



Comisiynydd  
Cenedlaethau'r  
Dyfodol  
Cymru

Future  
Generations  
Commissioner  
for Wales



Cardiff  
Metropolitan  
University

Prifysgol  
Metropolitan  
Caerdydd



# CULTURE AND CLIMATE RISK

A White Paper for Discussion

August 2024

**Authored by Dr Lana St Leger, Cardiff School of  
Management, Cardiff Metropolitan University**

**PRODUCED IN COLLABORATION WITH THE FUTURE GENERATIONS  
COMMISSIONER FOR WALES**



# Table of Contents

|   |           |
|---|-----------|
| <b>1. PREAMBLE.....</b>   | <b>1</b>  |
| <b>2. INTRODUCTION.....</b>                                     | <b>2</b>  |
| 2.1 CLIMATE CHANGE .....  | 4         |
| 2.2 CULTURE AND CLIMATE CHANGE IN WALES .....                   | 5         |
| 2.3 RESEARCH BACKGROUND .....                                   | 6         |
| <b>3. THE CULTURAL LANDSCAPE IN WALES .....</b>                 | <b>10</b> |
| 3.1 WHERE ARE WE? .....   | 10        |
| 3.2 THE WELL-BEING OF FUTURE GENERATIONS ACT AND CULTURE .....  | 13        |
| 3.3 CULTURAL HERITAGE ASSETS AND CLIMATE CHANGE .....           | 15        |
| 3.3.1 <i>Maintenance of Heritage and Cultural Assets</i> .....  | 15        |
| 3.3.2 <i>Cultural Heritage Preservation and Promotion</i> ..... | 20        |
| 3.3.3 <i>Cultural Heritage Tourism and Sites</i> .....          | 22        |
| 3.4 INTANGIBLE HERITAGE AND CLIMATE CHANGE .....                | 25        |
| 3.4.1 <i>Impact on the Welsh Language</i> .....                 | 27        |
| 3.4.2 <i>Impact on Welsh Culture</i> .....                      | 33        |
| <b>4. BECOMING A CULTURALLY CONSCIOUS WALES.....</b>            | <b>35</b> |
| <b>5. CONCLUSION AND RECOMMENDATIONS .....</b>                  | <b>37</b> |

*“Sbia ar y llefydd pwysig sydd gennon ni o ran fatha pethau diwylliannol... the fantastic Gwent Levels... maen nhw wrth y môr, mae peryg colli'r llefydd 'ma... ar benrhyn Gŵyr... mae cloddiau, ac maen nhw'n unigryw, maen nhw'n hynafol, ag unwaith eto, mae'r rheini yn coastal, 'dyn ni... mae'r rheina mewn peryg o gael ei cholli. Ond eto byth [ti'n meddwl am] ardal Cantre'r Gwaelod, lle ti'n meddwl am chwedloniaeth”*

*[Considering the important places we have in terms of such cultural things... the fantastic Gwent Levels... they are by the sea, there is a danger of losing these places... on the Gower peninsula... there are banks, and they are unique, yes, they are ancient, and once again, those are coastal, they are in danger of being lost. But then again, [you think about] Cantre'r Gwaelod, where you think of mythology]*

*Natural Resources Expert*

# 1. Preamble

The legendary submerged Lost Kingdom of Cantre'r Gwaelod, coined as the 'Welsh Atlantis', is a cultural reminder and analogy for the need to protect our assets. The mythical kingdom, rich in folklore, is the subject of many tales and songs in Welsh culture and is one of the greatest Welsh legends<sup>1</sup>.

Legend has it that this kingdom was full of green fields and pretty flowers and is described as a fertile and prosperous land protected from the sea by tall sea walls called dikes. The sluice gates kept the water out, and one person was charged with this critical job—Seithenyn<sup>2</sup>.

As one version of the legend goes, the flooding of the kingdom is said to have been because of Seithenyn's negligence, who was drunk or inattentive, resulting in the breach of the sea walls. Another version of the tale suggests that the submersion resulted from a divine punishment for the sinful behaviour of Cantre'r Gwaelod inhabitants. Whichever version of the legend you choose, listen carefully, and you will hear the bells of the lost city ringing from under the sea<sup>3</sup>, a reminder that human behaviours and their relationship with our climate are material to Welsh culture.

Stories like this handed down from generation to generation, remind us of distant times, resulting in numerous myths about the loss of land due to coastal flooding and sea level rises.

Before reading this paper, we want you to think of the youngest person you know and ask the question: What type of Wales and its culture should we, leave behind as our legacy?

---

<sup>1</sup> [https://www.bbc.co.uk/blogs/waleshistory/2012/03/legend\\_of\\_cantre\\_r\\_gwaelod.html](https://www.bbc.co.uk/blogs/waleshistory/2012/03/legend_of_cantre_r_gwaelod.html)

<sup>2</sup> <https://snowdonia.gov.wales/discover/history-and-heritage/mythology-and-folklore/seithenyn/>

<sup>3</sup> [https://www.bbc.co.uk/legacies/myths\\_legends/wales/w\\_mid/article\\_5.shtml](https://www.bbc.co.uk/legacies/myths_legends/wales/w_mid/article_5.shtml)

## 2. Introduction

Although we are not likely to see total land loss in Wales as predicted elsewhere across the globe, we have already seen flooding and more extreme weather episodes impacting Welsh communities and our Welsh language, heritage and cultural assets. We are all aware that climate change poses significant and wide-ranging impacts on the world, and we are likely to see it impact crop growth, community, and human health<sup>4</sup>. This paper aims to highlight the importance of placing culture and heritage in Wales at the heart of political decisions regarding climate change – and that climate change should also be at the heart of political decisions about culture.

Deciding what we value and how we preserve and promote culture is actively considered in the UK and worldwide<sup>5</sup>. The 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage is an international treaty to preserve and protect the world's intangible cultural heritage<sup>6</sup>. This convention has been influential in recognising and safeguarding cultural practices and traditions to ensure the long-term viability of intangible heritage within communities and groups<sup>7</sup>. There is no hierarchy of importance, and all expressions are valued equally, emphasising the recognition of the importance of intangible heritage for social cohesion, appreciation of cultural identities, and sustainable development.

This paper highlights the importance of tangible and intangible cultural heritage in Wales and considers their preservation and promotion with climate change in mind. As reported in this paper, climate change will inevitably impact Welsh culture. However, culture also contributes to climate change. We will be forced to consider climate change's impact on our festivals and events, such as the National Eisteddfod, and on our other cultural activities, such as leisure and sport<sup>8</sup>. There have been reports in the past year that have already identified climate change's impact on UK heritage<sup>9</sup>, and we don't want to fall behind in our attempts to adapt and become resilient in Wales. It is time that we think differently, outside of the status quo, and continue

---

<sup>4</sup> <https://www.metoffice.gov.uk/weather/climate-change/effects-of-climate-change>

<sup>5</sup> <https://www.bbc.co.uk/news/entertainment-arts-67803871>

<sup>6</sup> UNESCO. (2003). Convention for the Safeguarding of the Intangible Cultural Heritage. Available from: <https://ich.unesco.org/en/convention>.

<sup>7</sup> <https://ich.unesco.org/doc/src/01853-EN.pdf>

<sup>8</sup> Although the culture goal in the WFG Act includes sport, we have not introduced it as a major consideration in this paper. Further work is required to understand the impact on this sector further.

<sup>9</sup> <https://www.bbc.co.uk/news/science-environment-67432755>

to be world-leading in our evolutionary practices related to promoting the well-being of current and future generations and leading the way in cultural climate resilience planning.

What we do today to protect, preserve and promote Welsh culture and heritage will impact its future in Wales. Heritage and culture are essential for future generations to access and for current generations to continue enjoying and protecting our well-being. Living in Wales, we are fortunate to experience rich heritage history and celebrate this through our cultural traditions and activities. Being Welsh, for some, is to have a passion for rugby and sport, following the traditions of Dydd Gwyl Dewi Sant (St David Day), and feeling proud while singing the national anthem, *Mae Hen Wlad Fy Nhadau*. For many people in Wales, the Welsh language is a major part of their Welsh identity<sup>10</sup>.

Concerns indicate that culture needs to be included in climate and policy decisions made locally and nationally. Understanding local needs and problems related to culture is critical to achieving and delivering the aims of the Well-being of Future Generations Act. As the only country yet to legislate for future generations and one of the few to include cultural well-being in their definition of sustainable development, this topic is legislatively important. The Well-being of Future Generations Act defines Sustainable Development as: “*The process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the well-being goals*”<sup>11</sup>.

---

<sup>10</sup> Davies, J. (2014). *The Welsh Language- a History*. Cardiff: University of Wales Press.

<sup>11</sup> <https://www.futuregenerations.wales/about-us/future-generations-act/#:~:text=The%20Future%20Generations%20Act%20defines,out%20five%20ways%20of%20working>

## 2.1 Climate Change

The purpose of this White Paper for discussion is not to delve into the complexities of climate change itself but to begin the talks on how it will impact Welsh culture and heritage now and in the future. We do not detail what is already known about the physical elements of climate change; however, a brief non-technical summary is provided for directness. Climate change is considered the main threat in the Triple Planetary Crises, alongside biodiversity loss and air pollution<sup>12</sup>. Climate change refers to the long-term changes and shifts in weather patterns and temperatures we see in our world.

Climate change is a complex global challenge that impacts several areas, including ecological, environmental, socio-political, and socio-economic<sup>13</sup>. Since the 1800s, human activity has been a driver of climate change<sup>14</sup>. This is primarily due to the burning of fossil fuels and the generation of greenhouse gas emissions (carbon dioxide and methane), and energy, industry, transport, buildings, agriculture, and land use are among the leading sectors which cause greenhouse gases. Climate change today constitutes more than just increasing temperatures. Widespread changes occur across the land, ocean, ice regions and atmosphere. The impact of climate change is mainly focused on how rising temperatures equate to an increase in sea levels, frequency and intense rainfall events, droughts and storms, and its impact has become apparent over the past decade on the world's coastlines<sup>15</sup>. Natural environments are inherently dynamic and constantly changing within the Earth's system. However, the increase in CO<sub>2</sub> to more than 410 ppm in 2020 has resulted in an acceleration of environmental change<sup>16</sup>.

---

<sup>12</sup> [https://ggim.un.org/meetings/GGIM-committee/13th-Session/documents/Discussion%20paper\\_Geospatial%20information%20for%20climate%20resilience.pdf](https://ggim.un.org/meetings/GGIM-committee/13th-Session/documents/Discussion%20paper_Geospatial%20information%20for%20climate%20resilience.pdf)

<sup>13</sup> Abbass, K., Qasim, M. Z., Song, H., Murshed, M., Mahmood, H., & Younis, I. (2022). A review of the global climate change impacts, adaptation, and sustainable mitigation measures. *Environmental science and pollution research international*, 29(28), 42539–42559. <https://doi.org/10.1007/s11356-022-19718-6>

<sup>14</sup> Intergovernmental Panel on Climate Change (IPCC) (2023) 'Summary for Policymakers', in *Climate Change 2021 – The Physical Science Basis: Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press, pp. 3–32.

