



Wessex
Rivers Trust



Wild Figcheldean

River Avon, Figcheldean, Wiltshire

Project Update for Parish Councillors

September 2022

Contents

1.0	Background	3
2.0	Project Objectives	4
3.0	Project Output	5

1.0 Background

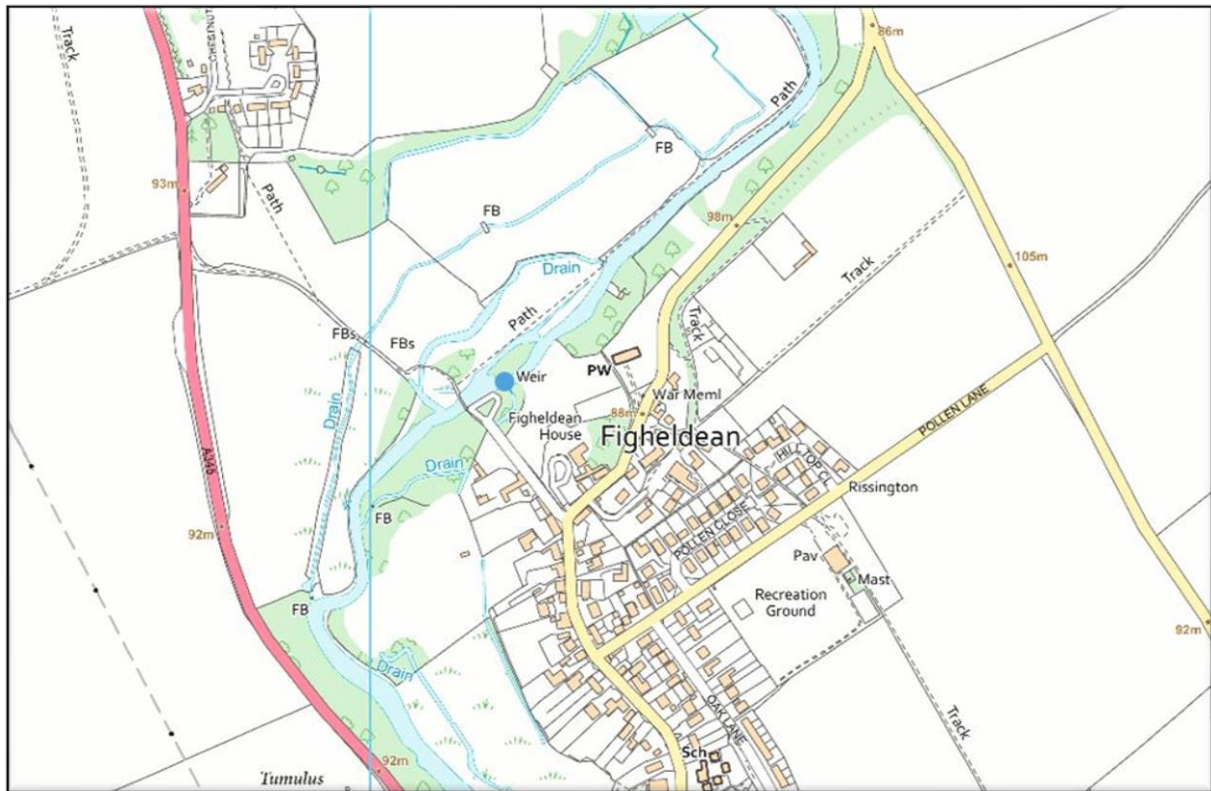


Figure 1: The location of the project (blue dot)

The Hampshire Avon arises from a series of springs in the chalk downland and greensand vales to the North of Salisbury Plain. This groundwater dominated river is designated as a SSSI and SAC for the chalk stream habitat and is characterised by several interest features i.e. *Ranunculus* spp. communities, associated wet grassland, fen and swamp habitats and it supports the SAC species Atlantic salmon, brook lamprey, bullhead and Desmoulin's whorl snail as well as wider fish, invertebrate and plant communities. However, historically the river and its floodplain have been modified and managed for milling, fishery and agricultural purposes and in parts is degraded with specific reference to geomorphology, elevated nutrients and ecology. The River Avon upstream of the Nine Mile River is in unit 3 of the River Avon system SSSI and is currently assessed as in unfavourable condition (Condition Assessment 2015) for its habitat structure (planform, modification, naturalness, woody debris and in-channel structures) water quality (phosphate) and biological assemblages (plant communities). Flow and features of local distinctiveness (including the fish communities not assessed). It is also classified as poor according to the WFD status (cycle 2016), failing on fish, macrophytes and phosphate.

The Wild Figheldean project focusses on a 1km reach of the River Avon close to the village of Figheldean (SU1514447466) from the Defence Infrastructure Organisation (DIO)-owned Choulston Bridge crossing, downstream to below Figheldean Bridge.

