CLIMATE CHANGE ADAPTATION SECTORAL PLAN FOR BUILT AND ARCHAEOLOGICAL HERITAGE APPROPRIATE ASSESSMENT SCREENING REPORT

Determination of the need for Appropriate Assessment for the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage prepared under the National Climate Change Adaptation Framework

Department of Culture, Heritage and the Gaeltacht

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Prepared in collaboration with the

Department of Culture, Heritage and the Gaeltacht

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INTRODUCTION

Under the Climate Action and Low Carbon Development Act 2015, the Minister for the Department of Communications, Climate Action and Environment (DCCAE) must submit to Government a series of successive National Mitigation Plans and National Adaptation Frameworks (NAF).

This mandate is preceded by an adaptation strategy set out by the European Union (EU) in the 2009 white paper *Adapting to Climate Change: Towards a European Framework for Action*, which encourages member states to develop their national climate change adaptation frameworks based on a 2-phase process. The first phase focuses on the identification of national vulnerabilities to climate change and the second phase, which we are now in, involves the development of sectoral and local authority climate change adaptation plans.

The inclusion of Built and Archaeological Heritage as one of the twelve sectors covered within Ireland’s National Adaptation Framework fits within this policy context.

The purpose of this document is to determine the need for an Appropriate Assessment of the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage prepared under the National Climate Change Adaptation Framework by the Department of Culture, Heritage and the Gaeltacht.

The preparation of the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage was led by the Department of Culture, Heritage and the Gaeltacht. The plan has been informed by existing research, including a background report commissioned by the Department of Culture, Heritage and the Gaeltacht (DCHG) (Daly, 2017) and climate change projections for Ireland (Nolan, 2015). In order to add robustness and to ensure relevance in an Irish context the project has incorporated expert, stakeholder and public consultation throughout the process. The draft Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage was then subject to public consultation, engagement with the Climate Change Advisory Committee, and the final document updated accordingly.
PURPOSE OF THE PLAN

The Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage has been prepared under the National Climate Change Adaptation Framework.

It will inform the development of Department of Culture, Heritage and Gaeltacht policy on climate change adaptation in relation to our built and archaeological heritage based on a current understanding of the consequences of climate change for the sector within Ireland.

The Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage has been written according to the Sectoral Planning Guidelines for Climate Change Adaptation produced by the Department of Communications, Climate Action and Environment (DCCAE, 2018).

These guidelines detail a six-step methodology for creating an adaptation plan:
1. Preparing the Ground
2. Climate impact Screening
3. Prioritisation
4. Priority Impact Assessment
5. Develop your plan
6. Implement, Evaluate and Review

The Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage sets out a high level policy on climate change adaptation, in relation to the Built and Archaeological Heritage sector, based on a current understanding of the consequences of climate change for the sector within Ireland.

The Plan includes:
- A review of the existing science relating to the potential impacts of climate change
- An outline of the Built and Archaeological Heritage sector in Ireland
- An outline of the vulnerability of the Built and Archaeological Heritage sector to impacts of climate change
- Information on potential effects of climate change on the Built and Archaeological Heritage sector
- An outline of climate change adaptation options for the Built and Archaeological Heritage sector

It may help inform the development of policies, strategies, plans and measures for, or related to, the Built and Archaeological Heritage sector in relation to adapting to the potential impacts of climate change.

Each of these individual policies, strategies, plans and measures will, where appropriate, be subject to screening for Strategic Environmental Assessment (SEA) and/or screening for Appropriate Assessment (AA) as necessary.
OBJECTIVE OF APPROPRIATE ASSESSMENT

The aim of the European Habitats Directive (Council Directive 92/43/EEC on the conservation of wild habitats and of wild fauna and flora) is to create a network of protected wildlife sites across Europe, which are to be maintained at a favourable conservation status. Each member state must designate their most important natural areas as Special Areas of Conservation (SAC). The Directive specifies the scientific criteria on the basis of which SAC sites must be selected and very strictly curtails the grounds that can be used as justification for damaging a site. The network of sites is referred to as NATURA 2000 and includes SACs (Special Areas of Conservation) for protected habitats and species and SPAs (Special Protection Areas) for birds, which are designated under the European Birds Directive (Council Directive 79/409/EEC as amended by Directive 2009/147/EC). The European Communities (Birds and Natural Habitats) Regulations 2011 were implemented to transpose the Habitats Directive and the Birds Directive into Irish law as well as addressing transposition failures identified in the Court of Justice of the European Union (CJEU) judgements.

