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|  | **Isles of Scilly – Climate Adaptation Scilly Project**  Tender for Climate Change Adaptation Action Plan  REF: 2021 CAS-CCAAP |
|  | O:\Branding Review\Finalised Collection\Logo\GIF\Landscape\Landscape-BlueonWhite.gif  November 2021 |
|  | The project has received funding from the England European Regional Development Fund (ERDF) as part of the European Structural and Investment Funds Growth Programme 2014-2020. The Department for Communities and Local Government is the Managing Authority for ERDF. Established by the European Union ERDF funds help local areas stimulate their economic development by investing in projects which will support innovation, businesses, create jobs and local community regenerations. For more information visit <https://www.gov.uk/european-growth-funding> |
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**Key Reference Material**

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| --- | --- |
| **Title** | **Source / Location of Document** |
| General information on the Natural Environment of the Isles of Scilly | [http://www.scilly.gov.uk/planning/heritage-conservation-environment#Natural Environment](http://www.scilly.gov.uk/planning/heritage-conservation-environment%23Natural%20Environment) |
| Council of the Isles of Scilly Climate Change Strategy 2011 | <https://www.scilly.gov.uk/sites/default/files/document/planning/Climate%20Change%20Strategy.pdf> |
| Literature review on an adaptive approach to flood and coastal risk management | <https://assets.publishing.service.gov.uk/media/606ef21fe90e076f5589bb7d/Evidence_to_support_an_adaptive_approach_to_flood_and_coastal_risk_management_-_report.pdf> |
| Community Led Plans | <https://www.grcc.org.uk/community-led-planning/community-led-plans-clps> |
| Social Capital, Resilience and Adaptation on Small Islands - Climate Change on the Isles of Scilly | <https://www.researchgate.net/publication/315751211_Social_Capital_Resilience_and_Adaptation_on_Small_Islands_-_Climate_Change_on_the_Isles_of_Scilly> |
| Community Resilience Development Framework | <https://www.gov.uk/government/publications/community-resilience-development-framework> |
| Farming in Protected Landscapes | <https://www.scillyaonb.org.uk/current-projects> |
| UKCP18 Marine report November 2018 | <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/marine-projections> |
| Independent Assessment of UK Climate Risk (CCRA3) | <https://www.ukclimaterisk.org/> |
| UK Climate Projections (UKCP) Data | <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index> |
| UKCP18 data for 5 km grids | <https://ukclimateprojections-ui.metoffice.gov.uk/products/LS3A_Subset_02> |
| State of the UK Climate 2020 | <https://rmets.onlinelibrary.wiley.com/doi/10.1002/joc.7285> |

# 1. Introduction

The Council of the Isles of Scilly (“The Council”) is seeking tenders to produce a Climate Change Adaptation Action Plan as part of the Climate Adaptation Scilly project.

The Climate Adaptation Scilly project includes a range of sea defence works and rainwater harvesting for businesses, funded by the European Regional Development Fund and by Grant in Aid from the Environment Agency.

These specific climate change adaptation actions form only part of the required response by the Isles of Scilly community to the physical impacts of climate change. And, while the Council of the Isles of Scilly leads the Climate Adaptation Scilly project, the whole community has a role to play in adapting to the impacts of climate change.

This specification describes a project to develop a *Climate Change Adaptation Action Plan* (CCA Action Plan), which will integrate into the general Climate Change Strategy for the islands, link with any local Farming in Protected Landscapes initiatives, form part of the Local Plan and its Civil Contingency planning, and both be in line with and deliver the UK Government’s Community Resilience Development Framework.

**2. Environmental Context**

The Isles of Scilly have a population of 2,203, who live mostly on the island of St Mary’s. The economy of the islands is dependent on tourism, which relies on the tranquil, unspoilt, high quality environment and is therefore sensitive to change and development.

The Isles of Scilly are designated and protected at international and national levels for several features, including:

* Several nationally and internationally designated sites of interest for nature conservation (including Sites of Special Scientific Interest (SSSI), Special Area of Conservation (SAC) and Special Protection Area (SPA) designations)
* High landscape quality (including Area of Outstanding Natural Beauty designation)
* Archaeological and cultural heritage (the highest concentration of scheduled monuments within the UK)
* Important geological formations
* Small scale local landscapes and seascapes
* Low non-natural background noise levels
* The importance of near views

Further details on the natural environment of the Isles of Scilly can be found at [http://www.scilly.gov.uk/planning/heritage-conservation-environment#Natural Environment](http://www.scilly.gov.uk/planning/heritage-conservation-environment%23Natural%20Environment)v

