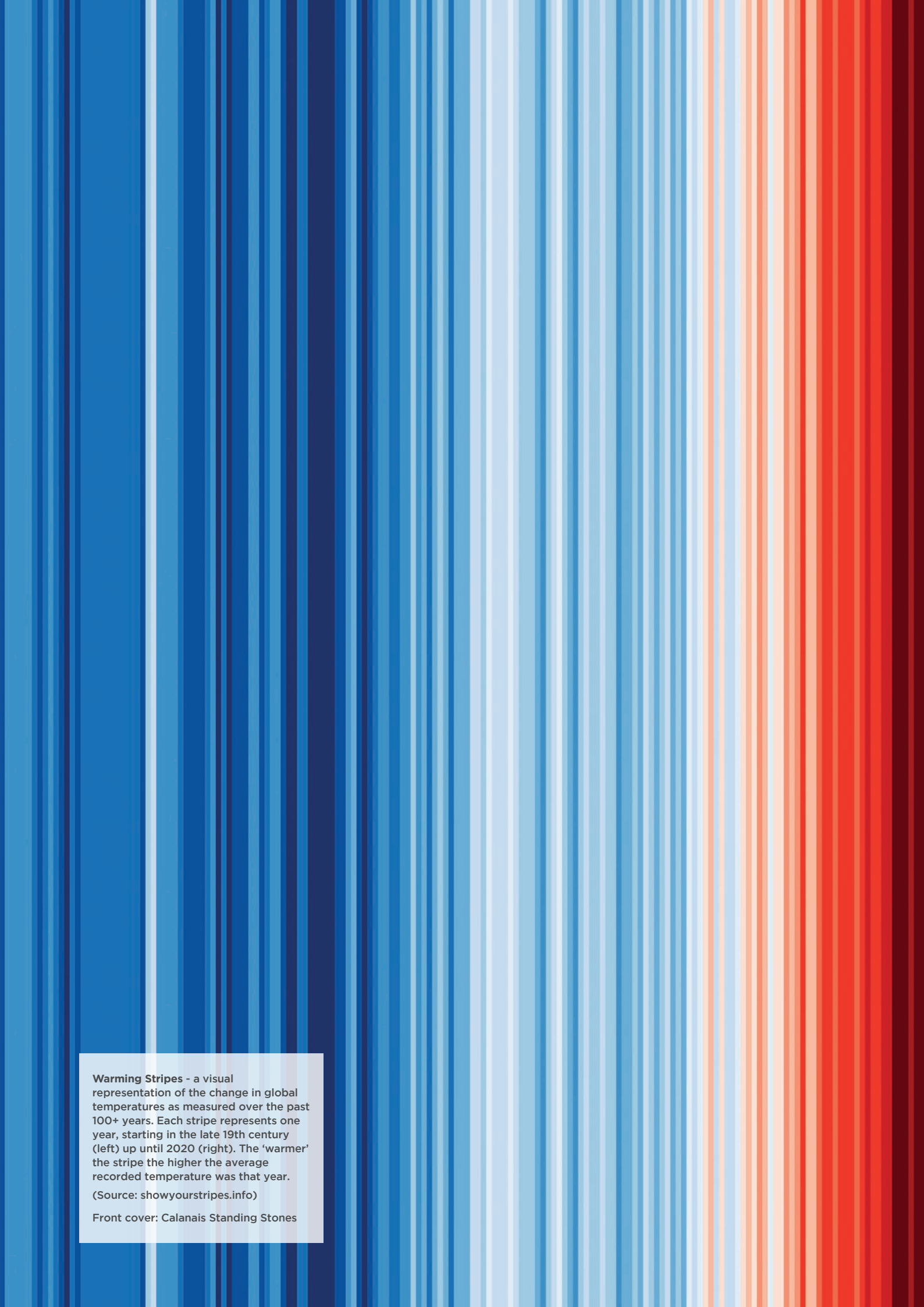
Climate Ready HES

Adaptation Plan



HISTORIC
ENVIRONMENT
SCOTLAND

ÀRAINNEACHD
EACHDRAIDHEIL
ALBA



Warming Stripes - a visual representation of the change in global temperatures as measured over the past 100+ years. Each stripe represents one year, starting in the late 19th century (left) up until 2020 (right). The 'warmer' the stripe the higher the average recorded temperature was that year.

(Source: showyourstripes.info)

Front cover: Calanais Standing Stones

PURPOSE AND SCOPE

Climate Ready Historic Environment Scotland (HES) is our organisation’s first climate change adaptation plan. It sets out our response to a series of climate risks that we have identified, that each have the potential to negatively impact our organisation. It is a plan directly for our organisation, though the steps we have taken in preparing it may be of interest to others.

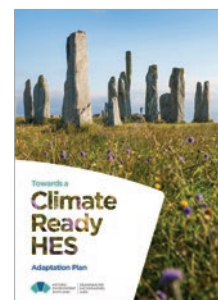
Addressing the climate risks identified is crucial to building organisational resilience against the impacts of climate change. It is also necessary if we are to achieve our wider climate action ambitions, such as becoming a net-zero organisation.

To create our Climate Ready HES plan we:

- Established a cross-organisational group to undertake a strategic level climate risk assessment of our organisation. This process identified the key climate risks of concern to our organisation.
- Sourced practical solutions, from people across our organisation, that we will implement over the next five years to begin addressing, or better understanding, the climate risks identified – this is our **‘adaptation response’**.

There are two ‘Climate Ready HES’ documents:

- 1. The Adaptation Plan**, that you are reading now: This provides an overview of the project, the key climate risks identified and our adaptation response to these risks. This document is intended to provide an accessible overview of our plan, for both HES colleagues and external partners who may be interested in our approach.
- 2. The Project Methodology and Results:** This provides detailed insight (and our reflections) on the methodology used to identify the key climate risks. It also provides the results of the climate risk assessment process, including evidence supporting the inclusion of each risk. This document is intended to provide support to other organisations who may be looking to start their ‘climate ready’ journey.