The European Parliament, in a communication to the European Council in September 2000, states: The implementation of the European Habitats Directive and Birds Directive, both with respect to species conservation and with respect to the establishment of the Natura 2000 network, is one of the most important tools for achieving the objectives of the Convention on Biological Diversity in the European Union and member states (European Parliament 2000).

It is a requirement of the Habitats Directive ((92/43/EEC) that the competent statutory consent authority must ensure that any plan, project or proposal, which is likely to have a significant effect on an SAC or SPA, is authorised only to the extent that the authority is satisfied it will not adversely affect the integrity of the area and that an appropriate assessment of the implications of the development for the conservation status of the site is undertaken.

Article 6 of the Habitats Directive provides a strict assessment procedure for any plan or project not directly connected with or necessary to the management of a designated European site but which has the potential to have implications for the site in view of the site’s conservation objectives.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Article 6(4) states:
If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.
There are four stages in an Appropriate Assessment as outlined in the European Commission Guidance Document (2001), summarised below:

**Stage 1: Screening**
The first step to establishing if an appropriate assessment is required is referred to as 'screening' and its purpose is to determine on the basis of a preliminary assessment and objective criteria if the plan or project, alone or in combination with other plans or projects, could have a significant effect on a Natura 2000 site in view of the sites conservation objectives. The process identifies any likely impacts upon a Natura 2000 Site, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.

**Stage 2: Appropriate Assessment**
This step considers the impact of the project or plan on the integrity of the Natura 2000 Site, either alone or in combination with other plans or projects, to the site's structure and function and its conservation objectives. Additionally, where there are deemed to be adverse impacts, an assessment of the potential mitigation of those impacts is considered.

**Stage 3: Alternative Solutions**
This stage examines alternative means of achieving the objectives of the project or plan that aim to avoid adverse impacts on the integrity of the Natura 2000 site.

**Stage 4: Imperative Reasons of Overriding Public Interest**
This stage is the main derogation process outlined in Article 6(4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project which will have adverse effects on the integrity of a Natura 2000 site to proceed.
IDENTIFICATION OF RELEVANT NATURA 20000 SITES

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are habitats of international significance that have been identified by NPWS and submitted for designation to the EU. 430 sites are designated as Special Areas of Conservation under the EU Habitats Directive and 135 sites are designated as Special Protection Areas (for Birds) under the EU Birds Directive. c.14% of the land is covered by SAC, SPA or both designations.

Ireland hosts 59 habitat types listed in Annex I and 26 species listed in Annex II of the EU Habitats Directive. 16 of the 59 Annex I habitats are priority habitats. Amongst these are active raised bog, active blanket bog, limestone pavements, orchid-rich calcareous grasslands, alkaline fens, turloughs, machair, fixed dunes and coastal lagoons. Other Annex I habitats include six marine habitats, saltmarshes, several lake types, heaths and scree/rock habitats. Annex II species include plants such as slender naiad (Najas flexilis) and marsh saxifrage (Saxifraga hirculus); invertebrates include whorl snails (Vertigo spp.) and freshwater pearl mussel (Margaritifera margaritifera); fish species include lampreys (Lampetra spp. and Petromyzon marinus). Annex II mammals found in Ireland include otter (Lutra lutra) and lesser horseshoe bat (Rhinolophus hipposideros), while marine species include bottlenose dolphin (Tursiops truncatus) and harbour porpoise (Phocoena phocoena). There are also 6 offshore SACs within the Irish EEZ protecting deep water coral reefs.

Within the framework of the Birds Directive, Ireland is of particular importance for migratory waterbirds and breeding seabirds. 25 species listed in Annex I of the Directive regularly occur including wintering whooper swan (Cygnus cygnus) and Greenland white-fronted goose (Anser albirostris flavirostris); breeding species such as corncrake (Crex crex) and terns (Sterna spp); as well as birds of prey including hen harrier (Circus cyaneus) and peregrine (Falco peregrinus).
APPROPRIATE ASSESSMENT SCREENING PROCESS

Stage 1 - Screening

The aim of the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage is to inform DCHG policy on adaptation to climate change within the Built and Archaeological Heritage sector, however, the document does not set out projects or specifically propose measures.

The table of proposed adaptation actions set out in Appendix 1, will generally require further consideration. These proposed adaptation actions, individual policies, strategies, plans and measures will, where appropriate, be subject to screening for AA. Depending on the outcome of the screening process these proposed adaptation actions will continue to full AA, as necessary.