<sup>15</sup> Ackland, K., Griffiths, H., Barker, L., Davies, S., Driver, T., & Hunt, D. (2023). Mapping the impacts of coastal erosion on the heritage assets of Ynys Enlli (Bardsey Island), North Wales, UK. *The Journal of Island and Coastal Archaeology*, 1–28. <https://doi.org/10.1080/15564894.2023.2227944>

<sup>16</sup> Orr, S. A., Richards, J., & Fatorić, S. (2021). Climate Change and Cultural Heritage: A Systematic Literature Review (2016–2020). *The Historic Environment: Policy & Practice*, 12(3–4), 434–477. <https://doi.org/10.1080/17567505.2021.1957264>

## 2.2 Culture and Climate Change in Wales

We need to appreciate now what impact climate change has and will have on cultural and heritage assets in Wales. Climate change is intricately intertwined with the preservation of heritage. Through adverse impacts of rising sea levels and shifting patterns in extreme weather, the toll this has on cultural heritage sites is visible<sup>17</sup>. Climate change equates to extreme weather, sea level rises, coastal erosion, flooding, and other elements not captured explicitly in this paper, like rising temperatures. Although there are some clear indicators related to the extent to which climate change is likely to impact our physical and natural environment, concerning the degrees of global warming, given the unpredictability of the future landscape in Wales and the exact impacts, we run the risk as a nation in being unprepared for some eventualities which could pose threats to culture and heritage in Wales. As discussed in Jones's 2018 White Paper- *Fit for a Future Education in Wales*<sup>18</sup>, the best way to predict the future is to shape it. This is critical for the cultural sector to shape what future we want Wales to see and leave a robust cultural heritage legacy for future generations.

In this paper, we will discuss in further detail the importance of the preservation of assets, both tangible and intangible, which hold significance to Welsh heritage and culture. We are lucky in Wales to demonstrate practices that lead the world in legislating with our future generations at its heart. The Well-being of Future Generations Act<sup>19</sup> is about improving our lives now and into the future. The Well-being of Future Generations Act is the legislation requiring public bodies to think long-term about their decisions and commits Wales to ensure that those not yet born inherit a Wales we want for the future.

---

<sup>17</sup> Sesana, E., Gagnon, A. S., Ciantelli, C., Cassar, J. and Hughes, J. J. (2020). Climate change impacts on cultural heritage: A literature review. *WIREs Climate Change*, 12(4). <https://doi.org/10.1002/wcc.710>

<sup>18</sup> Jones, C. (2019). *Fit for the Future Education in Wales* [online]. Available from: <https://www.futuregenerations.wales/wp-content/uploads/2019/10/2019-10-16-Fit-for-the-Future-Education-in-Wales-1-1.pdf> (accessed 29th July 2024)

<sup>19</sup> <https://www.futuregenerations.wales/wp-content/uploads/2017/01/WFGAct-English.pdf>

## 2.3 Research Background

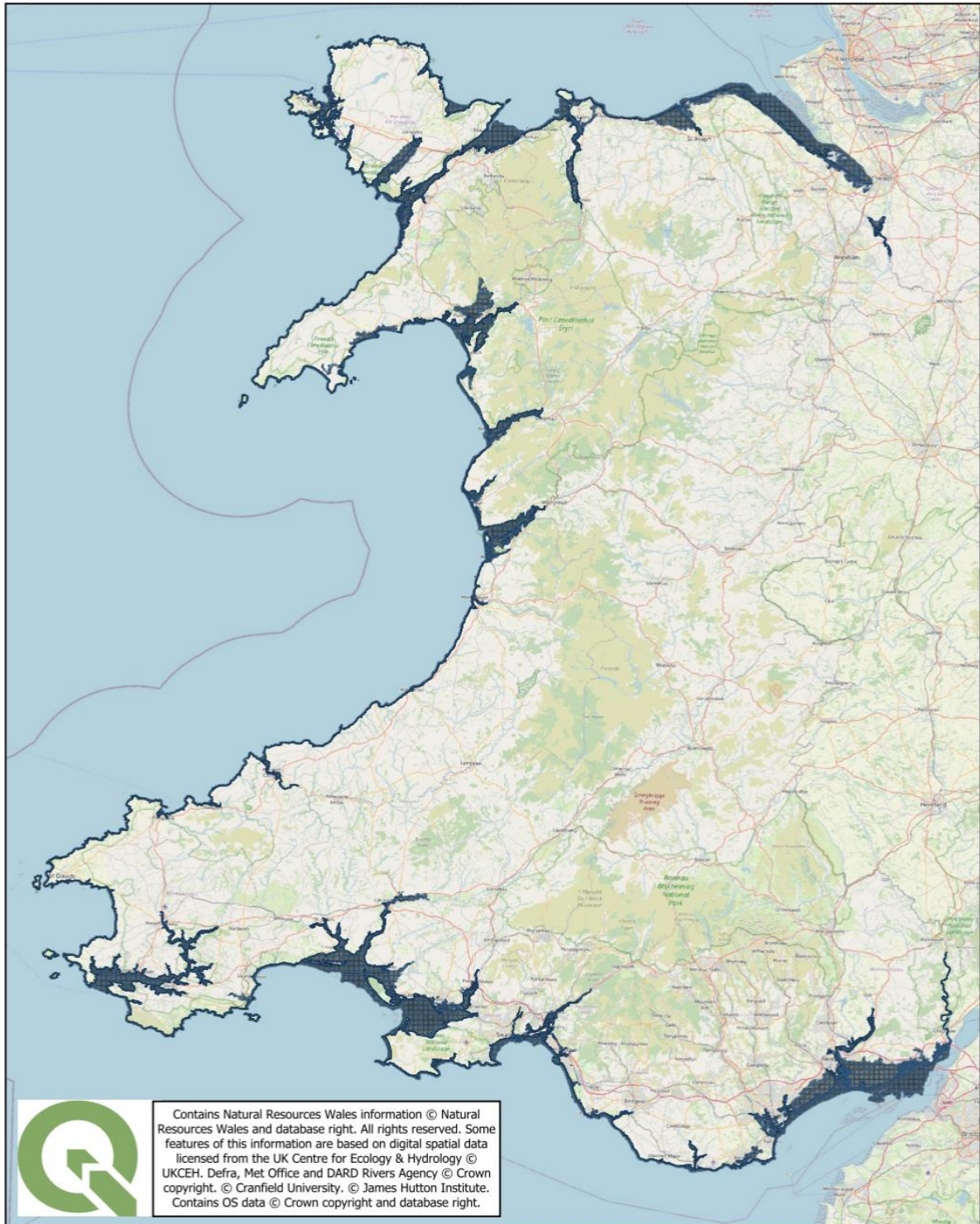
The information gathered within this paper was undertaken through an academic research project funded by Cardiff Metropolitan University. The purpose of the project was to undertake research into understanding the viewpoints of people with lived experience and those with technical expertise related to the impact of climate change on the Welsh language, culture, and heritage. Thus, the empirical work<sup>20</sup> undertaken to underpin this paper represents a preliminary scale research project and methodologically sets up for larger scale research projects to be undertaken - which would benefit this field of work.

In August 2023, the project launched at the National Eisteddfod in Llŷn and Eifionydd, Boduan, Gwynedd, and since then, 40 individuals have shared their perceptions to support the discussions raised in this paper. Some of these voices will be presented throughout the paper. Flood mapping will be demonstrated throughout, and thus to set the current flood risk for Wales. The present-day mapping has been assessed against these maps, which are publicly available through Data Maps Wales, using the QGIS system. Figure 1 and Figure 2 illustrate the background flood risk information used to create the locational maps within this paper.

A critical premise of this work was to gather publicly available data (at the time of the publication of this paper), which is available to the public for understanding flood risk. The mapping data used within this project was sourced from Data Maps Wales, and in the case of locational data (e.g. schools and listed buildings) point data has been used. This consists of locating the object of structure using a single geographic information system point and so does not show the full extent of the listing to which it relates – for example, its building/area footprint.

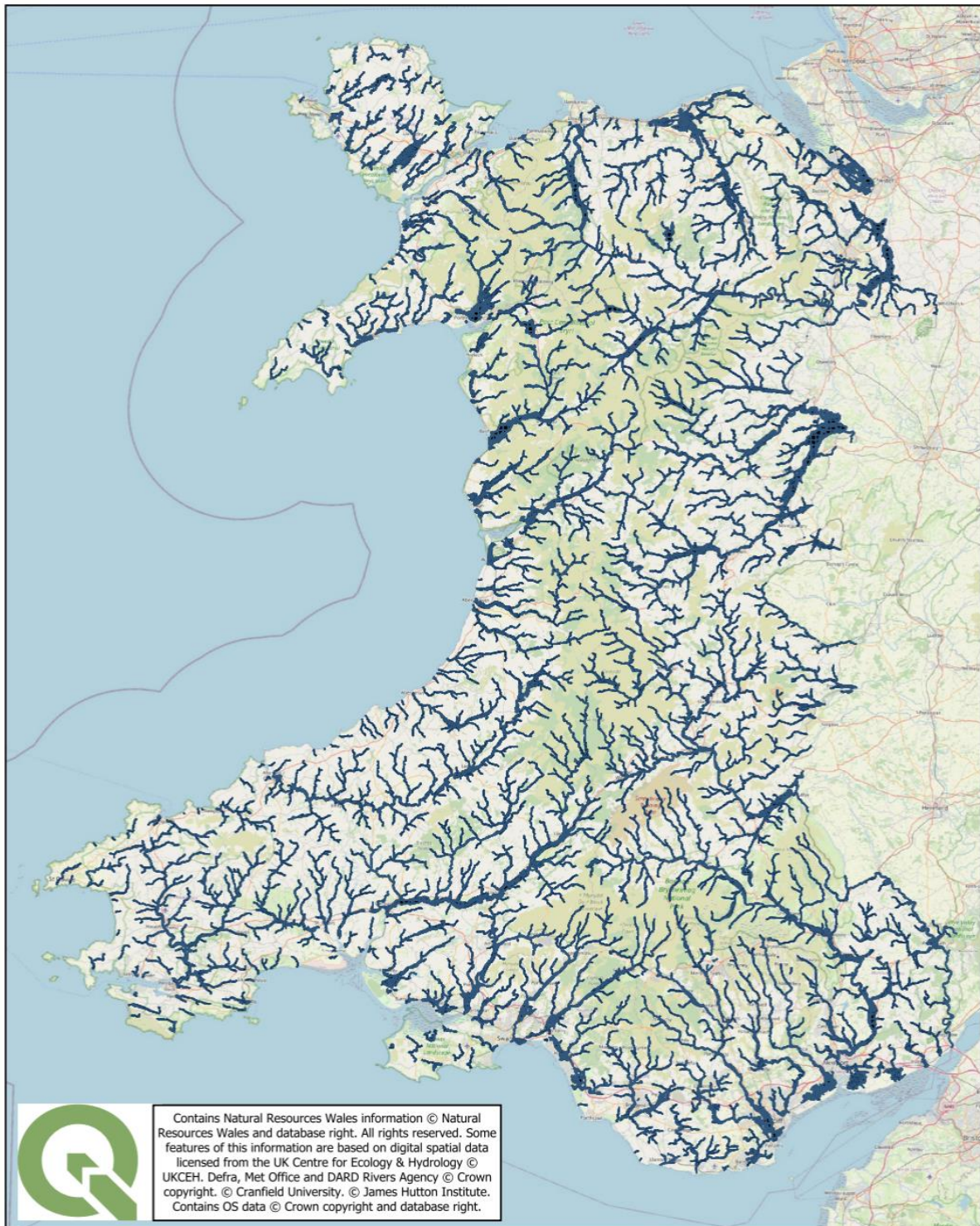
---

<sup>20</sup> This research was subject to rigorous ethical procedures set out by the University to ensure that it would be conducted ethically.