CLIMATE ACTION AT HES

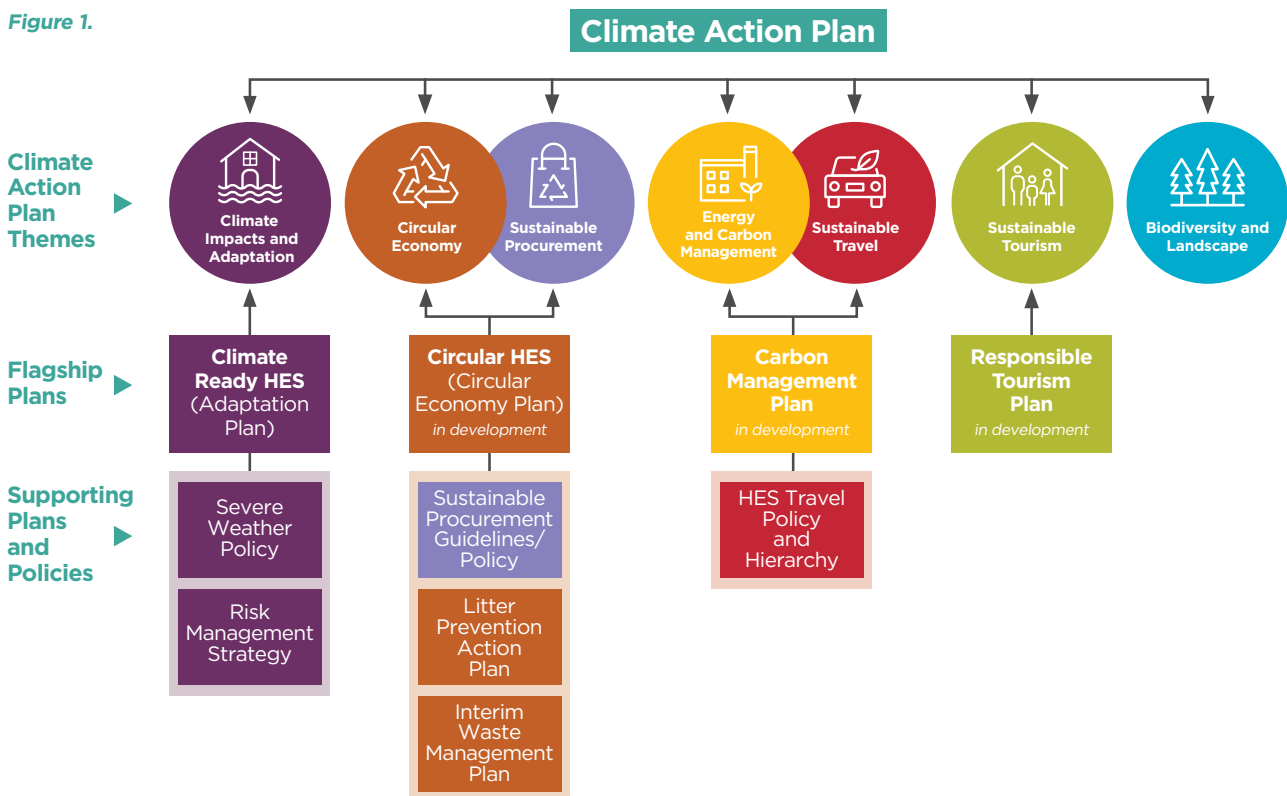
Climate Ready HES is a flagship deliverable of our **Climate Action Plan (2020 to 2025)**. It is intended to help deliver parity between our climate change mitigation and adaptation efforts, and to help secure a more resilient, climate ready future for our organisation. It purposely focusses on the steps we will take to address, or better understand, a series of climate risks identified as part of an organisational wide climate risk assessment.

Our overarching Climate Action Plan sets out our high-level climate action objectives under seven themes (see Figure 1). More focussed delivery plans are required for certain themes owing to their complexity. Climate Ready HES is the delivery plan for our Climate Impacts and Adaptation theme.

However, Climate Ready HES does not operate in isolation from the other six Climate Action Plan themes. As it deals with the overarching topic of climate risk, successful delivery of Climate Ready HES is required in order to achieve other key climate action commitments (such as becoming a net-zero organisation). It therefore works alongside these other more focussed plans and policies.

See Appendix A for a summary of key crossover points between Climate Ready HES and the Climate Action Plan themes.

Figure 1.



CLIMATE READY HES

This is our organisation's first dedicated climate change adaptation plan. It sets out a series of actions that we will undertake in order to prepare for, and better manage, the risks and impacts associated with climate change – making our organisation 'climate ready'. Here we present a concise summary of our Climate Ready Plan.

Why do we need to get 'climate ready'?

As our climate changes, it is increasing the frequency and severity of many **physical climate risks** that impact our organisation (e.g. flood events). It is also introducing new physical climate risks that can impact our organisation (e.g. the spread of new and invasive pest species). We also know that as society responds to the climate crisis and moves toward a low-carbon economy that our organisation is being exposed to new types of **transition climate risk** (e.g. changing expectations of our visitors and other stakeholders).

Why do we want to get 'climate ready'?

It makes good business sense. We recognise it is a crucial activity in order to remain a high-performing organisation. It's how we will continue to deliver on **our key functions** as Scotland's lead public body for the historic environment now, and in the future. It is also how we play our part in contributing to a climate ready, resilient Scotland.

What have we done?

We established a cross-organisational group to undertake a strategic level climate risk assessment of our organisation. This assessment was informed by tools and guidance developed by Adaptation Scotland. This included the **Adaptation Capability Framework** and the **Strategic Climate Change Risk Assessment tool**.

Our climate risk assessment identified 28 key climate risks that, based on our current understanding, we believe to be areas where further action is required. The identified risks are grouped into five categories:

- Physical climate risks on our organisation's **physical assets**
- Physical climate risks on the **natural capital** of our Properties in Care (PiC)
- Physical climate risks disrupting our day-to-day **operations**
- Varied climate risks impacting the safety and wellbeing of our **people**
- Key **transition** risks that would likely impact delivery of our core functions



What are we going to do?

The group established to carry out the climate risk assessment, gathered in views from across the organisation on actions we could take to reduce the impact of the risks identified. In total, ten priority actions were identified that together form our **'primary adaptation response'**. These actions are:

1. **Enhance our internal governance and management arrangements** to effectively mainstream 'climate ready' action and learning across all areas of our organisation.
2. **Commit appropriate resources** to climate change adaptation measures alongside mitigation measures to begin delivering parity between work areas of equal importance.
3. **Expand our in-house adaptation capabilities** to deliver the necessary tools, resources and skills required to mainstream our climate ready ambitions across our organisation.
4. **Invest in early warning capabilities** for day-to-day physical climate risk (weather and natural hazard events), putting the safety and wellbeing of people, visitors, contractors and other stakeholders at the core of becoming 'climate ready'.
5. **Develop climate scenarios to stress-test decisions** we make as an organisation. This will ensure our decisions are robust enough to navigate the transition to a low-carbon economy and physical changes in our climate.
6. **Integrate assessments of climate risk across our organisation** to reduce the danger of 'locking in' future risk. This will be included throughout all major decisions we take and in major projects, long-term investment considerations, strategies, plans and policies that we develop for our organisation and the wider sector.
7. **Mainstream 'adaptation' action into our plans, policies, projects and procedures.** Reducing our dependence on a standalone 'climate ready' plan by integrating adaptation activities into all relevant plans, policies, projects and procedures.
8. **Enhance our data collection and analysis capability** in order to better monitor climate risks, support the development of thresholds that trigger action and to monitor progress and impact of our adaptation measures.
9. **Co-create an 'Adaptation Manual'** that provides staff with advice and guidance on how to take well-considered climate change adaptation actions, supplemented with training / upskilling opportunities for our people.
10. **Invest in our research capabilities** to test and trial innovative adaptation solutions that not only support our organisation, but the wider historic environment and public sectors.



KEY TERMS



Fossil Fuels

Since the turn of the industrial revolution, human use of, and dependence on, fossil fuels has increased concentrations of greenhouse gases in our atmosphere. This has caused our planet to warm.



Climate Change

As the planet warms, other elements of our climate system are changing (e.g. changing rainfall patterns).



Emerging Risks

The changing climate is causing 'risks' to emerge that have the potential to negatively impact our organisation.



Physical Climate Risks

There are risks that emerge directly as a result of changes in our climate. For example, more frequent weather extremes such as intense rainfall events, or more frequent natural hazard events such as floods and wildfires.