Cumulative/In Combination Impacts

The EC Habitats Directive, the Planning Acts and the Habitats Regulations 2011 require that the impacts on Natura 2000 sites from the plan or project in question are assessed and that they are assessed in combination with other plans and projects that could affect the same Natura 2000 sites.

The other sectoral climate change adaptation plans that were available and reviewed as part of this AA screening report include:

- Seafood - Department of Agriculture, Food and the Marine
- Agriculture - Department of Agriculture, Food and the Marine
- Forestry - Department of Agriculture, Food and the Marine
- Electricity and Gas Networks - Department of Communications, Climate Action and Environment

All of these plans listed above have undergone AA and SEA screening, the results of which were publically available and these AA and SEA screening reports were also reviewed.

As these plans have themselves been screened for Appropriate Assessment, it is therefore assumed that if a plan has been adopted following Appropriate Assessment that it cannot pose likely significant adverse effects on a Natura 2000 site.

This screening assessment finds that the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage will not, either individually, in combination or cumulatively with the above identified plans adversely affect the integrity of any Natura 2000 site.

The outcome of this screening assessment is that the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage does not currently require full AA.

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1 Department of Agriculture, Food and the Marine. Agriculture, Forest and Seafood Sectoral Climate Change Adaptation Plan. Draft for Public Consultation.
2 Department of Agriculture, Food and the Marine. Agriculture, Forest and Seafood Sectoral Climate Change Adaptation Plan. Draft for Public Consultation.
3 Department of Agriculture, Food and the Marine. Agriculture, Forest and Seafood Sectoral Climate Change Adaptation Plan. Draft for Public Consultation.
4 Department of Communication, Climate Action and Environment. Draft Statutory Climate Change Adaptation Plan for the Electricity and Gas Networks Sector.
CONCLUSION

The conclusion reached following the Stage 1 screening for Appropriate Assessment is that a full Appropriate Assessment is not required for the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage.

The purpose of the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage is to inform DCHG policy on the adaptation to climate change for Built and Archaeological Heritage. However the Plan does not consider project or location specific measures nor does it influence the development consent of any Built and Archaeological Heritage projects. Detailed individual policies, strategies, plans and adaptation measures which may be set out in later plans will undergo, as appropriate, SEA and AA. This will ensure that any plans or projects that are likely to result in significant effects on any Natura 2000 site will be considered within this process.

The following Climate Change Adaptation Sectoral Plans were also reviewed but no AA or SEA screening reports are currently available for them:

- Biodiversity - Department of Culture, Heritage and the Gaeltacht
- Transport Infrastructure - Department of Transport, Tourism and Sport
- Flood Risk Management - Office of Public Works
- Water Quality - Department of Housing, Planning and Local Government
- Water Services Infrastructure - Department of Housing, Planning and Local Government

The following sectoral plans were not available at the time of publication and have therefore not yet been assessed:

- Communications Networks - Department of Communications, Climate Action and Environment
- Health - Department of Health

It is unlikely that the outcome of this screening assessment (i.e. that the Climate Change Adaptation Sectoral Plan for Built and Archaeological Heritage does not require full AA) will be altered once the other sectoral plans detailed above are completed and undergo AA screening. The purpose of the various Climate Change Adaptation Sectoral Plan documents is to inform policy on adaptation to climate change in each of the various sectors. Detailed individual policies, strategies, plans and adaptation measures which may be set out in later plans for each sector will undergo, as appropriate, SEA and AA. This will ensure that any plans or projects that are likely to result in significant effects on any Natura 2000 site will be considered within this process.

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5 Department of Culture, Heritage and Gaeltacht. Ireland’s Biodiversity Sectoral Climate Change Adaption Plan. Draft for Public Consultation.
6 Department of Transport, Tourism and Sport. ADAPTATION PLANNING Developing Resilience to Climate Change in the Irish Transport Sector.
8 Department of Housing, Planning and Local Government. Draft Climate Change Sectoral Adaptation Plan for Water Quality and Water Services Infrastructure.
9 Department of Housing, Planning and Local Government. Draft Climate Change Sectoral Adaptation Plan for Water Quality and Water Services Infrastructure.
REFERENCES


European Communities (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011.

