Background to Natural England

Natural England was established by an Act of Parliament in 2006. Our purpose is to help conserve, enhance and manage the natural environment for the benefit of present and future generations, thereby contributing to sustainable development. Our priorities for 2020 to 2025 support our mission and the ambitions of the government’s 25 Year Environment Plan.

A naturally functioning wetland landscape is one where rivers and streams flow freely to create complex, dynamic and well-connected habitat mosaics that support a rich assemblage of wildlife.

The river and stream channels should naturally follow a meandering course, with gradual change over years, particularly via erosion on the outside, and deposition on the inside, of the soft bank material on meander bends.

On the floodplain and in the main river, there should be an absence of artificial ditches, drains and barriers and a natural variation in the microtopography and geomorphology should occur, helping to provide a naturally functioning landscape.

The River Avon is one of the biggest and most ecologically important chalk streams in the world, supporting diverse fish populations, a particularly abundant aquatic invertebrate community, and over 180 species of plants. Chalk streams are globally rare, and with over 85% of the world’s chalk streams found in Southern England alone, we must do all we can to conserve and enhance this natural wonder for future generations.

The River Avon is a Site of Special Scientific Interest (SSSI) and therefore forms part of the nation’s finest natural heritage. The River Avon is internationally recognised as a wetland site of importance (Ramsar site) and was confirmed as a Special Area of Conservation (SAC) in 2000. The SAC also includes a number of tributaries and adjacent habitats. The lower reaches of the Avon Valley are also designated as a Special Protection Area (SPA) for their bird interest.

The River Avon is home to a diverse fish community including Atlantic salmon, trout, grayling, eel and other minor species. Southern chalk stream salmon are a genetically distinct sub-group, especially adapted to the chalk stream environment and set apart from other salmon in the world. This unique population has suffered significant declines in recent decades, caused and/or exacerbated by a combination of human induced pressures, including artificial barriers (e.g. dams, weirs, culverts and sluices) that block or delay their iconic migration to their spawning grounds in the upstream river.

In-channel barriers are one of the reasons that the River Avon fails to meet its Conservation Objectives under the Habitats Regulations and also a key driver behind 60% of Europe’s rivers failing to meet ‘good ecological status’ under the EU Water Framework Directive.

The River Avon has over 100 barriers along its course which can reduce the resilience of river habitats and species populations to environmental stress, such as in dry or hot years and such stress is likely to increase with climate change. Barriers alter the natural flow regime for a river and inhibit sediment movement and hydro-morphological function that would naturally support the habitat and wildlife for a chalk river. Barriers are thought to adversely impact fish migration including salmon.

Migratory fish are a highly important part of river ecosystems and local economies, and the genetic distinctiveness of Southern chalk stream salmon make them irreplaceable. We cannot afford to lose these special fish from the Avon.Project Title: Sea to Salisbury Improving salmon migration on the Lower Hampshire Avon

Background to the specific work area relevant to this purchase

Members of the Hampshire Avon Catchment Partnership (HACP) are working together throughout the wider Avon catchment to reduce many of the pressures that affect the health of the river. However, further investigation is required to help us reduce the risk posed by barriers impacting on the natural function of the river and in particular on salmon and others fish migration in the lower reaches of the Avon.

Research has shown that by removing these often outdated, unsafe or environmentally unacceptable barriers, rivers can rapidly return to a more natural and healthy state, benefiting both wildlife and people. Along with restoring the natural flow regime for a chalk river, improvements in water quality and resilience to flooding, barrier removal enables sediments to move freely downstream; a key process which helps form and maintain healthy coastlines, resilient to the impact of climate change.

This project is an excellent opportunity for members of the Hampshire Avon Catchment Partnership to understand a series of actions aimed at reducing the impact of barriers to salmon migration and the wider natural processes of the River Avon.

Outcomes will contribute towards an improvement in the statutory environmental targets associated with the River Avon.

Project Area (Salisbury to Christchurch Harbour) (blue area to be surveyed)



Requirement

Natural England propose to oversee and commission a series of investigations to assess the status and risk posed by barriers to salmon migration along the course of the Avon from the sea to Salisbury.

The investigation will set out a prioritised plan of action to address each barrier.

This will build on, and not duplicate, appraisals completed under previous plans and strategies by the Environment Agency. Information to be supplied by Natural England and Environment Agency.

Will provide an opportunity to design and implement projects to remove barriers presenting the highest risk to salmon.