Transition Climate Risks

Then there are risks that emerge as regulators, legislators, consumers and companies take action to mitigate against climate change and transition toward a low-carbon economy.



Climate Change Adaptation

'Adaptation' is what we do to better manage and prepare for these risks and impacts associated with climate change (e.g. adjusting the way we work to avoid possible harm).






Our Adaptation Response

This describes the actions we will take in order to 'adapt' our organisation to the risks and impacts associated with climate change.

Climate Ready HES – by implementing our adaptation response, we move toward being an organisation that is better prepared to deal with the risks and impacts associated with climate change – we become **'climate ready'**. We do this at the same time as transitioning toward being a resource efficient and net-zero emissions organisation.



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I. BACKGROUND



I.1 CLIMATE READY

The term ‘climate ready’ describes a series of activities and behaviours that are linked to how we are responding to the risks and impacts of climate change. At its core, becoming ‘climate ready’ is about:

- Taking practical, well-considered action to reduce the negative consequences and impacts of physical changes in our climate on our organisation, like taking steps to reduce exposure to a flood risk.
- Understanding the risks associated with transitioning to a low-carbon economy, like changing visitor and stakeholder expectations, and being prepared to respond to these shifting expectations.
- Acting now to avoid the lock-in of climate risks in the future, like integrating an assessment of climate risks at the developmental stage of all our major projects, ensuring they are future-proofed.
- Boosting our ‘climate action’ maturity by recognising where we need to invest in bringing in new skills and knowledge into our workforce, as well as identifying opportunities to train and upskill our people - turning the knowledge and expertise of our various departments into a collective powerhouse of climate action.

Becoming a ‘climate ready’ organisation also reaffirms our commitment to tackling the climate crisis, and we can use what we learn along the way to support wider change throughout the historic environment and public sector.



1.2 WHY DO WE NEED TO GET ‘CLIMATE READY’?

The climate is already changing: There has been a sustained and notable shift in our climate in recent decades¹. These changes in climate will continue, and intensify, in the decades ahead. Though uncertainty exists in the extent to which our climate will change in the longer-term, we know enough to recognise that becoming ‘climate ready’ is an essential activity.

Mitigating climate change alone is not enough: There is a lag-effect in the relationship between emissions and their influence on the climate. If global emissions of greenhouse gases ceased tomorrow, we would still see changes in our climate in the years ahead as historic emissions continue to influence the climate. The anticipated level of climate change projected up to 2050 is now largely locked into our climate system².

It makes good business sense: When it comes to understanding the climate risks we are exposed or vulnerable to, knowledge is power. Horizon scanning of climate risks, and proactively preparing for them, is a fitting endeavour for the lead public body of Scotland’s historic environment. It is how we will remain a high-performing organisation, now and in the future.

The future opportunities are worth the upfront work: Adapting to the impacts of climate change and becoming ‘climate ready’ is full of opportunity. There are opportunities to make better use of finite resources, adopting other climate action principles (like a circular business model) and exploration of new and innovative income streams. Many of these actions have co-benefits, fulfilling adaptation objectives at the same time as addressing the root cause of climate change.

The public sector has a leading role to play: The Scottish Government’s **Climate Change Adaptation Programme** sets clear expectations on the public sector. Action to improve our own, and wider society’s, resilience against the impacts of climate change must be a fundamental component of our climate action ambitions as a lead public body.

...though legislation only sets the minimum standard we want to achieve: We want to go beyond the minimum requirements of legislation and stay ahead of the curve. As momentum builds behind International Standards on adaptation, and as **Task Force on Climate-related Financial Disclosures** reporting requirements gain traction in the private sector, our climate ready plan can keep us at the forefront of managing climate risk and preparing for the impacts of climate change.



1. Adaptation Scotland: **Climate Projections for Scotland (2021)**
2. Climate Change Committee: **Independent Assessment of UK Climate Risk (2021)**

I.3 CLIMATE RISKS

The two categories of climate risk that we focussed on as part of our climate risk assessment were:

- 1. Physical climate risks:** These are risks directly linked to changes in our climate. This includes risks from increased frequency and severity of extreme weather events, or from the continued shift in climate and ecosystems over time. Physical risks can be described as³:

 - **Acute:** these are risks from higher frequency and severity of single events, e.g. an intense rainfall event, a flood, wildfire or heatwave.
 - **Chronic:** these are risks introduced as a result of longer-term changes and shifts in our climate, e.g. gradual changes in temperature, sea-level rise, and spread of pests and disease.
- 2. Transition climate risks:** These are risks introduced as regulators, legislators, consumers and companies take action to mitigate climate change and transition towards a low-carbon economy. Guidance from the Task Force on Climate-related Financial Disclosures⁴ categorises transition risks under the following themes:

 - **Policy and legal:** This covers changing legislation and reporting requirements placed on public bodies to help address the climate crisis.
 - **Technology:** This covers risks introduced as new technologies emerge, displacing older systems.
 - **Market:** This covers changes in the supply and demand for certain products and services and could include changing customer and stakeholder behaviours that impact our business operations.
 - **Reputation:** This covers risks around changing customer and stakeholder expectations and preferences on our organisation, as well as the possible stigmatisation of sectors that are viewed as part of the climate crisis problem (and not part of the solution).



3. McKinsey Global Institute: *Climate Risk and Response* (2020)

4. Task Force on Climate Related Financial Disclosures: *Recommendations of the Taskforce* (2017)

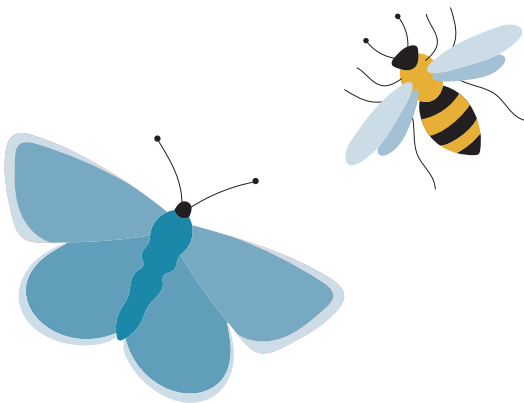
1.4 OPPORTUNITIES

In their 2019 report, ‘A Global Call for Leadership on Climate Resilience’⁵ the Global Commission on Adaptation described the ‘triple dividend of adaptation’. The three parts of this dividend are:

- 1. Avoided losses:** For HES, this could be the ability of our investments to reduce losses associated with climate risks, e.g. income loss or physical and material loss of properties, collections and other assets as a result of climate extremes.
- 2. Economic gains:** These are the financial benefits of avoided losses mixed in with benefits of innovation and creating new, more resilient ways of working as an organisation.
- 3. Social, environmental and cultural benefits:** Becoming climate ready and adapting to climate change means looking after the things that are important to us (our people, our properties and their natural capital, our core purpose as an organisation) and allowing them to thrive in a world undergoing rapid change.

The benefits of understanding, and acting on, the climate risks we are exposed to as an organisation are further highlighted in the Task Force on Climate Related Financial Disclosures guidance and recommendations on climate risk³. In this, opportunities associated with adapting to climate change are said to include:

- **Resource efficiency:** This includes smarter use of energy, water and finite resources, plus adopting other climate action principles (such as a circular business model). In doing all this, we reduce our exposure to certain climate risks and mitigate the root cause of climate change at the same time.
- **Products and services:** There are significant opportunities around the research and development of new and innovative products and services. At HES, this could include placing a greater emphasis on the environmental impact of the products we procure and services we offer – and working to reduce emissions associated with this.
- **Markets:** This includes pro-actively diversifying our activities and income streams and seeking those that are more resilient themselves to various climate risks. Doing this will place our organisation in a strong position to successfully transition to the low-carbon economy.