**Figure 1.** Flood Risk Assessment Wales – Sea Risk (Natural Resources Wales, 23<sup>rd</sup> May 2024)<sup>21</sup>

<sup>21</sup> Image created by author using the open-source geographic information system QGIS 3.36. Attribution Statement: Natural Resources Wales. (23<sup>rd</sup> May 2024). Flood Risk Assessment Wales. Available at: <https://datamap.gov.wales/layergroups/inspire-nrw:FloodRiskAssessmentWales>. Contains public sector information licensed under the Open Government Licence v3.0.



**Figure 2.** Flood Risk Assessment Wales – River Risk (Natural Resources Wales, 23<sup>rd</sup> May 2024)<sup>22</sup>

<sup>22</sup> Image created by author using the open-source geographic information system QGIS 3.36. Attribution Statement: Natural Resources Wales. (23<sup>rd</sup> May 2024). Flood Risk Assessment Wales. Available at: <https://datamap.gov.wales/layergroups/inspire-nrw:FloodRiskAssessmentWales>. Contains public sector information licensed under the Open Government Licence v3.0.

The assessment considers flood defences and provides a national assessment of risk flooding from Rivers and Sea<sup>23</sup>. Data demonstrated in this report indicate all extents of flooding homogenously (high to low risks of flooding) and do not separate these. For rivers, high risk means each year the area has a chance greater than 1 in 30 of flooding, medium is between 1 in 100 and 1 in 30, and low is between 1 in 1000 and 1 in 100. For the sea, high risk means that each year the area has a chance of flooding greater than 1 in 30, medium risk is between 1 in 200 and 1 in 30, and low risk means between 1 in 1000 and 1 in 200. We refer to all of these as the ‘FloodZone’. The assessment considers flood defences, where information is available. However, it is acknowledged that flood defences reduce but do not completely stop, the chances of flooding<sup>24</sup>.

*KEY FINDINGS –*

- 1. Cultural assets are at risk of climate change now and in the future, however we do not currently know the extent of this due to limited available data.*
- 2. There is a need for more purposeful leadership on adaptation and resilience, promotion, and protection of cultural assets in Wales to ensure a Wales of vibrant culture and thriving Welsh language.*
- 3. Both tangible and intangible heritage and culture need to be considered in planning for climate change impacts.*

---

<sup>23</sup> Coastal erosion, surface water and small watercourses are also important to consider but will not be illustrated as part of this report.

<sup>24</sup> <https://datamap.gov.wales/layergroups/inspire-nrw:FloodRiskAssessmentWales>

## 3. The Cultural Landscape in Wales

### 3.1 Where are we?

It's been almost a decade since the publication of the Well-being of Future Generations Act in Wales, which also saw the role of the Future Generations Commissioner emerge to act as the guardian of the interests of future generations. The Well-being of Future Generations Act, in line with the new Future Generations Commissioner for Wales's seven-year strategy, Cymru Can, demonstrates a commitment to culture and language in Wales. The force and intent of the Act, along with the critical climate change situation that we are faced with, requires us to think radically and proactively about how we want Wales to be left for those who proceed with us. A key challenge is to ensure that culture and language in Wales is a golden thread throughout all that we do in the face of climate change and other challenges.

At the time of this paper's publication<sup>25</sup>, we have an entire cabinet secretary responsible for Culture, along with the recent launch of the culture strategy consultation on the 24<sup>th</sup> of May 2024. The preceding First Minister<sup>26</sup> Vaughan Gething's 2024 leadership manifesto noted commitments to culture, heritage, and sport to ensure more protection for buildings of local or cultural significance. The manifesto also mentions working with national cultural, heritage and sporting organisations to help them reach net zero targets and reduce running costs. Highlighted was the priority of health and well-being within the arts, culture, heritage, and sports sectors.

In 2023, The Historic Environment (Wales) Bill received Royal Assent and marked the first time that legislation for the historic environment is together in one place<sup>27</sup>. It provides protection of monuments, buildings, and conservation areas, and this landmark piece of legislation supports the management of the unique historic environment in Wales to continue contributing to the nation's wellbeing<sup>28</sup>. Given the specific focus on the Historic environment, there is no legislative framework to support the broader culture in Wales, for example, the arts

---

<sup>25</sup> 9<sup>th</sup> August 2024

<sup>26</sup> Vaughan Gething announced his intention to resign as First Minister of Wales on Tuesday, 16<sup>th</sup> July. On Tuesday 6<sup>th</sup> August, Baroness Eluned Morgan was selected as Wales's first minister  
<https://news.sky.com/story/eluned-morgan-selected-as-wales-new-first-minister-after-vaughan-gethings-resignation-13189445>

<sup>27</sup> <https://senedd.wales/media/qofjukzx/pri-ld15211-e.pdf>

<sup>28</sup> <https://cadw.gov.wales/advice-support/historic-environment-wales-act-2023>

and creative industries, apart from within the Welsh Language (Wales) Measure and the Well-being of Future Generations Act.

The draft Culture Strategy<sup>29</sup> highlights the power of the arts, culture, and creativity in supporting individual and community well-being. Specifically, under Priority 3, there is a call for culture to be resilient and sustainable, for assets to be cared for and for the sector to demonstrate leadership and collaboration in its sustainable development approaches. Several critical aspects are raised in the priorities set out for culture in Wales over the next seven years and beyond. However, the cultural sector feels vulnerable and fragile given the years of funding cuts, high inflation rates, and the energy/cost of living crisis, leading to several challenges and far-reaching consequences.

**Table 1.** A Snapshot: The Welsh Strategic Journey- Climate Change and Culture<sup>30</sup>

|      |  |
|------|--|
| 2011 | Welsh Language (Wales) Measure (National Assembly of Wales)  |
| 2015 | Well-being of Future Generations (Wales) Act 2015 (Welsh Assembly Government)  |
| 2016 | Environment (Wales) Act 2016   |
| 2017 | Technical advice note (TAN) 24: the historic environment (Welsh Government)  |
| 2017 | Cymraeg 2050: A Million Welsh Speakers (Welsh Government)  |
| 2018 | Climate Change (Wales) Regulations 2018  |
| 2019 | Welsh ministers declare a climate emergency  |
| 2019 | Prosperity for all: a climate conscious Wales  |
| 2021 | Climate Change (Wales) Regulations 2021  |
| 2022 | Curriculum for Wales (Welsh Government)  |
| 2022 | Developing a Culture Strategy for Wales (Written statement, Welsh Government)  |
| 2023 | Cymru Can (Future Generations Commissioner for Wales)  |
| 2023 | The Historic Environment (Wales) Act 2023 (Welsh Government)   |
| 2023 | Written Statement: Publication of the Climate Change Committee’s Report on Climate Change Adaptation in Wales (Welsh Government) |
| 2024 | Planning Policy Wales (Welsh Government)   |
| 2024 | Welsh Government Culture Strategy published for consultation   |

<sup>29</sup> The Culture Strategy was within a period of consultation during the time of publishing this paper. <https://www.gov.wales/sites/default/files/consultations/2024-05/priorities-for-culture-2024-to-2030.pdf>

<sup>30</sup> We are aware of several other relevant publications which may be discussed throughout the document.

The 2023 Adapting to Climate Change Report from the UK Climate Change Committee notes the risk of climate change to culture.

*“Risks to cultural heritage from climate change are increasing due to extreme weather, precipitation and flooding, and coastal change. These risks threaten goals for a Wales of vibrant culture”* (page 27)

The report acknowledges the climate risk and damage to culture and heritage in Wales and notes that this is well mapped through sectoral planning. However, there needs to be more data to assess delivery progress related to community or national preparedness and responses. An objective about building the resilience of nature to climate change (one of the central themes of Wales’s climate adaptation strategy) notes that there is a need to improve the *“resilience of habitats and heritage in Wales’s coastal zones from the impacts of climate change”* (page 36). The publication of the Historic Environment (Wales) Act 2023 marks a momentous occasion for the unique history of Wales to continue contributing to the well-being of Wales and its people<sup>31</sup>. These brief notes on the report highlight the importance and timeliness of this White Paper to ensure that we can work to achieve the objectives set out for Wales and its strategies.

---

<sup>31</sup> <https://cadw.gov.wales/advice-support/historic-environment-wales-act-2023>

## 3.2 The Well-being of Future Generations Act and Culture

Culture in Wales is diverse, bringing complications and uncertainties about what culture means.

*“Welsh culture is expressed in many ways across the country, from speaking the Welsh language, celebrating traditional and cultural festivals as well as cooking traditional Welsh recipes”<sup>32</sup>*

*“Creativity is at the heart of Welsh life...the Welsh language is part of everyday life... it’s part of our living heritage- and in Wales, heritage is something that refuses to be contained in museums or between the covers of dusty books”<sup>33</sup>*

Analysis of public body well-being plans carried out by the Office of the Future Generation Commissioner for Wales demonstrates that public bodies must fully and effectively embed Wales's goal of a vibrant culture and a thriving Welsh language. A deficient number of well-being objectives and steps reference cultural well-being and a lack of integration into showing how cultural well-being could support the other dimensions.

Although there is no set definition of what Welsh culture encompasses, many things are central to Welshness, which perhaps contributes to the complications of delivering this specific well-being goal. To ensure a fit future for culture in Wales, we need to understand how the Well-being of Future Generations Act should be intertwined with discussions and considerations of culture. The description of the culture goal in the Well-being of Future Generations Act states that A Wales of vibrant culture and thriving Welsh language is *“a society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports and recreation”<sup>34</sup>*. Preserving cultural diversity has long been identified as a responsibility of present generations.

*“With due respect for human rights and fundamental freedoms, the present generations should take care to preserve the cultural diversity of humankind. The present generations have the responsibility to identify, protect and safeguard the tangible and*

---

<sup>32</sup> <https://hwb.gov.wales/api/storage/62c047e5-cd64-4bc1-8f3c-6ffb47e09d80/Welsh%20Culture%20Information%20Pack.pdf>

<sup>33</sup> <https://www.wales.com/about/culture/wales>

<sup>34</sup> <https://www.futuregenerations.wales/wp-content/uploads/2017/01/WFGAct-English.pdf>

*intangible cultural heritage and to transmit this common heritage to future generations.”*

UNESCO Declaration on the Responsibility of the Present Generations Towards Future Generations, Article 7, November 1997<sup>35</sup>.

Culture is often seen as *nice to have*, with many bodies needing to be made aware of how to think practically and strategically about the ways of working and the goal areas. Exacerbating this, the budget for cultural activity is squeezed during times of cuts by areas that are a statutory obligation, such as education and social care. However, it provides opportunities for Wales to do what it does best: be creative, multicultural, good global citizens and forward-thinking.

---

<sup>35</sup> <https://www.unesco.org/en/legal-affairs/declaration-responsibilities-present-generations-towards-future-generations>

### 3.3 Cultural Heritage Assets and Climate Change

Understandably, several considerations relate to how we ensure that our future generations can touch, feel, read, curate, and experience Wales's rich cultural and heritage assets. This section will focus on the risk climate change poses to cultural tangible assets - that is, things we can see, visit, store, or physically touch - and later discuss impacts on intangible heritage.

#### 3.3.1 Maintenance of Heritage and Cultural Assets

The impacts and results of climate change pose significant threats to our heritage and cultural assets. Extreme weather, rising sea levels and coastal erosion are some results of climate change, which will likely have devastating impacts on our tangible assets. Some of these tangible assets are managed and cared for by local communities with specific expertise. Often, in climate conversations, these local experts are not always noticed. However, their voices are critical to understanding the significance of losing or difficulties in preserving local assets. They carry valuable information, which could be significant in developing the knowledge and expertise for managing and presenting cultural assets.