The channel is perched on the edge of the floodplain, having been moved in the past to power a since demolished corn mill. The river and floodplain were further modified to feed water into an extensive water meadow system. A relic weir remains on the site of the mill which presents a significant obstacle to fish passage, degrades habitat quality upstream and inhibits natural sediment transport. The river channel itself is artificially straight with a reduced gradient and a uniform cross-section - all of which compound to suppress the natural geomorphology, limiting the natural hydrological processes by

which habitat niches form and develop, both in the river and across the floodplain. A large remnant water meadow carrier, which takes flow under higher flow conditions, is located in the middle of the floodplain and two further relic (completely silted up) back channels to the river (either created for, or pre-dating the mill) are also located between this carrier and the river – one of which follows the parish boundary.

The weir pool is a popular wild swimming site. Unfortunately, its popularity has made it a hot spot for anti-social behaviour and is increasingly a concern for local residents. The weir is in a state of disrepair and is also a potential health and safety liability to the landowner, the DIO. The Parish Council have expressed a desire to remedy the situation. The fishing rights for the reach are held by the Services Dry Fly-Fishing Association (SDFFA).

This phase of the project involved the completion of a stakeholder engagement, agreeing on a design to take forwards, completing detailed designs, hydraulic modelling of the designs and submission of a flood risk activity permit.

The outcome of the stakeholder engagement identified a preferred option from the feasibility study and two slightly different versions of the option were put forwards. The option agreed by the stakeholders was known as option A, and design drawings have been put forwards showing this option. It includes removal of the weir, lowering of the steep cliffing riverbanks on the TRHB, installing some coarse wood berms into the channel to create margins, channel narrowing on one bank with a gravel toe to enable angler access but also to allow for naturalisation of the riverbank and protection of this newly graded riverbank, and creation of a new off-take to replace the old off-take and create a more certain flow split.

2.0 Project Objectives

Project Objectives were as follows:

1. A strong relationship has been built up with key partners and stakeholders and this will be maintained throughout the duration of the project and beyond. All partners have had the opportunity to be represented and have fed back into the options proposed.
2. Develop a design that meets with the key partners and stakeholders aspirations for the site.
3. Undertake and supervise all works and activities necessary to complete the detailed design phase, complemented by modelling of the design to show key partners and stakeholders the likely impacts on the river channels.
4. Have agreement on a costed detailed design ready to take to construction with all necessary permits in place.

3.0 Project Output

By working in partnership with the EA, NE, DIO, Parish Council, SDFFA and two additional landowners, the Wessex Rivers Trust has delivered a detailed design that has ascertained the best option to restore the chalk stream and wet floodplain habitats within the constraints of the site and key stakeholders.

The two designs put forwards from the feasibility study and stakeholder engagement were identified and assessed on the basis of the potential ecological benefits (i.e. for the river, any other water courses and floodplain habitats), and considered the wider potential flood risk benefits and feasibility. A full and comprehensive stakeholder engagement was undertaken, with that feedback received and compiled and the preferred option identified

The detailed design included all feedback from the stakeholders, and we ended up with a hybrid option made up of two of the options identified in the feasibility study.

The design includes removal of the weir, lowering of the steep cliffing riverbanks on the TRHB, installing some coarse wood berms into the channel to create margins, channel narrowing on one bank with a gravel toe to enable angler access but also to allow for naturalisation of the riverbank and protection of this newly graded riverbank, and creation of a new off-take to replace the old off-take and create a more certain flow split.

A range of ecological surveys have been carried, with water voles identified as a major constraint on the planned bank grading. We are currently in discussions with NE regarding best practice and a mitigation licence. We have received a quote from a specialist consultant to write a detailed report, undertake another water vole survey, and to provide a mitigation plan for the water voles.

A flood risk activity permit has been submitted to the EA to gain permission for the works. The EA came back with a series of questions relating to the application, such as water vole mitigation and planned flow splits. We have recently finished answering these questions and have responded to the EA, they will now continue to process the application. The EA have another approximately 6-weeks to process the application unless they feel they require any further information, in which case they can pause the application and request the additional information.

A hydraulic model has been built and the baseline and proposed restoration scenario runs have been completed. The modellers have provided the parameters for the size of the new off-take to ensure a minimum of approximately 10% of summer low flows go down the central floodplain channel. In conjunction with the flow split the main channel is being narrowed by approximately 30% to improve flows and habitat resilience to climate change. The proposed design has been built into the hydraulic model, the model has highlighted there will be no increase in flood risk to either land or property.

The next step is to obtain funding to undertake a new water vole survey and provide a mitigation proposal, this will be outsourced and will enable us to provide the relevant statutory authority of proof that we are undertaking everything with due diligence and within the law. Water voles are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and are a priority conservation species. Following on from the water vole survey, report and mitigation we are hoping to undertake the build of the project in Autumn 2023, EA funding dependant.