5. The Global Commission for Adaptation: A Global Call for Leadership on Climate Resilience (2019)

I.5 PROJECT METHODOLOGY

Here we provide a brief summary of the steps we undertook to create our Climate Ready HES plan. For more detail, see our **Project Methodology and Results** document.



Step One

Pre-project: Reviewing our adaptation progress to date, using tools and guidance developed by Adaptation Scotland, and establishing the need for our 'Climate Ready HES' project.

Step Two

Stakeholder engagement: Forming a cross-organisational working group that would carry out a series of 'climate ready' activities and briefing the group on project scope and tasks to be undertaken.



Step Three

Data and evidence gathering: Going out into our organisation to gather data and evidence that would support our climate risk assessment, including recording the key functions and responsibilities of each directorate and key areas of exposure or vulnerability to climate change.

Step Four

Making sense of data and evidence: Collating all the data and evidence gathered in and refining it down into series of key climate risks, this included identifying solutions to address the risks and trialling way of prioritising.



Step Five

Preparing the plan: Finalising risk descriptions and our adaptation response and presenting to our Senior Management Team for feedback, then approval.

2. CLIMATE RISK ASSESSMENT RESULTS



Blackness Castle

In this section we present an overview of our climate risk assessment results. For more detail, see our **Project Methodology and Results** document.

We carried out a strategic level climate risk assessment of our organisation, informed by tools and guidance developed by Adaptation Scotland. This included the **Adaptation Capability Framework** and the **Strategic Climate Change Risk Assessment tool**.

Our climate risk assessment identified 28 key climate risks that, based on our current understanding, we believe to be areas where further action is required. The identified risks group into **five risk categories**, those are:



Physical assets: This category covers risks on the assets that we own or care for, such as increased frequency and severity of flooding. This includes built assets such as our offices, depots and warehouses, and their supporting infrastructure such as IT and mechanical and engineering equipment. Additional risks to the Properties in Care and their other associated designations, such as Designed Gardens and Landscapes, are covered here too.



Natural capital: This category covers risks, for example, to the flora and fauna of our Properties in Care from the spread of new and invasive species. It also includes increased rates of degradation of our Property in Care grounds, such as increasing frequency of rockfall events. The risks described in this section also cover other designations often associated with the places we look after, for example, **Sites of Special Scientific Interest**.



Operations: This category covers risks, such as increased frequency of travel disruption as a result of weather extremes, and the impact on delivery of our key functions. For example, operating visitor attractions and their supporting activities (e.g. catering and retail offerings) or travelling throughout the country to survey, record and inspect sites of historic interest.

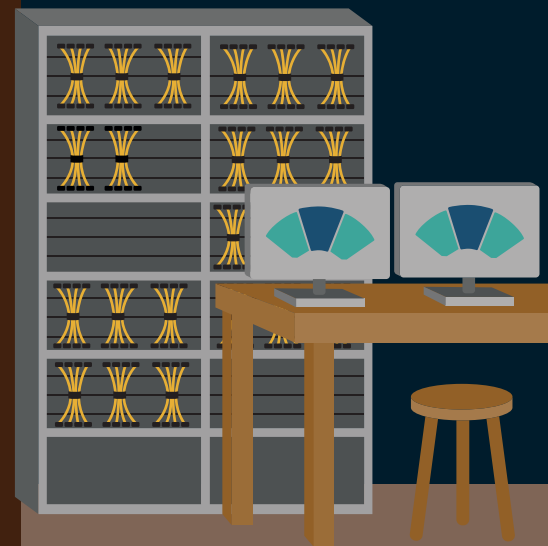
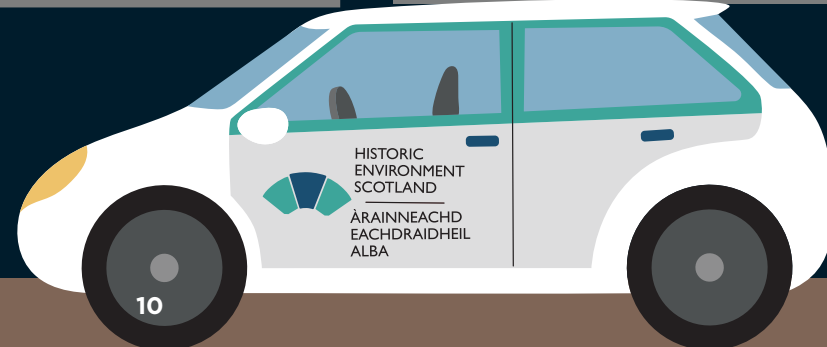
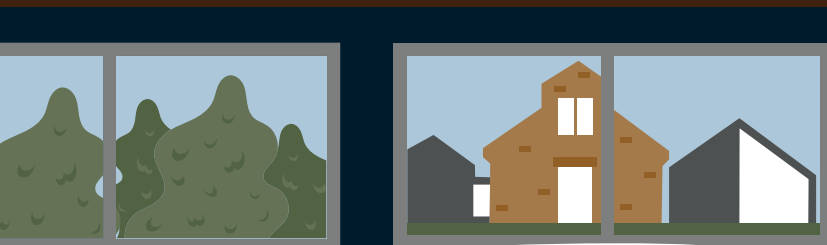


People: This category covers risks associated with our people. For example, the increased risk of overheating in office spaces due to hotter summers. It also includes the impact of the climate crisis more generally on our people, including increased levels of concern and worry.



Transition: This category covers risks associated with the transition to low-carbon economy. This includes risks associated with rapidly changing climate change legislation and policy, or the changing expectations of visitors and other stakeholders.

Climate Ready HES



2.1 PHYSICAL ASSETS



We have a diverse range of physical assets with a wide geographical spread across the country. This includes built assets such as our offices, depots and warehouses and their supporting infrastructure such as IT and mechanical and engineering equipment.

Included within our definition of physical assets are the 336 Properties in Care and their associated collection of over 40,000 objects. We also look after, and curate, an extensive archive and library relating to Scotland's architectural, archaeological, industrial and maritime heritage, as well as the National Collection of Aerial Photography (NCAP). All these 'assets' have potential to be impacted by climate change, some more than others, and with varying degrees of risk.

An additional complexity with our assets is that many, by their very nature, have very long lifespans. We look after assets that have been around for millennia, and we want them to be around for many years still to come.



Dunkeld Cathedral

Key risks identified

(including unique risk code):

- **PA01:** Changing weather patterns / increased occurrence of natural hazard events causing increased rates of decay of our Properties in Care
- **PA02:** Increased risk of flooding and associated impacts on our offices, depots and other supporting infrastructure
- **PA03:** Weather extremes / natural hazard events causing increased risk of damage to IT infrastructure
- **PA04:** Rising temperatures causing increased demand for cooling (and energy) in our buildings
- **PA05:** Hotter and drier summers increasing the risk of wildfire across our estate
- **PA06:** Changing weather patterns / increased occurrence of natural hazard events causing increased risk of damage/ loss to our collections and archives
- **PA07:** Changing visitor behaviours and numbers (combined with changes in climate) increasing rates of degradation of Properties in Care



These 'assets' have potential to be impacted by climate change, some more than others.