# 3. Background Information

The Isles of Scilly are located to the south west of Land’s End, separated from the mainland by approximately 40 km of open ocean. There are over 200 granite islands and islets within the archipelago. There are five inhabited islands with a population of 2203, living in 1388 dwellings (2011 census). The total land area is 16.37 km2, St. Mary’s is the largest island with a land area of 6.29 km2 and 1723 inhabitants. The remainder of the population live on Bryher, St. Agnes, St. Martin’s and Tresco. The highest point on the islands is 49 m above sea level and approximately 30% of the land area is at or below 5 m elevation. Tourism is the principal economy and in the summer the population increases to around 6000. The Duchy of Cornwall owns most of the islands and as a result, most properties are leasehold; only the built-up areas of Hugh Town and McFarlands Downs on St Mary’s are largely freehold. The island of Tresco is let in its entirety to the Tresco Estate whilst any uninhabited islands or untenanted land is leased to the Isles of Scilly Wildlife Trust.

The whole of the Isles of Scilly is an Area of Outstanding Natural Beauty, a Conservation Area and a Heritage Coast. Further designations applied to the islands include a RAMSAR site of global importance, Special Area of Conservation (SAC) EU Habitats Directive, Special Protection Area (SPA) EU Habitats Directive, a Marine Conservation Zone, 26 Sites of Special Scientific Interest along with 238 Scheduled Monuments, 129 Listed Buildings and one Grade 1 Registered Park and Gardens. The distinctive landscapes encompass lowland heathland, enclosed pasture, hedged bulb strips, small harbours and quays and scattered rural settlements punctuated by tiny townscapes.

The Isles of Scilly are vulnerable to the impacts of climate change, particularly from rising sea levels, inundation and coastal erosion. The islands bear the brunt of Atlantic storms and storm surges, their low-lying character coupled with the fact that much of the housing stock, critical infrastructure, fresh-water resources and commercial property are located close to sea level on narrow isthmuses increases the vulnerability. The risks to the islands have been highlighted by recent storms, particularly those of 2014, 2004 and 1989, and the impact these have had on key island infrastructure including fresh-water sources, housing, commercial property, roads, sewerage, electrical and telecommunications infrastructure (especially on Tresco) and damage to quays on the off islands.

Residents of the Isles of Scilly already demonstrate high levels of resilience to weather and climate-related events. In particular, local social and cultural structures facilitate self-reliance and cooperation. However, this high level of adaptive capacity is largely focused on response to present-day climate events (particularly storms) as they occur. Future physical impacts of climate change are less well understood and strategic approaches to structural and organisational adaptive capacity are mostly absent.

# 4. Project Specification

The project will engage with all parts of the Isles of Scilly community to develop a *Climate Change Adaptation Action Plan* for the islands. During the processes of engagement, communities and stakeholders will be actively facilitated to learn about the physical impacts of climate change on the Isles of Scilly and on their lives and livelihoods, and to consider what their responses might be to the challenges presented by the expected changes.

Previous work by Jan Petzold in 2017 (“Social Capital, Resilience and Adaptation on Small Islands - Climate Change on the Isles of Scilly”) identified that social capital was key to understanding how best to undertake climate change adaptation actions in a community like the Isles of Scilly.

The contents and arrangements of the CCA Action Plan will need to draw on a range of policy guidance from the UK Government and from non-governmental organisations such as the UK Climate Impacts Programme.

Key guidance and tools on policy and action plan development that should be considered as part of the CCA Action Plan include:

* [Adaptation Pathways](https://assets.publishing.service.gov.uk/media/606ef21fe90e076f5589bb7d/Evidence_to_support_an_adaptive_approach_to_flood_and_coastal_risk_management_-_report.pdf)
* The UKCIP [Adaptation Wizard](https://www.ukcip.org.uk/wizard/) and [Local Climate Impacts Profile](https://www.ukcip.org.uk/wizard/current-climate-vulnerability/lclip/) tools
* The European Union [Adaptation Support Tool](https://climate-adapt.eea.europa.eu/knowledge/tools/adaptation-support-tool)
* In addition, the Devon, Cornwall and Isles of Scilly (DCIOS) Adaptation [Climate Impacts Group](https://www.devonclimateemergency.org.uk/governance/climate-impacts-group/) (CIG) has completed summaries of the physical impacts of climate change, and the associated impacts on flooding in Devon, Cornwall and the Isles of Scilly and on health in Devon. The CIG also has completed an initial ‘top-down’ assessment of climate risks affecting the region (including the Isles of Scilly). Some of these risks are less applicable in the Isles of Scilly. The documents referenced in this paragraph are provided as part of the tender package, and include:
  + DCIS Climate Impacts Group Flooding Statement v3
  + Health Impact of Climate Change 2020