*“Ma’ na expertise gan y gymuned... a nhw sy’n gwybod y pethau da’ ni ddim ... os ni’n cydweithio ac yn datblygu pethau ar y cyd... gallwn ni hefyd bod yn sensitif i anghenion y gymuned leol”*

*[There is expertise from the community... and they know the good things we don't... if we work together and develop things together... we can also be sensitive to the needs of the community]*

*Political Public Sector Expert*

Extreme weather can cause issues to our culturally significant buildings. This includes superficial damage from weather erosion, wind erosion, and algae, which could change the visual appearance of these assets, and more severe damage, such as flooding. It isn't only the worry of damage or disappearing assets that impacts their future, but also whether they will become unsafe to access or inaccessible due to climate change impacts.

*“Wel i ni’n barod yn gweld newidiadau gyda’r tywydd – sydd wedi effeithio ar ein safleoedd ni, ac mae hwnna wedi golygu ar rhai adegau, am gyfnodau byr, ond ar rhai adegau bo’ ni*

*wedi gorfod cau... [mae] amgueddfeydd i gyd yn wahanol iawn i'w gilydd – felly maen nhw i gyd... yn wynebu falle heriau gwahanol o ran yr hinswadd ti'n gwybod.. [mae] na achlysuron, ti'n gwybod, gwyntoedd cryfion, coed yn dod lawr; pan i ni wedi cael y cyfnodau rili gwael o law trwm, llifogydd neu dŵr yn dod mewn... Ond wrth gwrs wrth bydd yr amgylchedd yn newid ac yn gwaethygu mae hwnna'n mynd i waethygu"*  
*[We are already seeing changes with the weather - which has affected our sites, and that has meant at times, for short periods, but at times we have had to close... [all] museums are very different from each other - so they're all ... in... perhaps facing different challenges in terms of the climate [there are] occasions, you know, strong winds, trees coming down, when we have had the bad periods of rain heavy, flooding or water coming in...but of course as the environment changes and worsens that is going to get worse]*

*Museum Sector Worker*

CADW and the Royal Commission have a role in managing and caring for sites with cultural and heritage sites. The current financial pressures are impacting what we can fund<sup>36</sup>.

*"A worrying picture for the future of the historic and built environment in Wales"*

*Liz Power, Director of Historic Buildings and Places<sup>37</sup>*

The 2024-25 Resource budget announced as part of the Economy MEG's contribution towards the reprioritisation exercise, Wales's cultural and heritage sector, has been subject to budget reductions<sup>38</sup>. Cultural organisations in Wales have been acknowledged as important to the improvement of the health and well-being of Wales as a nation. Roger Lewis, former president of Amgueddfa Cymru, praised the role of CADW in preserving heritage in Wales and enhancing social and economic well-being<sup>39</sup>. Despite there being additional funding announcements to preserve and protect cultural institutions (National Museum Cardiff and National Library of Wales), there have been significant budget cuts announced to the cultural and heritage sector in Wales. CADW saw a reduction of 10.5% to their budget for 2024 to

---

<sup>36</sup><https://business.senedd.wales/documents/s144060/Letter%20from%20the%20Wales%20Heritage%20Group%20-20-Proposed%20cuts%20to%20the%20Royal%20Commission%20on%20the%20Ancient%20and%20Hist.pdf>

<sup>37</sup> The Historic Environment and Climate Change in Wales: Sector Adaptation Plan should also be considered related to this work. <https://cadw.gov.wales/sites/default/files/2020-02/Adaptation%20Plan%20-%20FINAL%20WEB%20-%20English%20%281%29.pdf>

<sup>38</sup> <https://www.gov.wales/sites/default/files/publications/2024-02/ministers-written-evidence-to-senedd-scrutiny-committees-2024-2025.pdf>

<sup>39</sup> <https://www.iwa.wales/agenda/2024/04/cadw-wales-heritage/>

2025<sup>40</sup>, which is a big blow to culture and heritage in Wales. Especially as CADW celebrates its 40th anniversary this year.

*“I think the messaging needs to be strong that we cannot take our eye off the ball... like all other local authorities, we’ve got no money, we’ve got no reserves, we’re all working out how to pause or stop spending altogether, we’ve got a capital programme that we can’t even deliver, because we have to put projects on hold, because we haven’t got the reserves to actually deliver them... But you know, it’s kind of people don’t seem to understand that what’s needed is like, immediate radical change now, and it needs to be fundamental... the leadership that’s coming from the heritage and cultural sectors is certainly not in my view in step at all with the severity of the problem... we stand to lose a lot, don’t we, in our sector in particular... it’s very, very worrying*

*Heritage Preservation Worker*

Climate change has already been acknowledged as impacting cultural heritage. Geographic mapping illustrates the extent of the current risks to our assets from climate change. Figures 3 and 4 illustrate the current extent of this on our listed buildings. Some of these include The Smallest House<sup>41</sup>, Royal Institution of South Wales (Swansea Museum)<sup>42</sup>, the remains of Holt Castle<sup>43</sup>, Holt Bridge<sup>44</sup> and the Lido at Ynysangharad Park<sup>45</sup>. These listed buildings have been mapped through analysing their point location, obtained through Data Maps Wales, and using the features of ‘touching’ and ‘are within’ to analyse the spatial relationship between the features of the Flood Risk maps and point data of buildings<sup>46</sup>.

**Table 2.** Number of Listed Building Sites identified within the FloodZone

| <b>Number of Sites</b> | <b>Percentage<sup>47</sup> of Sites within the Sea FloodZone</b> | <b>Percentage of Sites within the River FloodZone</b> |
|------------------------|--|---|
| 30117                  | 4% (n=1200)  | 12% (n= 3647)   |

<sup>40</sup> <https://www.gov.wales/sites/default/files/pdf-versions/2024/6/3/1718181067/review-cadws-governance-arrangements-welsh-government-response.pdf>

<sup>41</sup> [Listed Buildings - Full Report - HeritageBill Cadw Assets - Reports \(cadwpublic-api.azurewebsites.net\)](#)

<sup>42</sup> [Listed Buildings - Full Report - HeritageBill Cadw Assets - Reports \(cadwpublic-api.azurewebsites.net\)](#)

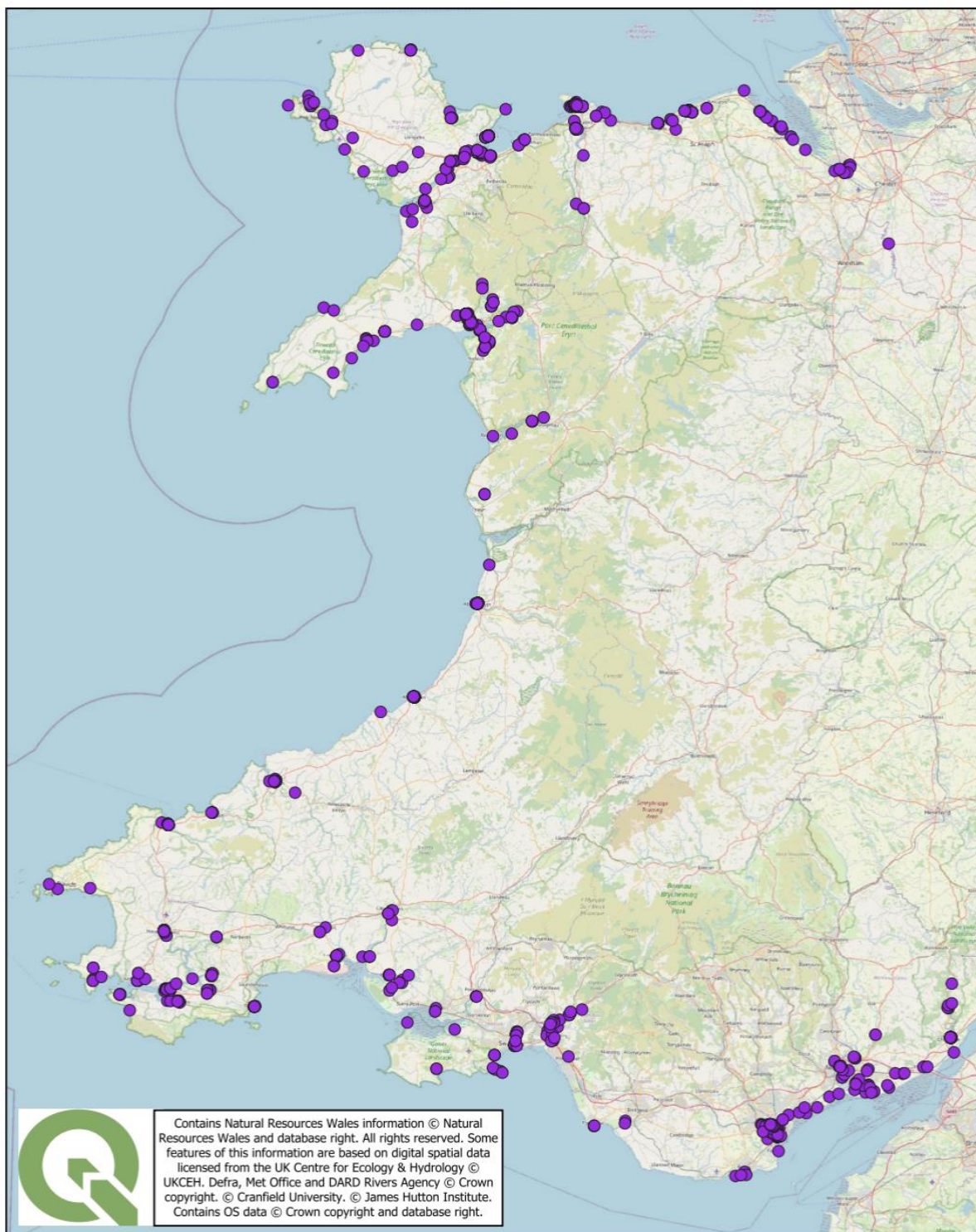
<sup>43</sup> [Listed Buildings - Full Report - HeritageBill Cadw Assets - Reports \(cadwpublic-api.azurewebsites.net\)](#)

<sup>44</sup> [Listed Buildings - Full Report - HeritageBill Cadw Assets - Reports \(cadwpublic-api.azurewebsites.net\)](#)

<sup>45</sup> [Listed Buildings - Full Report - HeritageBill Cadw Assets - Reports \(cadwpublic-api.azurewebsites.net\)](#)

