ARRT Project Summary

Project Title/Name: CRF Western Rother Fishery Habitat Enhancement Project: Upper Burton Mill Stream Fishery Habitat Enhancement Project	**Date** (Start Date (Month/Year) – Finish (month/year)) Start Date: July 2014; End Date: Completed April 2015

Location: Grid Ref & Place Name: Grid Ref: SU 979 182, nearest postcode: Burton Mill, GU28 0JR

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: The quantity of available spawning sites along the Stream is restricted due to a lack of local gravel; while this partly reflects the local geology, on-line lakes and dams along the Stream have completely disrupted any coarse sediment (fine gravels) that would otherwise flush down the system from the gravel rich areas upstream. The agreed key project aim is to create a single short section of habitat for spawning immediately downstream of Burton Mill dam. This will aid spawning opportunities for chub, dace, trout, bullhead and brook lamprey. While the Stream at this location initially gives the impression of being gravel rich a survey undertaken in December 2014 indicated that most of the bed material downstream of the dam is imported and consists of broken sections of the building stone and brick rubble, possibly derived from when the dam and mill house were originally constructed. Creating improved habitat near the dam will ensure that all of the available niches downstream are fully resourced. Opportunities for the survival of young fish and fry produced on any new spawning site will be very high because of the rich and varied nature of the local habitat. Engagement opportunities are maximised with South Downs National Park volunteers and production of a short video of the project for release on social media.

Project Outcomes: The project had to be carefully managed due to the high conservation value of the existing site. Pre-works surveys were undertaken by an appropriately skilled ecologist and indicated the need to carefully remove all freshwater duck mussels prior to the works, later returning them after recording their health, size and numbers. Additionally, any freshwater sponges/invertebrates identified at the site (typically encrusted on stones) were temporarily removed by hand and later returned to minimise the impact of the works. A short reach approximately 15m in length was identified for the gravel enhancement works and 7 tonnes of mixed 20-40mm diameter land-dug natural flint river gravels were manually introduced to the Stream using wheelbarrows, a small boat and hand shovels with the assistance of a group of volunteers from both the local angling club and the SDNP's Volunteers. A small amount of woody debris was used to help ensure that the gravels remain stable.

Project partners: Local landowners/farmers/local EA fishery & biodiversity staff, WTT, SDNP Volunteers

The Completed Works: augmented gravel and LWD

River gravels introduced to a short reach immediately downstream of Burton Mill dam, secured in place with a wooden flow deflector.

The Works: Duck Mussels Temporarily Removed

A colony of freshwater duck mussels (*Anodonta anatine),* once common and increasingly rare due to excess siltation and eutrophication were temporarily removed for the works.

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