Project outcomes

Members of the Hampshire Avon Catchment Partnership will have a report and an interactive map of the barriers to fish migration in the lower Avon that will enable delivery of a coordinated plan of action to remove the barriers presenting the highest risk to the species within 3 years upon completion of these investigations and set within the context of the wider river restoration plan that includes the objective to remove the impact from all structures on the river habitat.

A detailed action plan including an interactive map that addresses barriers to salmon migration in terms of prioritising the need to remove structures and restore natural function of the River Avon SAC.

Detailed design(s) for the barriers identified for removal. These are subject to actions identified by the feasibility study.

Methodology

A desktop study will be carried out to inform the requirements of field surveys to assess in-channel barriers. Results will be mapped using interactive GIS software to set out a prioritised action plan to address barriers to salmon migration (and shared amongst the Hampshire Avon Catchment Partnership).

The status and options to remove each barrier will be compared against existing data sets and local stakeholder knowledge to inform the action plan.

Detailed design(s) to be undertaken for barriers identified as a priority for removal by the feasibility study. The designs will also need to include the wider restoration and timescale required to support the structure removal.

The quote will need to include

1. An outline survey design specification detailing what methods and equipment would be used and how the methods outlined would achieve the objectives detailed above. It is appreciated the survey methods and timings may need to adjust depending on weather and results gathered and an explanation should be given on how this would be approached. Covid working practices will need to be included.
2. Desktop study and field surveys, including stakeholder engagement (including EA and NE consultation)
3. Upload missing barriers to the EA’s River Obstacle App
4. Produce an ArcGIS based action plan for barrier easement or removal, made available to Hampshire Avon Catchment Partnership.
5. Design of river restoration for reaches of river where barrier(s) identified and prioritised for removal

Costing (see pricing schedule (excel document))

|  |  |  |
| --- | --- | --- |
|  Element - Feasibility Study  | Staff days | Cost (£) |
| Desktop study |  |  |
| Field surveys including barrier assessment |  |  |
| Stakeholder engagement |  |  |
| GIS barrier mapping & analysis |  |  |
| Feasibility report  |  |  |
| Element – Removing Barriers  |  |  |
| Prepare detailed designs  |  |  |
|  | Total |  |

Sustainability

Natural England protects and improves the environment and is committed to reducing the sustainability impacts of its activities directly and through its supply chains. We expect the Contractor to share this commitment and adopt a sound, proactive sustainable approach in keeping with the 25 yr environmental plan/our commitments compliant with all applicable legislation. This includes understanding and reducing direct and indirect sustainability impacts and realising opportunities, including but not restricted to; resilience to climate change, reducing greenhouse gas emissions, water use and quality, biosecurity, resource efficiency and waste, reducing the risk of pollution, biodiversity, modern slavery and equality, diversity & inclusion, negative community impacts.

As a delivery partner, the successful contractor is expected to pursue sustainability in their operations, thereby ensuring the Contracting Authority is not contracting with a supplier whose operational outputs run contrary to the Contracting Authority’s objectives. The successful contractor will need to approach the project with a focus on the entire life cycle of the project

Outputs and Contract Management

Project outputs

Desktop study and field surveys, including stakeholder engagement (including EA and NE consultation)

Upload missing barriers to the EA’s River Obstacle App

Produce an ArcGIS based interactive action plan for barrier easement or removal and a written report of findings made available to Hampshire Avon Catchment Partnership.

Design of barrier(s) identified and prioritised for removal

|  |  |  |  |
| --- | --- | --- | --- |
| Reference | Deliverable | Responsible Party | Date of completion |
| 1 | Desktop study | Contractor | 30/07/2023 |
| 2 | Field surveys | Contractor | 31/10/2023 |
| 3 | Stakeholder Engagement | Contractor | 31/10/2023 |
| 4 | Upload data EA River Obstacle App | Contractor | 31/10/2023 |
| 5 | Produce ArcGIS based interactive action plan for barrier easement or removal with written report provided | Contractor | 28/02/2024 |
| 6 | Design of barrier(s) identified and prioritised for removal | Contractor | 28/02/2024 |

W/C 19th June – Start up meeting between Natural England, Environment Agency and Contractor

Monthly teleconferences thereafter

W/C 30th October – ArcGIS based interactive map action plan for barrier easement or removal with written report provided in digital format via e-mail.

W/C 6th November 2023 – Meeting with Natural England, Environment Agency and Contractor to discuss barriers identified for removal

W/C 12th February - Design of barrier(s) identified and prioritised for removal

28th February 2024 Final report and design(s) due. Three copies, digital format via e-mail

4th March 2024 - Wash up meeting with Natural England, Environment Agency and Contractor

Contract to be completed by 15th March 2024.