The arrangement of the contents of the CCA Action Plan may be varied from the following, but the Plan should consider:

1. Physical impacts of climate change that affect the Isles of Scilly
2. Existing and future vulnerabilities for communities and organisations
3. Identifying adaptation priorities, including triggers for actions
4. Short-listing potential risk-reduction actions and the agencies that undertake these
5. An implementation plan (including monitoring & review)

The CCA Action Plan will involve all aspects of the Isles of Scilly communities and organisations. This includes the work undertaken by major organisations such as the Council of the Isles of Scilly, the Duchy of Cornwall, the Isles of Scilly Wildlife Trust, South West Water, the Isles of Scilly Steamship Company, Openreach, Western Power Distribution and the many smaller organisations, whether commercial or non-profit, that comprise the economic, social and cultural environment of the islands.

Organisations that govern aspects of the Isles of Scilly, including UK Government agencies such as the Environment Agency and Defra should also be invited to be involved. Visitors should also be involved in the development of the CCA Action Plan.

The CCA Action Plan will complement the existing Isles of Scilly Climate Change Action Plan (CC Action Plan), which deals with both climate change mitigation and climate change adaptation elements. The CC Action Plan acknowledges the pending development of the CCA Action Plan. There will be opportunities to integrate activities proposed for the implementation of the CC Action Plan with activities associated with developing the CCA Action Plan.

The CCA Action Plan will form the Isles of Scilly component of the proposed DCIOS Adaptation Plan. Note that the DCIOS Adaptation Plan takes a more structural approach to climate change adaptation actions, while the CCA Action Plan for the Isles of Scilly also involves communities and stakeholders during its development.

In addition, the CCA Action Plan will deliver an element of the Environment Agency’s (EA) [Adaptation and Resilience Innovation Programme](https://www.gov.uk/guidance/flood-and-coastal-resilience-innovation-programme#memorandum-addendum) under their Grant in Aid programme. In particular, the output of the CCA Action Plan must include materials that can be used as a case study of practical examples for climate change resilience, particularly around flood risk.

**Phase 1) Physical impacts of climate change that affect the Isles of Scilly**

Using the latest scientific advice available from the Intergovernmental Panel on Climate Change (particularly on projected sea level rises), from United Kingdom Climate Projections 2018 (UKCP18), from the UK Climate Risk Independent Assessment (CCRA3) and from other appropriate sources, identify the physical impacts of climate change that will potentially affect the Isles of Scilly. These should be separated into the 4 seasons of Winter (DJF), Spring (MAM), Summer (JJA), Autumn (SON), where feasible.

The potential impacts include (but are not limited to) changes in:

* Air temperature (max. and min.) and sunshine hours
* Mean rainfall, number of rainy days and rainfall intensity on rainy days
* Mean and extreme wind speed (should be examined by wind quarter and by frequency distribution of wind direction)
* Seasonality (e.g., growing degree days)
* Mean sea level and extreme sea levels
* Wave height
* Ocean pH
* Sea surface temperature
* Atmospheric CO2 concentration (only as a physical impact – for example on plant growth rates or weathering rates)

Some of the most serious physical impacts of climate change will result in a change to the number, frequency, duration and intensity of extreme events such as droughts or coastal or surface water flooding. The analysis of the physical impacts of climate change must include analysis of likely changes in extreme events.

Where possible, estimates of projected changes in particular parameters should be identified and discussed, with the parameter projections sourced from appropriate publications or taken from the Met Office UKCP Local 2.2 km convective permitting model (CPM) UKCP18 dataset, [re-gridded to 5 km](https://ukclimateprojections-ui.metoffice.gov.uk/products/LS3A_Subset_02). The 5 km data are already being used to create a climate risk register for the South West (see <https://www.devonclimateemergency.org.uk/governance/climate-impacts-group/>).

The UKCP18 5 km dataset deals only with climate changes under the RCP8.5 emissions scenario and for various 20-year time slices. Data for the time slice for the period 2021-2040 should be presented, using the more extreme (worst-case) scenarios for each parameter. The ranges of projected changes should be mentioned in the reporting.

Care must be taken in discussion with the community and stakeholders of projected most likely and extreme values to ensure the concepts of likelihood and the consequences of choosing this particular emissions projection to adapt to are understood.