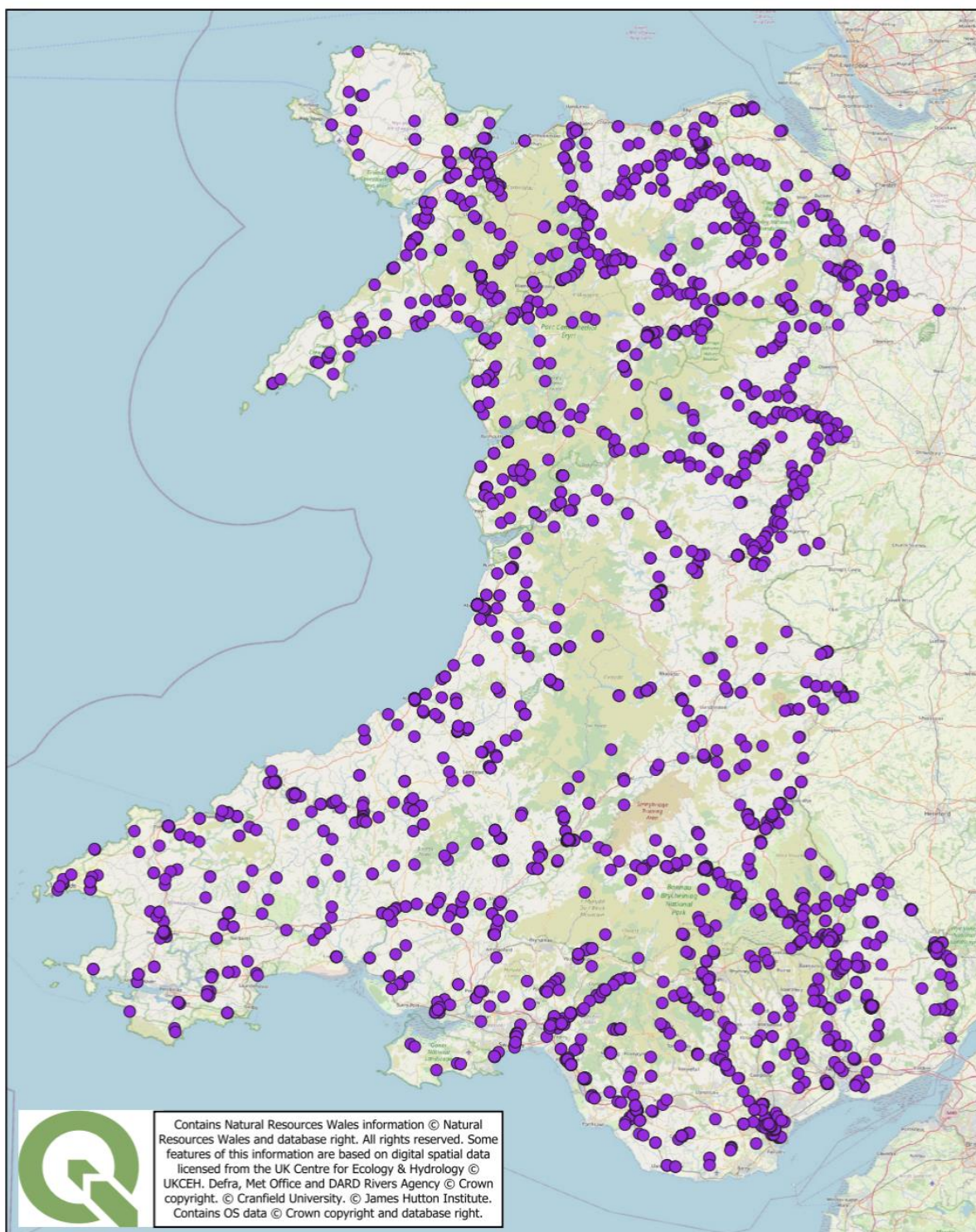
<sup>46</sup> [28.1.24. Vector selection — QGIS Documentation documentation](#)

<sup>47</sup> Reported percentages in this report are rounded to nearest percentage point



**Figure 3.** Sea Flood Risk Assessment to CADW Listed Buildings (Welsh Government, 31<sup>st</sup> July 2024; Natural Resources Wales, 23<sup>rd</sup> May 2024)<sup>48</sup>

<sup>48</sup> Image created by the author using the open-source geographic information system QGIS 3.36. Attribution Statement: Designated Historic Asset GIS Data, The Welsh Historic Environment Service (CADW), 31st July 2024, licensed under the Open Government Licence <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>



**Figure 4.** River Flood Risk Assessment to CADW Listed Buildings (Welsh Government, 31st July 2024; Natural Resources Wales, 23<sup>rd</sup> May 2024)<sup>49</sup>

<sup>49</sup> Image created by the author using the open-source geographic information system QGIS 3.36. Attribution Statement: Designated Historic Asset GIS Data, The Welsh Historic Environment Service (CADW), 31st July 2024, licensed under the Open Government Licence <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

### 3.3.2 Cultural Heritage Preservation and Promotion

Notwithstanding the impact climate change may have on the tangible heritage assets we have in Wales through flooding, issues that influence our ability to promote heritage also arise. Given the nature of the mapping investigations, several key buildings (e.g. castles) do not appear on the map due to their historical placement on higher grounds; however, the surrounding areas are impacted. Suppose we wish for future generations to touch, feel, and see what we can today and for us to access it freely. In that case, accessibility should be considered as crucial as actual maintenance.

*“We're going to have to go against the international principles around conservation and what sustainable conservation is and developments and be willing to say, we're going to have to remove that piece of infrastructure or we're going to have to do something that will indelibly and irrevocably change the historic fabric of our building to reduce its energy consumption because of the climate emergency. I think that's where that's where the challenge is really going to lie for decision makers. It's going to be it's going to be difficult because there's nothing more contentious than heritage, you know, so that's what's going to be the real challenge”.*

*Heritage Preservation Worker*

The issues surrounding the storage of artefacts are historically relatable in Wales. In 1993, Llandudno was hit by a storm that caused massive flooding and forced 3,000 people to evacuate their homes, causing millions of pounds of damage, including artefacts damaged by the floods. More recently, Pontypridd Museum’s basement stores were impacted by Storm Dennis in February 2020, as the flooding destroyed some of its collections. Not only did this have a physical impact on the assets within the museum, but it also had knock-on effects, such as access to the buildings and the community's cultural well-being. Although it is reported that the museum’s core collections escaped the flooding, some of the assets lost were unaccessioned books, framed items, and World War I diaries and photographs (fortunately, these had been digitised)<sup>50</sup>. As the world warms, so do our changes in rainfall and sea-level rise, which increases the risk of flooding, permanent and temporary. A critical consideration is

---

<sup>50</sup> <https://www.museumsassociation.org/museums-journal/news/2022/03/pontypridd-museum-reopens-two-years-after-devastating-flood/#>

whether we should invest more in digitising our cultural artefacts and whether this needs to be part of the prevention and mitigation.

*“This is how I can pass it on to my children and they can see it instead of it. Through you know, inheritance and buildings and proper books and you'll be there physically, but also, it'd be like the Welsh Metaverse... the technology is there. If you can map it to begin with, where you can save it then can't move and you can use GPS. Yes. So, you can walk around an empty space and walk around a room with a mobile phone if you wanted to. And it was going you're now heading towards the outer wall of the castle that was there before.... This is where this body was found. It was found with these. It was found with tattoos or sword indicating that this about its anthropological backgrounds and things... if it can be photographed and mapped and saved... But in terms of climate change, it's like Wales as you know, it's been flooded a lot... So that's a sore topic as well... You got to hold on to culture but you also got to move with it”*

*AI and Technology Worker*

There are also challenges in preserving and promoting artefacts and cultural heritage assets while trying to achieve net zero. Since declaring the climate emergency in 2019, Wales has legislated to reduce greenhouse gas emissions to net zero by 2050<sup>51</sup>. The effect of gradual climate changes on indoor cultural heritage is essential to consider when local collections of organic and inorganic materials in historic buildings may need modern climate control measures. There are practical issues around these buildings' ability to withstand the increase in temperature and other risks for protecting collections.

*“Well, I think there's that, like I say, that's the mechanical and practical issues of the infrastructure, not being able to withstand the increases and the risks... it's this dreadful kind of non-virtuous circle, isn't it, of sort of, needing to use more energy to regulate for the protection of collections”*

*Heritage Preservation Worker*

If we lose culture, we lose learning, a part of Wales's past, answers, identity, and solutions. Several attempts have been made to support the preservation of culture in Wales, the most

---

<sup>51</sup> <https://www.gov.wales/sites/default/files/publications/2022-12/welsh-government-net-zero-strategic-plan.pdf>

recent being the launch of the Welsh Government's draft Culture strategy. However, more needs to be done, both at the local and national levels.

### 3.3.3 Cultural Heritage Tourism and Sites

Cultural heritage tourism is a significant aspect of Wales's tourism industry. Visitors are attracted to its rich history, diverse culture, and landscapes. COVID-19 significantly impacted how CADW operated their monuments, with visitor experiences affected by regulations and restrictions<sup>52</sup>. Before the pandemic, the heritage sector celebrated its work in sustaining and enhancing assets important to Wales's history and culture, which supported a sense of nationhood, thousands of jobs, attracting tourism income, building resilient communities, and contributing to the nation's health and wellbeing<sup>53</sup>. One likely impact of climate change is increased pandemics due to species mixing from changes in migration patterns<sup>54</sup>. There is evidence that climate change is fuelling disease outbreaks and epidemics, with scientists noting that it is a matter of when, rather than if, such events will trigger another pandemic<sup>55</sup>. As previously experienced, this will impact how the heritage sector can create revenue and contribute to the Welsh economy.

The Welsh brand is deeply rooted in history and rich cultural heritage. Visitors to Wales cite heritage sites, visitor attractions, culinary experiences, and Welshness, including hearing or seeing the Welsh language on their trip, as necessary in creating a distinctive Welsh experience<sup>56</sup>. There is an appetite to experience Welshness, particularly among international visitors<sup>57</sup>. The heritage sector contributed £1.72 billion to the Welsh economy in 2018-19 through its heritage attractions<sup>58</sup>, and the improvement of the Welsh brand has been supported by Vaughan Gething MS, whilst serving as the Minister for the Economy at the Welsh Government between 2021-2024.

---

<sup>52</sup> <https://committees.parliament.uk/writtenevidence/108368/pdf/>

<sup>53</sup> <https://cadw.gov.wales/sites/default/files/2020-01/Annual%20Historic%20Environment%20Group%20for%20Wales%20-%20HEG%20Report%20Eng%202018-19.pdf>

<sup>54</sup> <https://www.theguardian.com/environment/2022/apr/28/climate-crisis-future-pandemics-zoonotic-spillover>

<sup>55</sup> <https://www.science.org/doi/10.1126/science.adk4500#:~:text=However%2C%20there%20is%20overwhelmin g%20evidence,diseases%2C%20both%20directly%20and%20indirectly.>

<sup>56</sup> <https://committees.parliament.uk/publications/40824/documents/198909/default/>

<sup>57</sup> <https://www.visitpembrokeshire.com/wp-content/uploads/Wales-visitor-Survey-2019-overseas-visitors.pdf>

<sup>58</sup> <https://cadw.gov.wales/sites/default/files/2020-01/Annual%20Historic%20Environment%20Group%20for%20Wales%20-%20HEG%20Report%20Eng%202018-19.pdf>

*“Other parts of the world have coasts and mountains [...] It is our built environment and the history around it, and lots of international visitors are interested in that. The fact that we have more castles [per square mile<sup>59</sup>] than any other part of the world is a big plus”<sup>60</sup>*

Coastal heritage sites in Wales are at risk of issues related to coastal erosion and rising sea levels. Castles and historical sites are at risk of reduced structural integrity, accessibility, and visitor safety, which risks are exacerbated by climate change. Examples can be seen through case studies written by the Historic Environment – Climate Change sub-group<sup>61</sup>. Accessibility of the built historic environment is a critical consideration with climate change in mind. The example we illustrate for this report is Ogmore Castle, Bridgend.