2.2 NATURAL CAPITAL



Natural Capital is defined as ‘the stocks of natural assets which include geology, soil, air, water and all living things’⁶. It also speaks to the benefits that nature brings to humans and, by default, organisations like ours.

The properties we care for contain more than just the physical monuments. They contain a mix of habitats, landforms and ecosystems that are part of our country’s natural capital. From beaches and dunes to exposed hilltops to river valleys and everything in between. These landscapes and landforms provide key benefits such as spaces for recreation and enjoyment, important wildlife and ecological habitats and natural defences against hazards such as flooding and coastal erosion.

The sustained shift in our climate is already having an impact on the natural capital associated with our properties. Changes in temperature, precipitation and other elements of our climate are impacting the distribution of flora and fauna and altering patterns of decay and degradation across our estate. These changes also increase the risk of pre-existing natural hazards, such as wildfire, landslides and rockfall.



Aberdour Castle

Key risks identified:

- **NC01:** Extreme weather / natural hazard events causing increased need for maintenance of green space
- **NC02:** Changing weather patterns causing degradation and changing character of Property in Care landscapes
- **NC03:** Increasing temperatures causing spread of invasive pest species and changes to established Property in Care biodiversity
- **NC04:** Hotter, drier summers causing increased risk of drought and water supply issues
- **NC05:** More frequent weather extremes / natural hazard events causing breakdown of vulnerable natural barriers
- **NC06:** Changing weather patterns causing increased risk of ground instability and rockfall / deterioration of geological exposures

The sustained shift in our climate is already having an impact on the natural capital associated with our properties.



6. Scottish Forum on Natural Capital: **Natural Capital Scotland**



2.3 OPERATIONS



Due to the nature of our organisation, we are inherently vulnerable to disruption caused by unpredictable, often extreme, weather events.

Extremes in temperature, precipitation and wind can result in disruption at our Properties in Care, depots and offices, impacting on staff and visitors, and reducing the financial performance and resilience of the organisation. It can also disrupt the supply chains that we depend on and consequently our ability to deliver business critical functions and key operations.

We have a geographically wide-spread workforce and diverse set of operations that combine to form lots of opportunities for the weather to impact our organisation. This includes the running of visitor attractions and supporting activities (e.g. catering and retail offerings) and the need for staff to travel throughout the country to survey, record and inspect sites of historic interest - and a whole host of activities in between.

Disruption to our organisation can also affect our ability to deliver our core functions, which are set out in the **Historic Environment Scotland Act 2014**. Those core functions include: (a) identifying and recording the historic environment; (b) understanding and interpreting the historic environment; (c) learning about, and educating others about, the historic environment; (d) protecting and managing the historic environment; and (e) conserving and enhancing the historic environment.



Disruption to our organisation can also affect our ability to deliver our core functions.



HES Network Technician

Key risks identified:

- **OP01:** Extreme weather / natural hazard events causing increased risk of disruption/ shock to our supply chain
- **OP02:** Extreme weather / natural hazard events and associated challenges in communicating closures with public
- **OP03:** Extreme weather / natural hazards leading to more frequent closure of our Properties in Care
- **OP04:** Extreme weather / natural hazard events resulting in increasing number of working days lost / disrupted
- **OP05:** Extreme weather / natural hazard events causing disruption to staff travel (commute / business travel)
- **OP06:** Extreme weather / natural hazard events resulting more frequent postponement / cancellation of events



2.4 PEOPLE

The way climate change could impact our people is varied, and often hard to predict or pinpoint. We employ around 1400 people who are located throughout the country, with a diverse range of roles and responsibilities.

Many roles within our organisation require our people to travel around the country and carry out site-visits and field work. Others, with primarily desk-based or location specific roles, work in a variety of property types from offices, to laboratories, to workshops and visitor centres (amongst other types).

This creates many ways our people could be impacted by both physical and transition climate risks. There are some more obvious examples like the risk of overheating in enclosed spaces or the risk of natural hazard events (e.g. flooding) when traveling. Many of these are occupational risks that we already know about, though they are exacerbated by climate change.

There are then risks that are trickier to tie down. For example, around increasing levels of concern and anxiety as the climate crisis further dominates our day to day lives.

Many of these are occupational risks that we already know about, though they are exacerbated by climate change.



Key risks identified:

- **PE01:** Extreme weather / natural hazard events impacting staff health and safety when traveling / onsite visits / outdoor working
- **PE02:** High temperatures increasing the risk of overheating in offices, depots and other enclosed spaces
- **PE03:** Heightened awareness of climate crisis issues leading to increased levels of concern and anxiety amongst our people



HES Conservation colleagues at Tantallon Castle



PRESENT

PAST

FUTURE

OUR FUTURE

NO PLANET
I ❤️

Funded by HES

2.5 TRANSITION

We have a diverse range of functions as an organisation:

- We care for more than 300 sites of national importance across the country and are the largest operator of paid visitor attractions in Scotland.
- We look after internationally significant archives and artefacts.
- We are at the forefront of investigating and researching the historic environment and addressing the impacts of climate change on its future.
- We protect our historic places through designations and consents, promote their sustainable development, and provide millions of pounds each year to local communities to repair and revitalise their historic environment.
- We provide advice and guidance about the historic environment and offer a wide range of training and learning opportunities.

This diverse range of functions leaves us open to a range of different transition climate risks, many centred around the transition toward a more sustainable, or responsible, means of operating large visitor attractions (sustainable tourism).

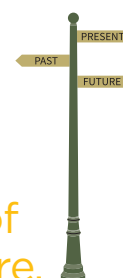


HES Climate Action Plan workshop

Key risks identified:

- **TR01:** Enhanced climate action expectations on public sector bodies and misalignment of our own policy and strategy with Scottish Government climate change targets
- **TR02:** Dependence on a carbon and resource intensive operational model, and tourism sector, to generate revenue increasing the risk of reputational damage and impact on income
- **TR03:** Rapidly changing customer and stakeholder expectations for climate action not met, resulting in reputational damage and impact on income
- **TR04:** Rapidly evolving knowledge of action needed to address the climate crisis misaligned with the advice and guidance we publish leading to misinformation / reputational damage
- **TR05:** Changing government priorities leading to risk of reduced funding in future
- **TR06:** Maintenance deficit in historic environment, combined with a changing climate, leading to increased demand on resources (e.g. PiC conservation budget and HES grants)

We are at the forefront of investigating and researching the historic environment and addressing the impacts of climate change on its future.



3. OUR ADAPTATION RESPONSE



Edinburgh Castle

We call the actions that we will take to address the climate risks identified our ‘adaptation response’. Our Climate Ready HES plan focuses on an adaptation response that we can implement over the next five years and that is generally focused on near-term activity - though the benefits will be realised over a much longer timescale. Our adaptation response at this stage is based on:

- Implementing ‘no-regret’ and ‘low-regret’ actions that act to reduce current climate risk, with longer-term benefits for addressing future climate risk. This means focussing on actions that are relatively low-cost and work to address both current and future climate risks.
- Rapidly increasing our ability and capacity to deal with future changes in the climate. This will allow us to plan for, and implement, more transformational adaptation toward the end of this plan’s five-year cycle.
- Developing processes that will allow us to avoid the lock-in of future climate risk and mainstreaming adaptation action throughout our organisation.

