ARRT Project Summary

Project Title/Name: CRF Western Rother Fishery Habitat Enhancement Project: Piloting the Creation of Backwater Fish Refuge upstream of Shopham Bridge on main Rother	**Date** (Start Date (Month/Year) – Finish (month/year)) Bid Deadline: February 2012; Start Date: July 2012 End Date: Contract to April 2014; Completed Aug' 2013

Location: Grid Ref & Place Name: SZ 9835 1858; nearest postcode: Shopham Bridge Farmhouse: GU28 0JP

Country and County: United Kingdom, England

Project Status: complete/in-progress/planned: Completed

River Name: tributary/main river/catchment: Western Rother/Arun, Rother & Western Streams Catchment

Contact Name of Project Officer/Manager and Organisation: Ses Wright, ARRT

Funding Body/Budget: UK Govt': Catchment Restoration Fund (CRF): total Western Rother Fishery Project £109,800.00

Project Themes/Drivers: Pick all that apply: ☒In-channel habitat & biodiversity ☒Flood risk management ☐Urban rivers ☒Environmental flows/water resources ☒Land use management–agriculture ☐Economic aspects ☒Fisheries ☐Hydropower ☒Water quality ☐Land use management–forestry ☒Social benefits ☐Hydromorphology ☒ Climate resilience ☒ Monitoring ☒ Education & Engagement ☐ Catchment planning and survey work

Project Aims and Objectives: Construction of an on-line fish refuge along the main Rother channel. It is recognised that carefully designed and constructed fish refuges can provide both a nursery habitat for juvenile fish during the summer months and a winter refuge where fish of all sizes can escape the force of spate flows. This type of habitat enhancement had not been undertaken in the catchment before so the project was a pilot to help assess whether such an approach is viable on the Western Rother. Initial discussions held by ARRT with the local landowners and angling clubs indicated a willingness to commit to maintaining the quality and functionality of a fish refuge. The project will also explore the impact of cattle poaching and associated sediment input which has been identified as impacting the Rother, exacerbated by the Greensand geology. The project will explore the potential to combine fenced cattle-drinks with a fish refuge. While cattle can exacerbate sediment input, if carefully managed, cattle-drinks can also create shallow water margins which in turn create suitable habitat for locally spawned fish and fry (amongst other ecological benefits) and enhance river-land connectivity and channel morphology. The use of fencing and cattle-drinking areas to optimise habitat potential for fish will therefore also be an aim of the project.

Project Outcomes: A potential site immediately upstream of the new gravel/rock glide site was identified through river survey and landowner/farmer/EA/angling club discussions. Careful planning of the extent, depth, gradient and proposed fencing and cattle-drinking was undertaken. This included a topographical survey of the channel and flood risk modelling. The contractors removed the topsoil from the area successfully losing some to local field margins within the existing pasture floodplain eroded by cattle. Subsoil was removed from a wide area adjacent to the river, leaving the riverbank initially intact, excavated to a depth of ~1-1.5m at its deepest point, graded back to create the greatest possible extent of shallow water margins around the edge of the refuge. The remaining bank was then top-sliced to allow water to fill the refuge with the aim to keep out some of the sediment-rich main river flows from silting up the new refuge. A graded cattle-drink was constructed top-dressed with hard chalk cobbles. Fencing of the refuge included careful management of a ditch that fed surface drainage to the refuge. Tree planting was delivered with the help from Graffham Junior School, planting mainly Black Poplars donated via Sussex Wildlife Trust.

Project partners: Local landowners/farmers/local EA fishery & biodiversity staff, WTT, Whiting Groundworks Ltd.

Before the Works:

Main Rother due to being heavily incised is hidden from view between the two bankside trees. The land is naturally low and just before a bend in the river.

After the Works:

Completed shallow-edged fish refuge with fencing, including a graded cattle-drink using compressed hard chalk boulders to protect cattle hooves and erosion risk.

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