**Figure 5.** River and Sea Flood Risk Assessment to Ogmore Castle (Natural Resources Wales, 23<sup>rd</sup> May 2024)<sup>62</sup>

<sup>59</sup> Correction from original ‘per head’ to fact noted in <https://www.wales.com/about/culture/castles>

<sup>60</sup>Q191 <https://committees.parliament.uk/oralevidence/12642/pdf/>

<sup>61</sup><https://storymaps.arcgis.com/stories/b862abb4f5264a3f8693583770e4088b?play=true&speed=medium>

<sup>62</sup> Image created by the author using the open-source geographic information system QGIS 3.36. Natural Resources Wales. (23<sup>rd</sup> May 2024). Flood Risk Assessment Wales. Available at:

Figure 5 illustrates the present flooding extent of sea risk to the surrounding areas around Ogmore Castle. Flooded is both the road and car park which serve the castle, which would impact the accessibility for our current generations to access when and for a period post flooding. This report only considers the current risk of sea and river flooding, as climate risk mapping (considering flood defences) was not publicly available at the time of publication. However, several other factors should be regarded as related to the resilience of buildings considering climate change, including overheating, moisture, and solar risks<sup>63</sup>.

It is challenging to map cultural locations against climate change because no set database locates them in an accessible format. The fact that there was no single place to access cultural locations and assets in Wales was a critical challenge while undertaking the work that has led to this paper. Workers within the sector also noted this challenge when dealing with climate change planning. Brief mapping using postcode data on some cultural locations, such as art galleries and cultural event locations, demonstrates that several are located within or touching the current flood risk zones. Examples are Clwb y Bont (Pontypridd), Oriel Mostyn Gallery (Llandudno), and the Colwyn Bay Gorsedd Stones<sup>64</sup>.

*“Bydde mapio mas yr asedau ‘na yn erbyn beth mae’r mapiau’n dangos i ni, mae’r newid hinsawdd yn mynd i ‘neud. Bydde hwnna’n rili ddefnyddiol... nid yn unig o ran, allan yn y gymuned, ond hefyd ar seilwaith sydd o fewn y gymuned ‘na...bydde hwnna’n lle da i ddechrau, ti’n gwybod, a bod hwnna falle’n gallu cael ei rannu, gyda pawb sy’n rhan o hwn fel bo pobl yn gallu edrych arno fe gyda’i gilydd, a dod lan gyda, sut i ni’n mynd i ymateb i hwn, gyda’n gilydd, yr asedau, yr adeiladau, yr archifau, y casgliadau i hunain, beth sydd mewn amgueddfeydd lleol? A lle maen nhw wedi cael eu lleoli”*

*[There would be a mapping of the assets there against what the maps show us, what climate change is going to do. That would be a useful tool... not only in terms of, out in the community, but also on infrastructure that is within that community... that would be a good place to start, and that maybe it could be shared, with everyone who is part of this so that*

---

<https://datamap.gov.wales/layergroups/inspire-nrw:FloodRiskAssessmentWales>. Contains public sector information licensed under the Open Government Licence v3.0.

<sup>63</sup> <https://www.gov.wales/sites/default/files/publications/2022-12/evidence-briefing-resilience-of-buildings-challenges-associated-with-climate-change.pdf>

<sup>64</sup> Mapping undertaken using: Natural Resources Wales. (23<sup>rd</sup> May 2024). Flood Risk Assessment Wales. Available at: <https://datamap.gov.wales/layergroups/inspire-nrw:FloodRiskAssessmentWales>. Postcode data (or nearest postcode if unavailable) was used to pinpoint these locations in QGIS. There are limitations to using point data, as this creates a single point rather than a surface area of the location.

*people can look at it together, and come up with... how are we going to respond to this, together, the assets, the buildings, the archives, the collections themselves, what's in local museums? And where they have been located.]*

*Museum Sector Worker*

An example of such a map is the one developed by the Mayor for London- London's first cultural infrastructure map<sup>65</sup>. Although it is appreciated that information about culture is ever-changing and evolving, it is sometimes difficult to locate. Despite this, the map provides valuable locational, contextual data built in collaboration with the community to add missing cultural locations and closures. A map such as this would allow Wales's cultural heritage sector to understand where their tangible and intangible assets are located, both on a national and local level, which could support resilience and adaptation planning.

### 3.4 Intangible Heritage and Climate Change

As defined by UNESCO in 2003, intangible cultural heritage is “oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skill to produce traditional crafts”<sup>66</sup>. In the face of climate change, we must consider how our tangible assets might be impacted and how this impacts the intangible culture and heritage. This is important as intangible cultural heritage is an essential factor in maintaining cultural diversity in the globalised world.

An example of a building which supports Welsh cultural events but is also subject to flooding is Clwb y Bont in Pontypridd. Opened in September 1983 by Dafydd Iwan, it has gained recognition as a venue that showcases short films by Welsh filmmakers<sup>67</sup> and lively music events. The history of Clwb y Bont is grounded in promoting the Welsh language and culture<sup>68</sup>. In 2020, Storm Dennis brought devastation to Clwb y Bont, and more recently, the severe floods of January 2023 saw about 2in of Water within the club<sup>69</sup>. Relevant to note, the January 2023 flooding also blocked two access roads to St Fagans Museum in Cardiff due to floodwater.

---

<sup>65</sup> <https://www.london.gov.uk/programmes-strategies/arts-and-culture/space-culture/cultural-infrastructure-plan-and-toolbox/cultural-infrastructure-map>

<sup>66</sup> <https://ich.unesco.org/en/what-is-intangible-heritage-00003>

<sup>67</sup> <https://clwbybontblog.wordpress.com/about/>

<sup>68</sup> <https://clwbybontblog.wordpress.com/about/>

<sup>69</sup> <https://www.bbc.co.uk/news/uk-wales-64246302>

Global examples of culture being lost are unrestricted to a single country or continent; we are seeing widespread challenges to cultural sites because of climate change. An example of such disastrous events includes that of the 8-9th August 2023 in Hawaii, where much of Lahaina, Maui, was lost by a wildfire, exacerbated by Hurricane Dora. The community was not only home to native Hawaiians (among others) but also a thriving tourist destination with a deep-rooted history of Indigenous Hawaiian history, sacred sites, culture, and heritage. Notwithstanding the severe impacts these wildfires have had on the livelihoods of the people of Lahaina, there were concerns among locals that several areas of significance to their local history were caught in the blaze<sup>70</sup>. The oldest Banyan Tree in the state is one such example which held importance to the town of Lahaina, which was severally damaged in the wildfires, along with destruction to the 2023 Emma Garden Sharpe Hula Festival, a day which celebrates hula, Hawai'i-made arts, Keiki activities and workshops<sup>71</sup>.

There is recognition here that climate change does impact our cultural assets, but we must also consider how these assets have a responsibility to contribute positively to the climate. On the 24<sup>th</sup> of July 2024, Historic England produced a new Advisory Note to clarify and support decisions made on proposals to reduce carbon emissions among their historic buildings<sup>72</sup>. Historic England acknowledged that there is a need for historic buildings to change and evolve and that with careful thought, the changes to these assets can achieve the complementary goal of heritage protection and climate adaptation. The document, however, was seen as a welcome step by industry figures but does not go far enough and misses critical factors. The example provided by Andrew Madge within a Financial Times article noted about applying glazing bars rarely replicates the character of historic windows, and unlikely to be acceptable<sup>73</sup>.

Related to culture, the Strategy for Climate Justice and the Arts, commissioned by the Arts Council for Wales in partnership with Natural Resources Wales, is a welcomed example of how issues related to culture can look at both how assets are impacted by climate change and how they can contribute positively to the agenda. The strategy aims to help to tackle environmental issues (e.g. carbon footprint) and support artists and art organisations to

---

<sup>70</sup> <https://www.mprnews.org/story/2023/08/16/npr-mauis-cultural-landmarks-burned-but-all-is-not-lost>

<sup>71</sup> <https://www.latimes.com/world-nation/story/2023-08-12/lahaina-cultural-treasures-up-in-flames>

<sup>72</sup> <https://historicengland.org.uk/whats-new/news/new-advice-on-adapting-historic-buildings-for-energy-and-carbon-efficiency/#:~:text=Historic%20England%20has%20produced%20a,to%20live%20in%20the%20future.>

<sup>73</sup> <https://www.ft.com/content/972fa057-cbe3-4305-bc7d-25f0c3ecb756>

minimise the environmental impact of creating art. Critically, it appreciates the potential of art to connect people with nature and contribute positively to tackling the climate emergency<sup>74</sup>.

*“The climate and nature emergencies are now a part of our everyday lives... The development of this strategy recognises the power of the arts to connect people with nature and help them find a voice in the conversation we need to have about our future. In centring itself on social justice, addressing inequality and promoting internationalism, it shows Wales to be the globally responsible nation we are all striving for”*

Clare Pillman, Chief Executive at Natural Resources Wales, Arts Council for Wales  
News 4<sup>th</sup> October 2022<sup>75</sup>

There are other global examples of cultural conversations being called upon to be used to evoke emotions and make issues like Climate Change real and personal<sup>76</sup>. The British Council also promotes global responsibility in the UK through its Cultural Protection Fund<sup>77</sup> (founded in 2016), which responds to safeguarding heritage at risk of conflict and/or climate change<sup>78</sup>.

### 3.4.1 Impact on the Welsh Language

Over the past millennia, Welsh has gone from being the essence of Welsh identity to nearly ceasing to exist and now present in almost every corner you turn in Wales. The fight for the language and its use still breathes fire across the country despite the disappointing result of the Census 2021. On the 21<sup>st</sup> of March 2021 (Census Day), an estimated 538,300 usual residents in Wales aged three or over reported being able to speak Welsh (17.8% of the population). Census 2021 reported the lowest-ever percentage of Welsh speakers recorded in a census (although the numbers of speakers were third lowest behind 1981 and 1991). Compared with

---

<sup>74</sup> <https://arts.wales/news-jobs-opportunities/tackling-climate-and-nature-emergencies#:~:text=The%20Strategy%20for%20Climate%20Justice,arts%20organisations%20to%20minimise%20the>

<sup>75</sup> <https://arts.wales/news-jobs-opportunities/tackling-climate-and-nature-emergencies#:~:text=The%20Strategy%20for%20Climate%20Justice,arts%20organisations%20to%20minimise%20the>

<sup>76</sup> Hand, J. and Frasz, A. (2019). How arts and cultural strategies can accelerate environmental progress. In: Campbell, Lindsay K., Svendsen, Erika, Sonti, Nancy Falxa, Hines, Sarah J., Maddox, David, eds. Green readiness, response, and recovery: A collaborative synthesis. Gen. Tech. Rep. NRS-P-185. Newtown Square, PA: U.S. Department of Agriculture, Forest Service: 306-323. <https://doi.org/10.2737/NRS-GTR-P-185-paper21>.

<sup>77</sup> <https://cultural-protection-fund.britishcouncil.org/projects>

<sup>78</sup> <https://cultural-protection-fund.britishcouncil.org/about>

the previous decade, the Welsh language saw a decrease of around 23,700 people (compared with the Census 2011) reporting to be able to speak Welsh<sup>79</sup>.

*“I think the biggest challenge we've got for the Welsh language, from all of the intangible customs and cultural traditions that are tied up within perhaps language is the farming community and agriculture. And I think that's where climate change meets language preservation... those kids [growing up in agriculture communities] will, when they go to school, will speak Welsh in the playground, will speak in the classroom, because that strong rooted in the agriculture in the history of the area, that that community that they are... what is effectively preserving the Welsh language. So, you've got climate change impacting the affordability of being a farmer in the first place”*

*Heritage Preservation Worker*

There are concerns that words and terminology will be lost because of climate change. These mainly derive from changes in traditional practices (e.g. agricultural) and the loss of biodiversity, some of which are significant to cultural heritage in Wales. Extreme and inconsistent weather and seasonal changes mean we must think about how our farming practices may change. This will include changes to traditional farming methods, the loss of crops, and animal rearing. Because of these changes, there will likely be a loss of words in the future, as they are used less frequently and a loss of cultural heritage. There will, of course, be new words emerging as our climate changes. Through changing ecosystems and biodiversity, we are seeing both species loss and species movement at an unprecedented rate. Folklore is often intimately tied to the natural world, so with this loss, stories may become meaningless or lost entirely, just as there is an opportunity to conserve these folklores for culture to add meaning and depth to how we value and preserve nature.