Our Climate Ready HES plan focuses on an adaptation response that we can implement over the next five years.



Our ‘**primary adaptation response**’ is a series of ten priority actions that will help address multiple risks identified. These actions are:

- 1. Enhance our internal governance and management arrangements** to effectively mainstream ‘climate ready’ action and learning across all areas of our organisation.
- 2. Commit appropriate resources to climate change adaptation measures** alongside mitigation measures to begin delivering parity between work areas of equal importance.
- 3. Expand our in-house adaptation capabilities** to deliver the necessary tools, resources and skills required to mainstream our climate ready ambitions across our organisation. Example activities include:
 - Identifying specialist skills and knowledge gaps that we will need to fill in order to future-proof our organisation, including the need for enhanced climate science and data analytic capabilities and adaptation specialists.
 - Working across our organisation to better understand the information required by various users to conduct climate risk assessments (e.g. the need for quantitative data versus qualitative data).
 - Identifying training and guidance opportunities to upskill our people. For example, training on climate risk assessment implementation.

4. Invest in early warning capabilities for day-to-day physical climate risk (weather and natural hazard events), putting the safety and wellbeing of people, visitors, contractors and other stakeholders at the core of becoming 'climate ready'.

- Making use of Met Office Weather Warnings and providing updated guidance for staff on how to stay safe during periods inclement weather.
- Working with organisations like the Scottish Environment Protection Agency to make better use of their flood risk alerts and weekly water scarcity reports.
- Scoping ways of providing automated alerts for staff (e.g. through email or text) when certain levels of weather or flood warnings are issued.

5. Develop climate scenarios to stress-test decisions we make as an organisation. This will ensure our decisions are robust enough to navigate the transition to a low-carbon economy and physical changes in our climate.

- Developing descriptive qualitative scenarios / storylines that present accessible information on plausible future climates. These would be used to explore a range of implications of future climate risks on our organisation and promote alternatives to 'business as usual' operations and activities.
- Exploring the use of more quantitative future scenarios, such as the Network for Greening the Financial System's **Climate Scenarios** or the UK **Socioeconomic Scenarios** hosted by the UK Climate Resilience Programme.
- Further developing our understanding and use of the UK Climate Change Projections, including more novel uses such as the development of future storylines grounded in the climate science.

6. Integrate assessments of climate risk across our organisation to reduce the danger of 'locking in' future risk. This will be included throughout all major decisions we take and in major projects, long-term investment considerations, strategies, plans and policies that we develop for our organisation and the wider sector. Example activities include:

- Creating a 'light' version of the Climate Ready HES methodology to be used by project owners and teams to screen for climate risks.
- Review current risk management practices in the organisation and identify ways of integrating assessments, and raising awareness of, climate risk.

7. Mainstream 'adaptation' action into our plans, policies and procedures. Reducing our dependence on a standalone 'climate ready' plan by integrating adaptation activities into all relevant plans, policies, projects and procedures.

- Working with our 'Policy Network' to list upcoming policy and strategy reviews and working with them to embed adaptation activities within updated organisational policies and strategies.
- Establishing a process for all new plans, policies and procedures to be screened for potential to deliver good practice adaptation activities.
- Regularly promoting and sharing examples of good adaptation, for example on our intranet or in regular vlog updates given by our Chief Executive or Senior Management Team.

8. Enhance our data collection and analysis capability in order to better monitor climate risks, support the development of thresholds that trigger action and to monitor progress and impact of our adaptation measures. Example activities include:

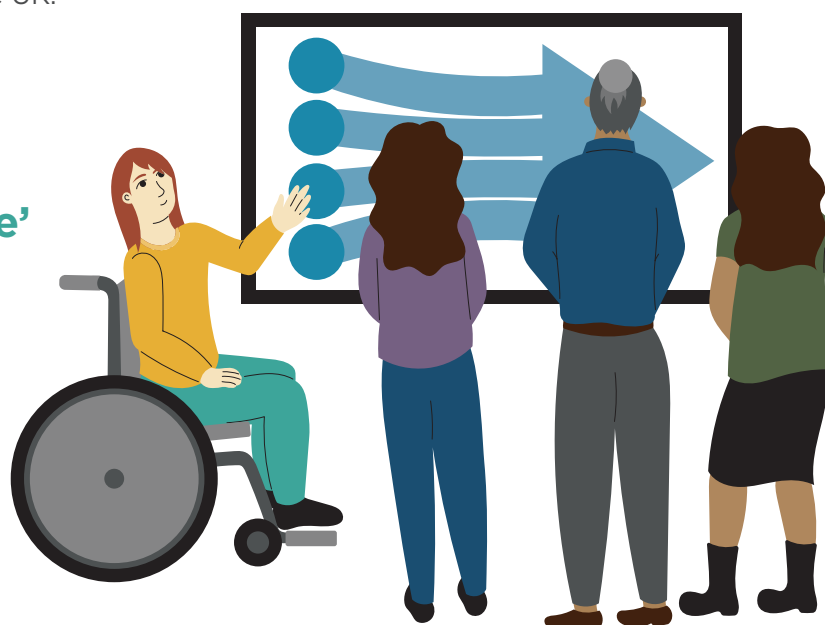
- Provide staff with an easy means of reporting climate related damage and disruption. For example, creating a simple online form with photo upload capability on our Property in Care Asset Management System (PICAMS).
- Using a similar system described above, provide staff with an easy means of recording sightings of flora and fauna at our Properties in Care. This would allow us to establish a species baseline and, in time, support in monitoring the spread of flora and fauna and appearance of invasive and pest species of concern.

9. Co-create an 'Adaptation Manual' that provides staff with advice and guidance on how to take well-considered climate change adaptation actions. This will be supplemented with training / upskilling opportunities for our people and developed in partnership with other heritage agencies and public bodies across the UK.

10. Invest in our research capabilities to test and trial innovative adaptation solutions that not only support our organisation, but the wider historic environment and public sectors. For example, making 'climate change adaptation' a core organisational research objective and seeking opportunities to create collaborative research projects both internally and externally. This would include active collaboration with academic and other sector partners.

As well as the primary adaptation response actions, there are a series of secondary risk specific actions that we will carry out. These can be found in Appendix B.

Our '**primary adaptation response**' is a series of ten priority actions that will help address multiple risks identified.