If the UKCP18 data require further analysis to present specific climate parameters suitable for discussion with communities and stakeholders, this must be identified separately in the price proposal.

The concept of adaptation pathways shall be used to discuss the range of climate change scenarios that are possible under various likely emissions pathways. NB, some climate change impacts will occur no matter what emissions pathway eventually is followed, although the timing of the impacts may vary depending on the emissions pathway followed.

**Phase 2) Existing and future vulnerabilities for communities and organisations**

Following identification and collation of the expected physical impacts of climate change on the Isles of Scilly, these must be discussed with the community and organisations. The discussions will identify what vulnerabilities they currently have to existing climate impacts and consider what climate change impacts may mean for their future vulnerabilities.

Current and future vulnerabilities could be compiled with communities and organisations using the LCLIP tool from the UK Climate Impacts Programme (UKCIP), although use of other suitable approaches is acceptable, with the agreement of the Client.

Identification of any local critical thresholds and tipping points in the face of the physical impacts of climate change is required as part of this component of the work. For example, these might include elevations of low-lying land and associated key infrastructure subject to coastal flooding.

Discussion and collaboration between communities and organisations should take place within a structure that fosters a sense of collective identity for the development and implementation of the CCA Action Plan and facilitates confidence in the future of the islands. This collective identity should be developed as part of the initial engagement with the communities and organisations.

**Phase 3) Identifying adaptation priorities, including triggers**

The most appropriate climate change adaptation actions to take will be identified in collaboration with the communities and organisations involved in development of the Action Plan. The timing, scale and potential for mainstreaming actions into existing initiatives, or for developing actions that have co-benefits (i.e., provide outcomes beyond just adaptation to climate change) should be considered. The ability of adaptation options to be flexible and open-ended (i.e., to undertake additional adaptation beyond the first adaptation period) should also be considered.

The climate change adaptation actions that are identified should then be prioritised using an appropriate technique. Prioritisation should consider at least the risk and cost-benefit associated with each potential adaptation action.

The concept of climate change ‘triggers’ for adaptation actions should be introduced during consultation with the community. The concept should be used to identify particular points in time and space where action should begin, to cope with climate change risks.

(NB, there is a strong relationship between critical thresholds [see Phase 2 above] and triggers for adaptation action, but the two are not necessarily equivalent. For example, sea level may rise relatively consistently through time, but a trigger for adaptation action might occur before sea level rises to a key threshold such as the floor level of a vulnerable building, since it usually takes time to construct structural adaptation measures to sea level rise.)

**Phase 4) Short-listing potential risk-reduction actions and the agencies that undertake these**

From the long list of appropriate climate change adaptation priorities, discussions with communities and organisations will be used to short-list potential risk-reduction actions. The criteria to be used for short-listing should be decided in collaboration with the communities and organisations themselves. Ideally, a single set of multiple criteria for short-listing should be developed through broad collaboration, so that each group can identify how their priorities relate to others’ priorities.

A single list of adaptation priorities should be developed so that each entity (whether a community or an organisation) can see where the key actions in which they are involved fit with the full list of priorities identified collaboratively.

The role of each entity in implementing the short-listed climate change adaptation actions should then be identified and each entity should receive a separate bespoke list of the actions in which they could be involved.

**Phase 5) An implementation plan (including monitoring & review)**

The short-list of climate change adaptation actions should be discussed with the agencies involved to identify the timing, resourcing and dependencies that are involved in their implementation. An Implementation Plan for the CCA Action Plan should be developed to present these elements and to identify what level of commitment each entity has made for their implementation.

The Implementation Plan should identify how implementation of the agreed short-listed actions will be monitored and reviewed, to track progress. The Implementation Plan should recommend a meeting style and frequency for an appropriately organised collective group to facilitate its continued existence and ongoing achievements.

# 5. Outputs and Objectives

The major output of the project is a *Climate Change Adaptation Action Plan* (CCA Action Plan), including an Implementation Plan, which can be used by all parts of the Isles of Scilly community to provide information on – and to guide actions in response to – climate change impacts.

Intermediate outputs should include 5 short reports on the proposed methods for the upcoming project phase and reporting progress on the previous phase. These reports should cover engagement processes with communities and organisations during the following phases of the Action Plan development (numbered as in Section 4 above):

Phase 2) Existing and future vulnerabilities for communities and organisations

Phase 3) Identifying adaptation priorities

Phase 4) Short-listing potential risk-reduction actions and the agencies that undertake these

Phase 5) An implementation plan (including monitoring & review

Each short report should identify:

* The approaches used to engage with communities and stakeholders during the preceding phase
* Brief summary of the outcomes of engagement during the preceding phase
* Learnings from the engagement that can be applied to subsequent phases, or other projects
* The approaches proposed to be used to engage with communities and stakeholders during the next phase.