Changing rainfall patterns and drier soil conditions are all examples of how climate change threatens agricultural production<sup>80</sup>. But the longer-term consequences could see these conditions affect language and culture. Welsh farmers are thinking about long-term resilience

---

<sup>79</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/language/bulletins/welshlanguagewales/census2021>

<sup>80</sup><https://www.ukri.org/wp-content/uploads/2021/12/131221-NERC-LWEC-AgricultureForestryClimateChangeImpacts-ReportCard2016-English.pdf>

in their farming practices and are also considered to have an important role in safeguarding and promoting the use of the Welsh language.

*“Does ‘na ddim dwywaith [fydd] byd ffermio yn newid... Bydd tir sydd efallai’n cael ei gynnwys yn rhy wlyb neu yn rhy oer ar y foment yn dod yn dir amaethyddol. Ma’ hefyd newid yn digwydd a dwi’n sôn am hyn oherwydd dwi’n credu bod hwn yn cael effaith ar yr iaith yn y pendraw.... Gyda’r holl newidiadau sy’n digwydd, dwi’n meddwl weithiau, mae’r eirfa yna yn mynd i ddiffannu. Mi fydd ‘na eirfa newydd yn dod, ond mi fydd cyfoeth yr eirfa wledig yn diflannu, felly dw’i yn teimlo fod hwnna’n drueni”*

*[There is no doubt [that] the world of farming will change... Land that is perhaps too wet or too cold at the moment will become agricultural land. There is also a change taking place and I mention this because I believe that this has an effect on the language in the end.... With all the changes that are happening, I think sometimes, that vocabulary is going to disappear. There will be new vocabulary coming, but the richness of the rural vocabulary will disappear, so I feel that's a shame]*

*Expert Geographer*

Because of extreme weather and rising sea levels, there are also risks to Welsh-speaking communities and educational infrastructure. Figure 5 demonstrates the present-day defended flood risk, which shows the flood extent to Welsh-focused schools in Wales (Welsh medium, dual stream, English with significant Welsh, bilingual AB, and bilingual BB). These school sites have been mapped by analysing their point location, obtained through Data Maps Wales, and using the features of ‘touching’ and ‘are within’ to analyse the spatial relationship between the features of the Flood Risk maps and point data of buildings<sup>81</sup>.

**Table 3.** Number of Welsh Medium Provision Sites identified within the FloodZone

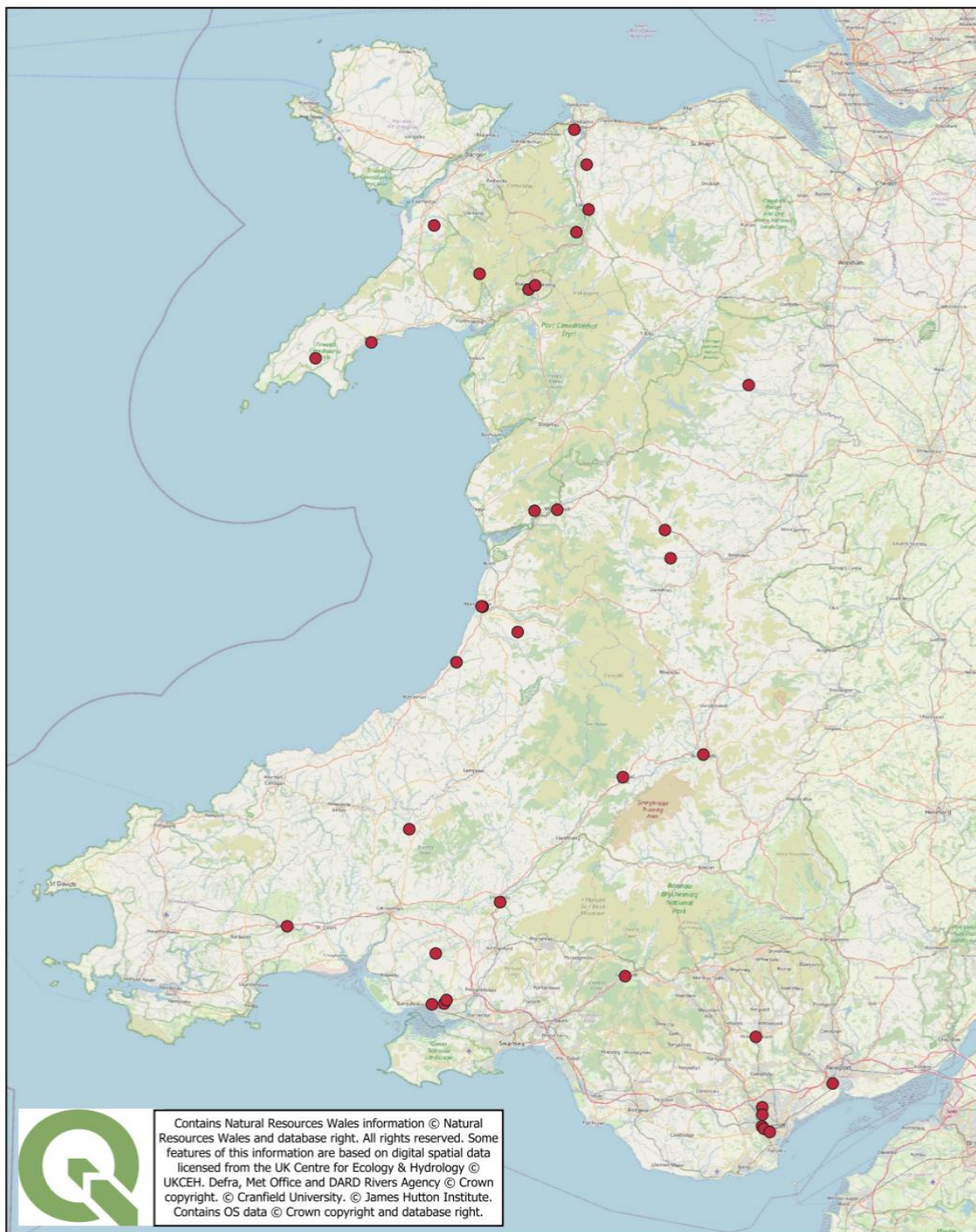
| <b>Number of Sites</b> | <b>Percentage of Sites within the Sea FloodZone</b> | <b>Percentage of Sites within the River FloodZone</b> |
|------------------------|---|---|
| 482                    | 3% (n=16)   | 7% (n= 36)  |

<sup>81</sup> [28.1.24. Vector selection — QGIS Documentation documentation](#)



**Figure 6.** Sea Flood Risk Assessment to Schools with Welsh Medium provision<sup>82</sup> (Welsh Government, 1<sup>st</sup> December 2022; Natural Resources Wales, 23<sup>rd</sup> May 2024)

<sup>82</sup> Schools (Primary, Secondary and Middle) listed in this search cover Welsh Medium, Bilingual AB, BB, CC, Dual Stream and English with Significant Welsh. English Medium schools not included. Attribution Statement: Welsh Government. (1<sup>st</sup> December 2022). All Schools Wales. Available at: [https://datamap.gov.wales/layergroups/geonode:all\\_schools\\_wales](https://datamap.gov.wales/layergroups/geonode:all_schools_wales). Contains public sector information licensed under the Open Government Licence v3.0.



**Figure 7.** River Flood Risk Assessment to Schools with Welsh Medium provision<sup>83</sup> (Welsh Government, 1<sup>st</sup> December 2022; Natural Resources Wales, 23<sup>rd</sup> May 2024)

<sup>83</sup> Schools (Primary, Secondary and Middle) listed in this search cover Welsh Medium, Bilingual AB, BB, CC, Dual Stream and English with Significant Welsh. English Medium schools not included. Attribution Statement: Welsh Government. (1<sup>st</sup> December 2022). All Schools Wales. Available at: [https://datamap.gov.wales/layergroups/geonode:all\\_schools\\_wales](https://datamap.gov.wales/layergroups/geonode:all_schools_wales). Contains public sector information licensed under the Open Government Licence v3.0.

The new curriculum for Wales demonstrates a strong (and globally contextualised) focus on Welsh culture and creativity. As outlined in the Fit for the Future Education in Wales 2018 White Paper, the aim is to develop a generation which is actively and democratically engaged with their culture<sup>84</sup>. There are, however, social challenges which have the potential to both hinder and support this, and without considering the climate change risk and unintended consequences on Welsh language education infrastructure, there are threats to the ambition for the heritage language to thrive among our future generations.

Wales is home to many cultures and languages<sup>85</sup>, which are considered to contribute to the rich and diverse heritage and history in Wales<sup>86</sup>. Related to migration and movement of people, it is also essential to consider how people being displaced (within and beyond Wales) may impact language communities and the extent to which Welsh will be heard and used. This has implications for the Welsh Government's target of reaching a million Welsh speakers by 2050. Although we are not going to see a total land loss in Wales like we are going to see elsewhere in the world, it is essential that we consider how Wales can play a role in global stewardship and leading global conversations related to culture, considering culture at its heart. We should also work across agencies to share our expertise and learning with the worldwide community.

*“Mae ‘na iaith leiafrifol yn marw bob 40 diwrnod, dyna’r ystadegyn sy’n fy meddwl i ar hyn o bryd. Mae ‘na wlad o’r enw Vanuatu i’r rhai sy’n ymwybodol o’r wlad ynys honno, mae ‘na son na fydd Vanuatu yn bodoli mewn 50 o flynyddoedd. Mae ‘na 110 o ieithoedd yn cael eu siarad ar Vanuatu sy’n unigryw i’r lle”*

*[There's a minority language that dies every 40 days, that's the statistic that's on my mind right now. There is a country called Vanuatu for those who are aware of that island country, there is talk that Vanuatu will not exist in 50 years. There are 110 languages spoken on Vanuatu that are unique to the place]*

*Policy Informer*

---

<sup>84</sup> Jones, C. (2019). *Fit for the Future Education in Wales* [online]. Available from: <https://www.futuregenerations.wales/wp-content/uploads/2019/10/2019-10-16-Fit-for-the-Future-Education-in-Wales-1-1.pdf> (accessed 29th July 2024)

<sup>85</sup> <https://museum.wales/articles/1221/Wales-other-languages/>

<sup>86</sup> <https://cadw.gov.wales/learn/wales-rich-and-diverse-heritage>

### 3.4.2 Impact on Welsh Culture

Places with cultural heritage significance hold stories and experiences of several individuals, communities, or nationalities, which, in turn, contribute to their attachment to a site or location. It is important to consider local heritage when discussing the promotion and protection of heritage. The preservation of cultural heritage is often community-based, with these places recurrently constructed and transformed through local history and individual agency.

Changing ecosystems and biodiversity because of climate change could impact Welsh culture related to the land. We are seeing species loss and movement at an unprecedented rate across the globe, as well as physical phenomena changes. An example of the interrelationship between culture and biodiversity is the impact changing climate conditions will have on the natural environment and in our national parks. We have already seen wildlife, such as insects, floral and mammals, in Wales suffering significant population losses. Experts have called for urgent action to save Welsh nature against the devastating impact of climate change<sup>87</sup>.