APPENDIX 1 – BUILT AND ARCHAEOLOGICAL HERITAGE ADAPTATION ACTION PLAN TABLE
**GOAL 1: Improve understanding of the heritage resource and its vulnerability to climate change impacts**

<table>
<thead>
<tr>
<th>ACTION</th>
<th>Flooding Inland</th>
<th>Flooding Coastal</th>
<th>Storm Damage</th>
<th>Coastal Erosion</th>
<th>Sea Level</th>
<th>Pests &amp; Mould</th>
<th>Fire</th>
<th>Maladaptation</th>
<th>OUTPUT</th>
<th>RESPONSIBLE</th>
<th>TIMESCALE</th>
<th>STAKEHOLDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Baseline quantification of numbers, nature and location of heritage assets</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>Desktop study</td>
<td>Short</td>
<td></td>
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</tr>
<tr>
<td>b. Co-ordinate single mapping portal of relevant heritage assets</td>
<td>✓ ✓ ✓ ✓ ✓</td>
<td>GIS maps</td>
<td>Short</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>c. Condition assessment of a sample of heritage sites/properties in public ownership</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>Condition assessments and digital imaging</td>
<td>Short</td>
<td></td>
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</tbody>
</table>

**Objective 2: Conduct risk and vulnerability assessments for climate change impacts on heritage**

| d. Risk assessment - overlaying maps of heritage assets with risk maps for flooding, coastal erosion and other priority impacts | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | GIS based risk assessment | Short |
| e. Vulnerability assessment of a number of heritage assets to the prioritised impacts of climate change – focus on high value and/or high risk | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | Site specific vulnerability reports | Short-Medium |
| f. Engagement with communities in high risk areas to create evaluations of vulnerability and priorities for response for local heritage | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | Community based adaptation plans for specified areas of high risk | Short-Medium |

**Objective 3: Undertake monitoring of climate change and its impacts**

<p>| g. Monitoring of atmospheric climate at selected heritage properties | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | Met Éireann stations installed at 2-3 sites | Short-Medium |
| h. Monitoring of ongoing maintenance &amp; repair works undertaken and also of emergency response (including costs where available) | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | Statistics relating to climate impacts and response for heritage in public ownership | Short |
| i. Monitoring of the impacts of climate on a representative selection of assets for which condition monitoring has been conducted (see Goal 1.c) | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | Design and establishment of sustainable impact monitoring regimes at a number of sites | Medium-Long |
| j. Develop monitoring and response regimes which build on citizen science approaches and utilise new technologies | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ | Established schemes with community engagement | Medium |</p>
<table>
<thead>
<tr>
<th>ACTION</th>
<th>FLOODING INLAND</th>
<th>FLOODING COASTAL</th>
<th>STORM DAMAGE</th>
<th>COASTAL EROSION</th>
<th>SOIL MOVEMENT</th>
<th>BURIAL PRESERVATION</th>
<th>PESTS &amp; MOLD</th>
<th>FIRE</th>
<th>MALADAPTATION</th>
<th>OUTPUT</th>
<th>RESPONSIBLE</th>
<th>TIMESCALE</th>
<th>STAKEHOLDERS</th>
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</thead>
<tbody>
<tr>
<td>GOAL 2. Develop and mainstream sustainable policies and plans for climate change adaptation of built and archaeological heritage</td>
<td></td>
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**Objective 1. Integrate heritage issues into relevant national and local inter-sectoral policies & plans**

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<tbody>
<tr>
<td>a.</td>
<td>Ensure co-operation and communication between departments, agencies, State bodies and other stakeholders</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Use of existing channels to mainstream consideration of heritage</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>Co-ordinate with local authorities to ensure national and regional policy &amp; plans align</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Establish regular liaison with county managers</td>
<td>Short-Medium</td>
<td></td>
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<tr>
<td>c.</td>
<td>Work with other sectors and LAs to identify heritage assets within their remit that may be under threat directly or indirectly due to climate change</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Working group meeting &amp; exchange of information gathered under Goal 1.1</td>
<td>Medium</td>
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**Objective 2. Mainstream climate change adaptation into sectoral policy and conservation planning at all levels**

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<tr>
<td>d.</td>
<td>Inventory existing policies &amp; plans and whether they address climate change</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Inventory</td>
<td>Short</td>
<td></td>
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<tr>
<td>e.</td>
<td>Integrate climate change adaptation into all heritage management plans &amp; policies as these are updated / revised</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Revised policies and systems</td>
<td>Short-Medium</td>
<td></td>
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<tr>
<td>f.</td>
<td>Provide training for staff and communities in climate change adaptation policy</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Cohort of trained individuals</td>
<td>Short-Medium</td>
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**Objective 3. Increase and improve disaster risk management for heritage**