Note, report 1 will deal only with the upcoming work proposed as part of Phase 2, while report 5 will deal only with the progress following Phase 5.

Tailored participatory engagement approaches should be used to build shared ownership in the community of the issues associated with the physical impacts of climate change. Broad local accountability for the actions identified in the CCA Action Plan should result from these approaches.

The information developed for and contained within the CCA Action Plan should be presented to the community in an engaging manner, using multi-media and online approaches, where practical, to form a long-lasting record of the CCA Action Plan’s development process and its implementation. This should include records of the delivery of the other components of the Climate Adaptation Scilly project, including the sea defences and rainwater harvesting for businesses components, as examples of adaptation actions.

Each short report should be written in such a manner that it can be used with minimal modification as a case study of how these steps in the development of the CCA Action Plan were undertaken. The target audience for these case studies is communities undertaking climate change adaptation in the United Kingdom and abroad. The short reports should be useable with minimal modification as case studies in using Adaptive Pathways approaches under the EA’s [Flood and coastal resilience innovation programme](https://www.gov.uk/guidance/flood-and-coastal-resilience-innovation-programme). However, the Client recognises not all adaptation actions proposed will relate to flood and coastal resilience.

# 7. Programme & Costs

PROGRAMME

The contract is intended to start in the second week of December 2021. The draft final report will be delivered at the end of August 2022. The tenderer should propose a programme of work that provides the outputs noted above, with any variation in timing to suit proposed variations in method. The programme proposed by the tenderer should contain at least three nominated dates for meetings to review project progress and for discussion of draft work reviews. In each month where no such project progress/draft work review meetings are proposed, a general progress meeting must be scheduled in the programme.

The final report will be delivered three weeks after a marked-up draft final report is returned by the Client to the Consultant. Local government processes mean this is likely to be in the latter half of 2022.

COSTS

Tenderers must provide a lump sum price for the delivery of the Climate Change Adaptation Action Plan, the short reports and all activities associated with the project.

The lump sum prices will need to include any and all costs the potential providers feel are necessary for meeting the specification. Tenderers should include a narrative in their submissions laying out the basis of their costs, including at least:

1. Site visits
2. Literature review
3. Number of personnel involved and associated day rates
4. Interpretation and reporting

This will help the Council understand the basis of the tender. The pricing summary table in the Quotation Opportunity Form must be used to provide a summary breakdown of costs.

The Council will make payments of 60% of the total agreed price to the Consultant on a monthly invoice basis for work completed, with no more than 15% of the total price to be invoiced in any one month. The remaining 40% of the total agreed price will be paid as 5% for each output in phases 2, 3, 4 and 5 (total 20%), 15% on delivery of the draft report and 5% on delivery of the final report.

# 8. Tender Process

This is an open tender that will be run under the terms described under the Invitation to Tender (ITT) document prepared for this project.

Tenders will be assessed on price and quality as described in the Invitation to Tender. The method of assessment will include the following.

Tenderers must include at least the following elements in their submission as outlined in Sections D1 to D4 of the Invitation to Tender.

1. A description of the proposed approach to be taken to the work
2. An outline Engagement Plan setting out the proposed plan of engagement by the Consultant with communities and stakeholders
3. A cost breakdown for the project
4. A narrative laying out the basis of the costs for the project, including but not limited to:
   1. Detailed Engagement Plan
   2. Site visits
   3. Literature review
   4. Any work suggested for more detailed analysis of UKCP18 data
   5. Number of personnel involved and associated day rates
   6. Interpretation and reporting
5. A programme including the proposed work and delivery of outputs
6. Names, CVs and roles of key consultants that will be involved in the project, including an organogram of the reporting relationships

60% of the assessment will be assessed on quality.

40% of the assessment will be assessed on price, as outlined in Section D5 of the ITT.

All submissions are to be submitted in PDF format by the deadline by e-mail to [procurement@scilly.gov.uk](mailto:procurement@scilly.gov.uk) and should be titled “Quotation for Climate Adaptation Scilly – Climate Change Adaptation Action Plan: DO NOT OPEN AUTOMATICALLY ON RECEIPT”.

Tenders should be submitted by the deadline described in the ITT.