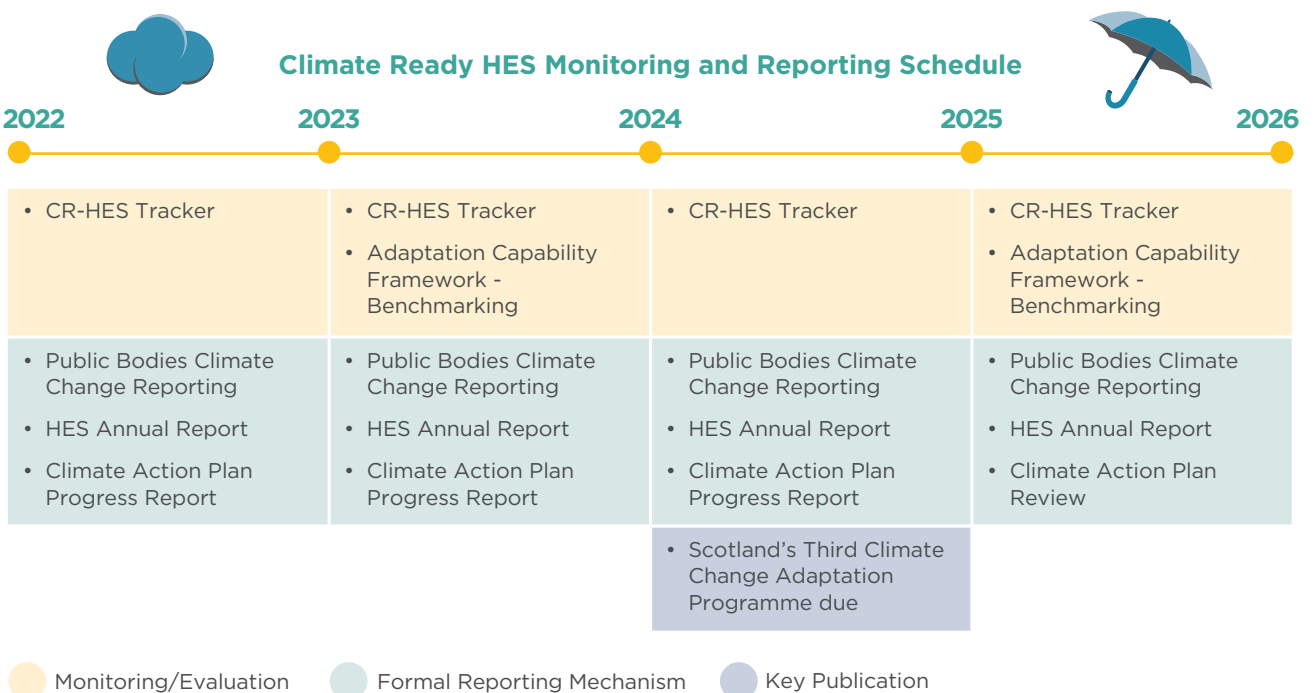
4. MONITORING OUR PROGRESS



Establishing a monitoring and evaluation framework for Climate Ready HES is crucial. For each of the adaptation responses outlined in this report, monitoring and evaluation will allow us to track progress, assess effectiveness, highlight corrective measures that may be required, learn from practice and help identify barriers to implementation.

We will monitor and evaluate the progress of Climate Ready HES by:

1. Developing a **‘climate ready’ tracker**, in partnership with Adaptation Scotland, that will be used to record progress against each of the 28 identified risks and their adaptation responses. Certain risks may be adopted into our pre-existing risk management process. This would provide an additional avenue for regular reporting and monitoring of risks.
2. Re-running Adaptation Scotland’s **Capability Framework benchmarking** tool every 18 months to track progress against the adaptation capabilities outlined in that framework.
3. Continuing to **report on our progress** as part of the **Public Bodies Climate Change Reporting Duties** and through our Annual Report submitted to government each year. The Scottish Government has recently strengthened their legislative framework around adaptation progress reporting. From reporting year 2021-22, it will be mandatory for bodies to provide in their annual reports what contribution the body has made to help deliver **Scotland’s Climate Change Adaptation Programme**.
4. **Monitoring performance** of our Corporate Plan and Annual Operating Plan KPI’s related to climate action. Climate Ready HES is crucial to the delivery of these high-level KPI’s.



APPENDIX A

A visual summary of key crossover points between **Climate Ready HES** and our **Climate Action Plan**.



APPENDIX B

The following tables outline a series of secondary risk specific actions that we will carry out – our **‘Secondary Adaptation Response’**. These actions work alongside the Primary Adaptation Response outlined in Section Three.

Table 1 Physical Assets - Secondary Adaptation Response actions



Physical Asset Risks						
PA01	PA02	PA03	PA04	PA05	PA06	PA07
Changing weather patterns / increased occurrence of natural hazard events causing increased rates of decay of our Properties in Care	Increased risk of flooding and associated impacts on our offices, depots and other supporting infrastructure	Weather extremes / natural hazard events causing increased risk of damage to IT infrastructure	Rising temperatures causing increased demand for cooling (and energy) in our buildings	Hotter and drier summers increasing the risk of wildfire across our estate	Changing weather patterns / increased occurrence of natural hazard events causing increased risk of damage/ loss to our collections and archives	Changing visitor behaviours and numbers (combined with changes in climate) increasing rates of degradation of Properties in Care
Secondary Adaptation Response						
Creation of a stone type database of the Properties in Care, assessed for vulnerability to climate change		Identification of vulnerable ICT equipment compiled and watchlist created		Develop ‘managing wildfire risk’ guidance and begin to implement controls at high-risk Properties in Care	Include consideration of weather / natural hazard risks in salvage plans	Identification of sites experiencing degradation as a result of visitor pressures and climate change
						Explore further potential, and use, of the Monument Monitor system





Table 2 Natural Capital - Secondary Adaptation Response actions

Natural Capital Risks					
NC01	NC02	NC03	NC04	NC05	NC06
Extreme weather / natural hazard events causing increased need for maintenance of green space	Changing weather patterns causing degradation and changing character of Property in Care landscapes	Increasing temperatures causing spread of invasive pest species and changes to established Property in Care biodiversity	Hotter, drier summers causing increased risk of drought and water supply issues	More frequent weather extremes / natural hazard events causing breakdown of vulnerable natural barriers	Changing weather patterns causing increased risk of ground instability and rockfall / deterioration of geological exposures
Secondary Adaptation Response					
Horizon scanning and identification of flora and fauna species of concern – creation of a watchlist			Liaise with Scottish Water for advice on drought risk and future-planning		Scope the use of NatureScot’s GeoHeritage Climate Change Risk Assessment methodology on relevant Properties in Care
Appraisal of options to improve ecological condition of green space associated with the Properties in Care			Review SEPA’s Water Scarcity and Drought Risk Assessment tools – consider ways of integrating and disseminating live ‘water scarcity’ information to our regions		





Table 3 Operation Risks - Secondary Adaptation Response actions

Operation Risks					
OP01	OP02	OP03	OP04	OP05	OP06
Extreme weather / natural hazard events causing increased risk of disruption/ shock to our supply chain	Extreme weather / natural hazard events and associated challenges in communicating closures with public	Extreme weather / natural hazards leading to more frequent closure of our Properties in Care	Extreme weather / natural hazard events resulting in increasing number of working days lost / disrupted	Extreme weather / natural hazard events causing disruption to staff travel (commute / business travel)	Extreme weather / natural hazard events resulting in more frequent postponement / cancellation of events
Secondary Adaptation Response					
More frequent, and routine, analysis of impact of site closures (due to weather) on income generation					Enhance our ability to deliver digital events
		Review severe weather policy and produce new staff guidance on staying safe during periods of inclement weather			
			Continue the move towards more flexible and remote working, including provision of new ICT services at more remote sites		
		Explore partnership opportunities with other public bodies to create shared regional office hubs			
	Scope the creation of an automated PiC closure notification system that links our asset management system with the HES website				