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<tbody>
<tr>
<td>g.</td>
<td>Active participation with the Office for Emergency Planning &amp; the National Directorate for Fire and Emergency Management</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Nominate individual to national emergency steering group</td>
<td>Short</td>
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<td>h.</td>
<td>Develop Cultural Heritage guidelines for National and Regional Emergency response</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Published guidelines</td>
<td>Short</td>
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<tr>
<td>i.</td>
<td>Enable training on disaster risk preparedness for cultural heritage</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>4 x regional training courses</td>
<td>Short-Medium</td>
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<td>j.</td>
<td>Ensure flexible policies and systems are in place to enable timely and effective response and recovery</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Fit for purpose emergency response systems &amp; recovery procedures</td>
<td>Short</td>
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## GOAL 3. Maintain Ireland’s heritage for future generations

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<thead>
<tr>
<th>ACTION</th>
<th>Flooding Inland</th>
<th>Flooding Coastal</th>
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<th>Pests &amp; Mould</th>
<th>Fire</th>
<th>Maladaptation</th>
<th>OUTPUT</th>
<th>RESPONSIBLE</th>
<th>TIMESCALE</th>
<th>STAKEHOLDERS</th>
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<tbody>
<tr>
<td><strong>Objective 1. Increase the resilience of heritage resources under current conditions</strong></td>
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<tr>
<td>a. Engage with Planning Authorities over climate proofing planning procedures for heritage properties</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
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<td>Amendment to planning requirements</td>
<td></td>
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<td>Short</td>
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<tr>
<td>b. Review, and continue to build on, existing practice relevant to climate resilience</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
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<td></td>
<td>Survey &amp; evaluation of current measures</td>
<td></td>
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<td>Short</td>
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<tr>
<td><strong>Objective 2. Develop management and conservation approaches for changing environments</strong></td>
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<td>c. Undertake cost-effectiveness analysis and life cycle assessments for conservation interventions</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<td></td>
<td></td>
<td>Critical evaluation of current conservation practice</td>
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<td>Short</td>
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<tr>
<td>d. Integrate climate change adaptation into all heritage works and maintenance plans</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<td></td>
<td>Climate-ready maintenance and conservation regimes</td>
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<td>Medium</td>
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<tr>
<td>e. Identify and implement viable practical measures to protect heritage against extreme weather impacts</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td></td>
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<td>Climate ready infrastructure and visitor services at state owned sites</td>
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<td>Medium-Long</td>
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<tr>
<td>f. Promote research into techniques to address conservation and management challenges related to climate change impacts</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<td></td>
<td></td>
<td>Development and piloting of new approaches</td>
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<td>Medium-Long</td>
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<tr>
<td>g. Instigate research to investigate and make recommendations regarding the sustainability of preservation in situ as a long-term strategy for maintaining heritage resources</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<td>Improved understanding and recommendations for management</td>
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<td>Short-Medium</td>
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<tr>
<td><strong>Objective 3. Find ways to capture value when loss is inevitable</strong></td>
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<tr>
<td>h. Undertake survey and recording of high risk assets (identified under G1.d, e &amp; f)</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<td></td>
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<td>Archive of high-quality datasets</td>
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<td>Ongoing</td>
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</tr>
<tr>
<td>i. Establish increased level of research, recording and rescue excavations in high risk areas</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<td>Preservation by record</td>
<td></td>
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<td>Short-long</td>
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</tr>
</tbody>
</table>
## GOAL 4: Communicate and transfer knowledge

<table>
<thead>
<tr>
<th>ACTION</th>
<th>Flooding Inland</th>
<th>Flooding Coastal</th>
<th>Storm damage</th>
<th>Coastal Erosion</th>
<th>Soil Movement</th>
<th>Burial Preservation</th>
<th>Pests &amp; Mould</th>
<th>Fire</th>
<th>Maladaptation</th>
<th>OUTPUT</th>
<th>RESPONSIBLE</th>
<th>TIMESCALE</th>
<th>STAKEHOLDERS</th>
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<tbody>
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</table>