*“Reit, wel o ran newid hinsawdd, ‘da ni ‘di ‘toucho tipyn bach ar fath o bod hi’n cynhesach, fel pobl yn fwy tebygol o gael gwyliau fan hyn... dwi’n gwybod bod rhaid dechrau addasu beth ‘da ni’n tyfu... mae ‘na trychfilod gwahanol yn dod bellach gan bod hi’n fwy cynnes yn tydi, a mae ‘na afiechydon gwahanol yn dod hefyd, rhai o planhigion jysd ddim yn ffynnu pan mae’n rhy gynnes neu’n rhy sych. So mae hwnna... mae’n bownd amwn i o gael effaith ar y fath planhigion ac amwn i anifeiliaid sydd yn mynd i ‘neud yn dda ar ein tiroedd sydd wedyn yn mynd i effeithio, wrth gwrs mae amaethyddiaeth a’r iaith Gymraeg yn law, law yn llaw”*

*[Right, well in terms of climate change, we can touch a bit on the fact that it's warmer, like people are more likely to have holidays here.. I know that we have to start adapting what we grow... there are different insects coming now because it's warmer isn't it, and there are different diseases coming too, some plants don't thrive when it's too warm or too dry. So that's it... it's going to have an impact on such plants and we want animals that are going to do well on our lands which are then going to have an impact, of course agriculture and the*

*Welsh language are hand in hand]*

*Local Language Worker*

---

<sup>87</sup> <https://naturalresources.wales/about-us/news-and-blogs/news/experts-call-for-urgent-action-to-save-welsh-nature-as-new-report-reveals-devastating-decline-in-species/?lang=en>

One of Mabinogi's iconic characters, Blodeuwedd, is a story considered to bring warmth and new life in the form of flowers after the cold of winter<sup>88</sup>. The story of Blodeuwedd, in Welsh mythology, has established connections to nature, emphasising that nature and human beings go hand in hand. Her name translates to 'flower face', symbolising a connection with the natural world and seasons in Welsh legend. Related to local stories and folklore, questions around the extent to which culture is considered when carbon offsetting on Welsh land. There are enormous challenges for the agricultural community when faced with deals from large companies to buy land with little appreciation of the tales and stories associated with the purchased land. Related to culture, this is significant as we need to consider how placemaking, belonging and identity (Welsh names/farms/locations) may be impacted by this.

*“Fel cwmnïau mawr yn dod mewn a prynu tir Cymru i fel offsetio carbon emissions nhw so maen nhw'n defnyddio Cymru... 'falle rhoi cwpl o Broadleaf rownd yr ochr 'falle i ticio bocsi ti'n gwybod, ond eto, mae hwnna yn, yn dinistrio tirwedd hynafol a treftadaeth hynafol y, ti'n gwybod, y tirlun... mae hwnna'n fel tangible change to visual heritage...s'dim coed bythol wyrdd yn native i'r wlad yma”*

*[Like big companies coming in and buying Welsh land to offset their carbon emissions so they use Wales... they put a couple of Broadleaf around the side 'maybe to tick a box you know, but again, that is, destroying the ancient landscape and the ancient heritage of the, you know, the landscape... that's like a tangible change to visual heritage... there are no evergreen trees native to this country]*

*Local Community Climate Support Worker*

---

<sup>88</sup> <https://botanicgarden.wales/2017/02/flower-face-blodeuwedd/>

## 4. Becoming a Culturally Conscious Wales

Politically, we are making strides towards cultural consciousness in Wales. However, a brief documentary analysis of some Public Body Strategies towards climate change reveals significant opportunities that could be improved. Some plans appreciate climate change's impact on communities and some of Wales's most important heritage sites<sup>89</sup>. However, many strategies and plans in Wales do not directly address and consider culture in their planning for climate change, despite citing the Well-being of Future Generations Act.

Among the strategies and plans analysed, it was identified that there needs to be more understanding of addressing missions/objectives. Collaboration with youth groups and communities is essential<sup>90</sup>. This collaboration and synergy are crucial for community members to feel engaged and involved in the planning and learning process. There are also notes about considering biodiversity loss, and that preservation is critical here, as well as links to managing green spaces and connecting people with nature through education<sup>91</sup> and land management<sup>92</sup>. The One Planet Cardiff Strategy for a Carbon Neutral City by 2030<sup>93</sup> lists culture as its fourth mission: culture and sport-led renewal. However, there are no updates on the progress of this mission.

One notable plan which appreciates the importance of culture is Torfaen County Borough. Within their Climate Change and Nature Emergency Action plan<sup>94</sup>, they demonstrate how their approach to responding to climate and nature emergencies contributes to the well-being goals and the five ways of working in the Well-being of Future Generations Act. Although not all plans and strategies directly consider climate change's impact on culture and language, many commit to working with relevant research and development experts to understand target areas further, showing a proactive approach and opportunity to integrate culture into their Climate Change planning.

---

<sup>89</sup> <https://naturalresources.wales/media/iacpsksr/frmp-cycle-2-national-section.pdf>

<sup>90</sup> <https://www.swansea.gov.uk/climatechangestrategy>

<sup>91</sup> <https://www.swansea.gov.uk/climatechangestrategy>

<sup>92</sup> <https://www.flintshire.gov.uk/en/PDFFiles/Climate-Change/Climate-Change-Strategy-2022-2030.pdf>

<sup>93</sup> <https://www.oneplanetcardiff.co.uk/wp-content/uploads/OPC%20vision%20document.pdf>

<sup>94</sup> <https://www.torfaen.gov.uk/en/Related-Documents/Climate-Change/Climate-and-Nature-Emergency-Action-Plan.pdf>

For us to plan and be comfortable considering culture within the documentation and strategies produced and to act on these, it is crucial that organisations understand how they can embed culture into all our missions and actions. Table 5 outlines an approach that uses the ways of working and goals of the Well-being of Future Generations Act and considers how to weave culture into actions.

**Table 5. Becoming A Culturally Conscious Wales**

| <i><b>Ways of Working</b></i>                                 |   |
|---|---|
| <i>Long Term</i>  | Official documentation which considers the how local and national culture in Wales is fit for purpose in the short and long term. Considers how culture is central to long term planning.   |
| <i>Prevention</i>   | Appreciating that culture can be part of a preventative approach to problem solving and dealing proactively with problems within the cultural sector.   |
| <i>Integration</i>  | Integration of cultural well-being across well-being goals within a wide range of policy considerations.  |
| <i>Collaboration</i>  | Sharing and communicating best practice of embedding culture into objectives among bodies aligning with the act, whilst also understanding and appreciating organisational diversity.   |
| <i>Involvement</i>  | Providing opportunities to residents and cultural experts to express their viewpoints and concerns to ensure that objectives and practices reflect the diversity of cultures within the area they serve.  |
| <i><b>Goal Areas</b></i>                                      |   |
| <i>A resilient Wales</i>                                      | Consideration of how changes in ecosystem and biodiversity because of climate change may alter parts of our culture and heritage and how loss of cultural and linguistic diversity may impact on our ability to describe and protect our natural world.                 |
| <i>A healthier Wales</i>                                      | Understanding how culture can be embedded into healthier lifestyle choices, which enhances people’s physical and mental well-being for now and for the future.  |
| <i>A more equal Wales</i>                                     | That Wales and its organisations are culturally and climate change aware to enable people to fulfil their potential, regardless of their background or circumstances.   |
| <i>A Wales of cohesive communities</i>                        | A commitment to involving communities in decision making, whilst also ensuring that we maintain community cultural assets, and plan for future climate risk, to continue connecting communities.  |
| <i>A Wales of vibrant culture and thriving Welsh language</i> | Ensure that culture in Wales will still be available to future generations and that we maintain as much of it in the face of climate change risk. Think creatively about how we can ensure that the Welsh language is normalised and celebrated in our cultural spaces. |
| <i>A globally responsible Wales</i>                           | Consider how improving cultural well-being in Wales can make a positive contribution to global cultural well-being and demonstrating world leading practices.   |
| <i>A prosperous Wales</i>                                     | Ensure that culture is enabled to play a vibrant and productive part in enabling Wales’s economy to thrive and that the benefit of this is felt by all our communities.   |

## 5. Conclusion and Recommendations

In Wales, a key priority is understanding the realistic challenges facing the Welsh Government in protecting culture for the future, how these challenges are exacerbated by the impact of climate change, and how this relates to the achievement of the country's language goals. Globally, this is significant as several development frameworks and political intervention measures tend to leave linguistic diversity and multilingualism behind when, in fact, language (spoken and signed) is core to being human.

Preservation and promotion of cultural assets and heritage are essential for current and future generations to enjoy and understand the rich history of Welsh culture and heritage. Focusing on the impact of climate change on heritage, particularly intangible heritage, is critically important. This paper has highlighted several perspectives, geographic mapping, and examples that have identified that Welsh culture is at risk because of climate change despite its potential to support solving other societal challenges.

Recommendations following this report are:

1. The Welsh Government should hold public bodies responsible for ensuring that cultural assets are adequately planned for the impacts of climate change. Public Bodies should ensure they take proactive steps to plan and act to protect, preserve, and promote cultural assets at potential risk of climate change. However, the Welsh Government should also be reminded that some bodies may not have the specific skills or training and may require support.
2. Undertake a skills review of those responsible for leadership and planning related to assessing climate change risk on cultural assets. This would identify any skills gaps within these public bodies and work towards lessening the gap.
3. The Welsh Government should consider the budgetary implications for public bodies protecting cultural assets and provide resources to adequately address the recommendations in this paper.
4. The Welsh Government should establish a Task Force to fully understand the extent to which climate change will impact culture in Wales. This Task Force should assess both how cultural assets will be impacted by climate change and how culture can contribute positively to the climate and conversations around it.

5. The Welsh Government should fund a Culture Digital Platform / Fund to support the digitisation and location of national and local cultural assets, artefacts, and stories.
6. Public sector organisations should develop action plans to promote and preserve local culture and heritage assets.
7. Local Authorities must take urgent action to promote and preserve local culture and heritage assets within their area and integrate this action into well-being plans as part of the Public Service Board's responsibilities.
8. Investment should be contributed to local community programmes to preserve and protect their local cultural assets for current and future generations to enjoy. This investment should provide the resources and skills to manage and promote local cultural assets.
9. Mapping culture against climate change and current flood risk needs to become more accessible and in easy-to-read/use formats so people can easily access and analyse it.
10. The Welsh Government should support public bodies' engagement with the cultural sector in relation to climate conversations and policy.
11. Resilience plans must be considered to ensure that education (Welsh subjects/provision in particular) will not be negatively impacted and can continue to be fully accessible in the face of climate change (e.g., flooding).
12. The Welsh Government and public bodies should embrace the publication of the Historic Environment (Wales) Act 2023 and understand how they can also consider cultural assets within their planning in the absence of a Culture (Wales) Act.
13. The Welsh Government should consider introducing a Culture Bill into Senedd Cymru to promote, preserve, and enhance cultural heritage, the arts, cultural industries, and other cultural activities to ensure their continuous role in community well-being, national identity, and economic contribution. The Culture Bill would legislate to support the development of this sector now and for the future and put culture on a statutory footing.



Comisiynydd  
**Cenedlaethau'r  
Dyfodol**  
Cymru

**Future  
Generations**  
Commissioner  
for Wales



**Cardiff**  
Metropolitan  
University

Prifysgol  
Metropolitan  
Caerdydd