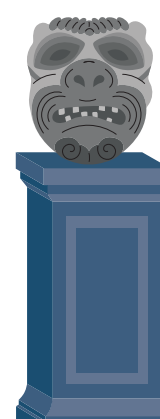




Table 4 People - Secondary Adaptation Response actions

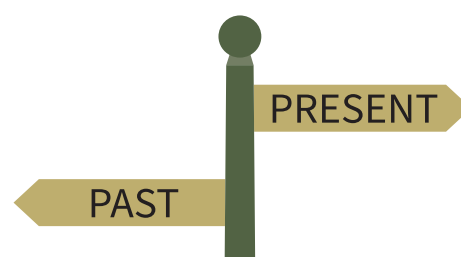
People Risks		
PE01	PE02	PE03
Extreme weather / natural hazard events impacting on staff health and safety when traveling / onsite visits / outdoor working	High temperatures increasing the risk of overheating in offices, depots and other enclosed spaces	Heightened awareness of climate crisis issues leading to increased levels of concern and anxiety amongst our people
Secondary Adaptation Response		
Review severe weather policy and produce new staff guidance on staying safe during periods of inclement weather		Undertake a survey of our people to determine levels of awareness of climate change and associated issues, and levels of ambition / desire to act on climate change
Develop an alert system that lets staff know when there is a heightened risk of a hazard (e.g. a prolonged hot spell)		Develop a HES Climate Action Plan training course to provide tailored training for people who wish to upskill in an area of 'climate action'
		Creation of a rolling programme of climate action activity as part of our Wellbeing Programme
		Place a stronger emphasis on our Green Champions Network as a support network that provides space for our people to talk openly about concerns that they have and challenges they are facing





Table 5 Transition Risks - Secondary Adaptation Response actions

Transition Risks					
TR01	TR02	TR03	TR04	TR05	TR06
Enhanced climate action expectations on public sector bodies and misalignment of our own policy and strategy with Scottish Government climate change targets	Dependence on carbon intensive sectors to generate revenue increasing the risk of reputational damage and impact on income	Rapidly changing customer and stakeholder expectations for climate action not met resulting in reputational damage and impact on income	Rapidly evolving knowledge of action needed to address the climate crisis misaligned with the advice and guidance we publish leading to misinformation / reputational damage	Changing government priorities leading to risk of reduced funding in future	Maintenance deficit in wider historic environment, combined with a changing climate, leading to increased demand for HES Grants
Secondary Adaptation Response					
Improved horizon scanning of Government policy/strategy and implications for HES, including the government's 'route map to 2032' – published as part of the last Climate Change Plan update (2020)					
Review current Risk Management Strategy for the organisation and assessment of how it can support in the mainstreaming of climate action					
Establish a cross-directorate working group to scope and steer a major shift from reliance on carbon intensive goods and services to low-carbon alternatives			Continue work to demonstrate the value of the historic environment with attention to embodied carbon, traditional skills and materials, learning from the past and learning from loss		
		Begin periodic surveying of Historic Scotland Members, and other key stakeholders on climate action sentiment / expectations		Ensure grants scheme is supporting climate resilience in the historic environment and consider as part of Grants Programme review	
		Explore the possibility of establishing a 'Climate Assembly' of Historic Scotland Members and other key stakeholders to shape our climate action ambitions		PiC Sustainable Management Plan development	



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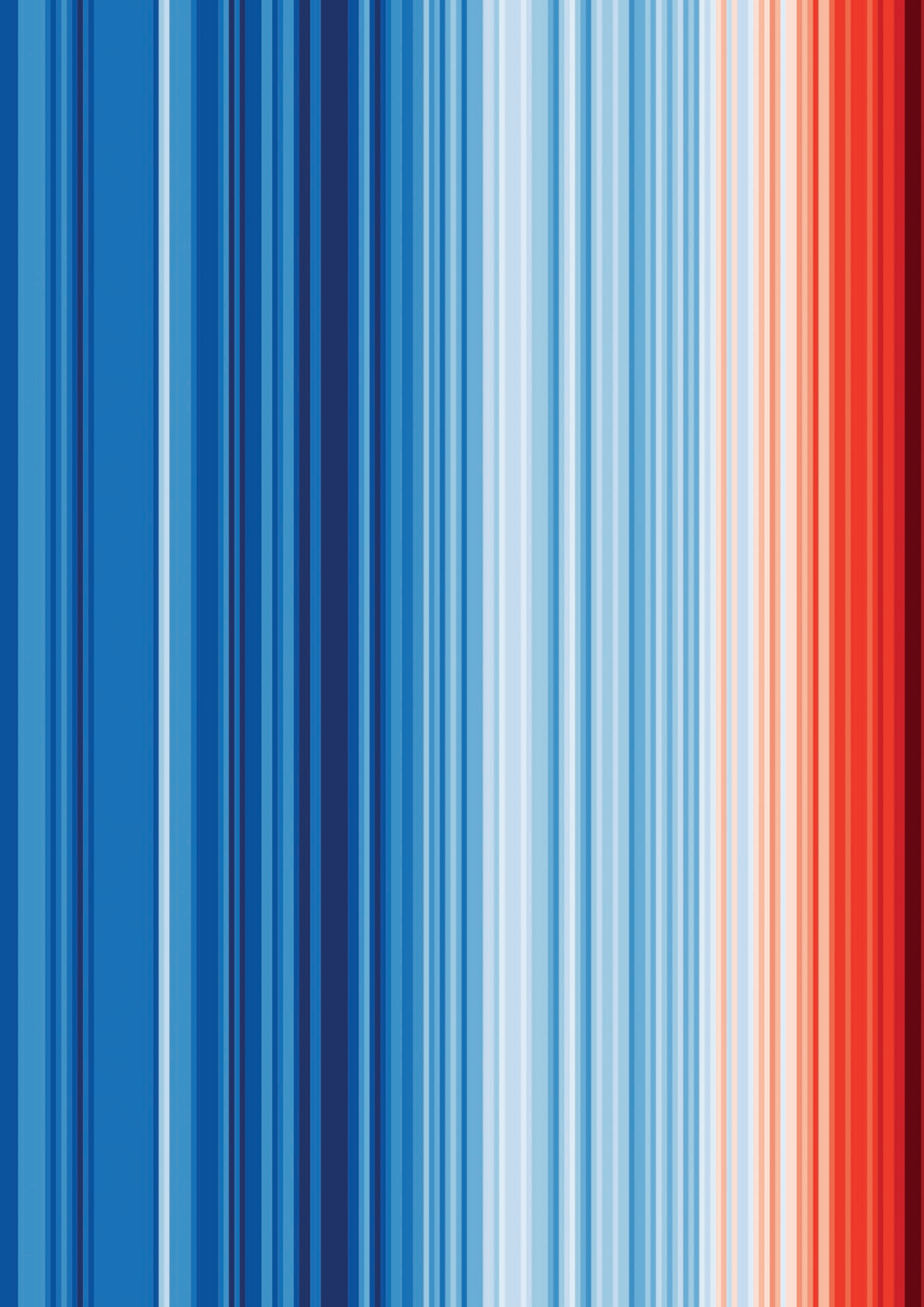
Adaptation Scotland:

We extend our thanks to Adaptation Scotland for their support throughout this project. We would encourage others starting out on their ‘climate ready’ journeys to make use of the resources developed by Adaptation Scotland and their partners.

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