### Objective 1. Create a vision for the sector and demonstrate leadership in the response to climate change challenges

a. Establish and demonstrate green ways of working within historic buildings
   - Best practice exemplar
   - Medium

b. Active participation and sharing of knowledge with international partners
   - Contribute to EU Risk Data Hub or similar
   - Short

c. Establish a working group to co-ordinate information, promote research and drive the implementation of the plan
   - Working group established
   - Short

### Objective 2. Create guidance and disseminate information

d. Create guidelines for heritage sector on preparing for and recovering from priority climate change impacts - utilise cost-benefit study (G3.c)
   - Publish impact-based resilience and recovery guidance
   - Short-Medium

e. Create guidelines for non-specialists on sensitive adaptation, recovery from climate impacts and promoting sustainable re-use and energy saving in historic buildings
   - Publish & widely promote guidelines
   - Short-Medium

f. Work with and provide guidance for public sector on appropriate adaptation/response measures
   - Guidance produced and disseminated
   - Short-Medium

### Objective 3. Enable the collection, archiving and sharing of data, experiences and learning related to heritage and climate change

b. Establish a system for harmonising the collection of baseline data on impacts of climate change, adaptation responses (including costs) and possible sources of funding
   - Enhanced, secure and accessible database
   - Medium

c. Seek inclusion of heritage in any future modelling of impacts conducted for Ireland
   - Inclusion in climate risk atlas
   - Medium-Long

h. Support gathering and sharing of experience and knowledge across stakeholder bodies
   - Workshop
   - Short

### Objective 4. Develop training

j. Provide training to fill identified skills shortage and gaps in capacity in relation to the adaptation of cultural heritage to climate change
   - Training delivery
   - Short-Medium
## GOAL 5. Exploit the opportunities for built and archaeological heritage to demonstrate value and secure resources

<table>
<thead>
<tr>
<th>ACTION</th>
<th>Flooding Coastal</th>
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<th>OUTPUT</th>
<th>RESPONSIBLE</th>
<th>TIMESCALE</th>
<th>STAKEHOLDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective 1.</strong> Explore potential revenue streams and partnerships for the resourcing of goals 1-4</td>
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<tr>
<td>a. Analyse potential for loss of tourism resources as a consequence of climate change impacts on heritage</td>
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<td>Report</td>
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<tr>
<td>b. Cost-effectiveness analysis of adaptation investment for high risk sites (identified in G1.e) which are also priority for tourism</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
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<td>Costed &amp; funded action programme for key sites</td>
<td></td>
<td>Short-Medium</td>
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<tr>
<td>c. Actively seek to establish cost saving collaborations on cross sectoral issues such as monitoring and early warning systems</td>
<td>V</td>
<td>V</td>
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<td>V</td>
<td>V</td>
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<td>V</td>
<td>V</td>
<td>Collaborative agreements created</td>
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<tr>
<td>d. Develop grant schemes for preventive maintenance, sensitive adaptation and disaster recovery from climate impacts, supported by guidance documents</td>
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<td>V</td>
<td>Number of successful grant allocations</td>
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<td>Medium</td>
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<tr>
<td><strong>Objective 2.</strong> Develop a better understanding of how the historic building stock and its adaptive re-use contributes to sustainable communities</td>
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<tr>
<td>e. Analyse value of heritage to society including recreation, health and climate change mitigation</td>
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<td>Quantification of social benefits e.g. carbon contribution</td>
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<td>Short-Medium</td>
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<tr>
<td>f. Create green heritage award for sustainable re-use &amp; energy saving within historic buildings</td>
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<td></td>
<td>Promotion of best practice</td>
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<td>Short - Long</td>
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<tr>
<td><strong>Objective 3.</strong> Maximise the potential of heritage as an engagement tool for cross-sector research and initiatives, public engagement and education in relation to climate change and adaptation</td>
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<td>g. Build public awareness of the risks of climate change (in general and for heritage) and of efforts to mitigate and adapt</td>
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<td>Assess existing communication gaps and create strategy for public engagement</td>
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<tr>
<td>h. Promote research to understand and, where possible, take lessons from past climate related impacts and community response</td>
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<td>Information resource</td>
<td></td>
<td>Medium</td>
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<tr>
<td>i. Use interpretation of heritage sites to raise public interest, engage schools and youth in climate change through heritage centred ‘climate stories’</td>
<td>V</td>
<td>V</td>
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<td>V</td>
<td>V</td>
<td>V</td>
<td>Integration of climate change into visitor interpretation &amp; education</td>
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<td>Long</td>
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</table>