



## Westcountry Rivers Trust

### CONSTRUCTION METHOD STATEMENT – TREWEN BRIDGE WEIR

June 2019 - Rev 0.

**Proposed works to Trewen Bridge Weir comprising provision of a new concrete glacis, the installation of low baffles onto the glacis face and an eel pass formed from proprietary eel tiles.**

Revision	Date	Details	Author	Checked by
0	28.06.2019	First issue for Land Drainage Consent	D Chapman	L Ousley
Signed				

This document seeks to set out the method of construction for the proposed works to improve fish passage at Trewen Bridge Weir. It will be updated by the appointed Contractor prior to occupation of the site.

This document is to be read in conjunction with project Drawings, Westcountry Rivers Trust 01 to 06 comprising Site Location Plan, Detailed Site Location and Block Plan, Existing Layout Plan, Proposed Layout Plan, Sections - Existing and Proposed and the Proposed Temporary Works Plan.

#### 01. Contract Administration

The work will be undertaken by a suitably qualified and experienced contractor to be appointed shortly. The works will be let using an NEC3 engineering and construction short contract. The contract will be administered by a Westcountry Rivers Trust (WRT) project manager with input from Environment Agency (EA) Biodiversity and Fisheries Officers; the EA are partners in the wider Water for Growth project, of which this proposal forms part, as are Natural England and South West Water (SWW).

Temporary access to the weir is available to the area downstream of Trewen Bridge through a roadside gate that enters the field on the true left-hand bank; this field also provides a construction laydown area.

It is anticipated that the WRT project manager and/or EA Officers will visit the site on most if not all days of the construction period.

#### 02. Health and Safety

CDM2015 applies to the works although it is not considered that they are notifiable. However, a Construction Phase Health and Safety Plan will be required from the appointed contractor including appropriate risk assessments for all elements of the proposed works.

Refer to section 04 for existing services information.

#### 03. The Proposed Works

The fish passage improvements proposed are detailed on the project drawings that accompany this document but, in outline, comprises the following:

1 – The construction of a new concrete glacis from the end of the existing concrete apron, and the installation of 200mm high baffles onto the glacis face to reduce water velocity and increase water depth to provide best practice passage over the weir for salmonids (Salmon and Trout). A single baffle is also proposed beneath the bridge.

2 - The formation of an eel pass from proprietary eel tiles on the true left-hand side.

All works have been developed in close liaison with local EA staff and will adhere to best practice guidelines.

An application for Planning Consent has been made and is currently awaiting registration.

#### **04. Site Infrastructure**

Drawing 02, Detailed Site Location and Block Plan, indicates the location of the weir in relation with its surroundings.

Existing services: it is anticipated that no overhead or underground utilities service exist on and around the site although the appointed contractor is to satisfy themselves that none exist that could be affected by the works. All work areas are to be CAT scanned prior to the undertaking of the works.

The contractor is to provide proprietary WC and handwashing facilities at the site during the construction phase. Vehicle access and parking will be within the field on the downstream left-hand bank accessed via the nearby road gate.

#### **05. Method of Work**

It is anticipated that the works will be complete by 11 October 2019 subject to river conditions and daily checks that migrating fish aren't present. It is anticipated that the works will take up to 22 working days on site to complete. The appointed contractor is to provide a detailed works programme once appointed.

All works will be undertaken in accordance with all relevant best practice including **PPG5 – Pollution Prevention Guidelines, Works and maintenance in or near water**; although this document has been withdrawn it still provides the benchmark guidance for works such as those proposed.

**All fuelling is to take place well away from the watercourse in a proprietary bunded space. All building materials and chemicals to be stored in work areas is to be secured in bunded storage containers. Spill Kits are to be available at all times in case of emergency. Should a pollution incident occur at this site, it is to be reported immediately to the Environment Agency on the incident hotline 0800 807060 and the Westcountry Rivers Trust contract manager 07854 716263 or 07540 345590.**

Site access – the site is accessed from the road via the gate leading to the downstream field on the true left-hand bank. Prior to the works commencing, all access consents will be in place.

WRT will liaise with the landowner prior to the works to ensure there are no livestock present within the field during the construction period.

All surfaces are to be appropriately protected and left in an 'as found' condition as far as practical.

Site setup – the first task will be to form the secure site area and the delivery of equipment and materials to the site. The site area is indicated on the Detailed Site Location and Block Plan.

Highway Traffic Control – for most of the time the works will be accessed via the field gateway leading to the downstream field, left-hand bank. However, if a concrete wagon is unable to utilise this field access, it is anticipated that the concrete required to form the proposed glacis will be poured from a concrete wagon positioned on the highway. As such, the highway will become single lane or even be closed for a short period. As such, the appointed contractor will liaise with the local Highways Department and put in place appropriate traffic control, likely to be temporary traffic lights, on the day of the concrete pour.

Dry work areas and temporary dams - The undertaking of all works is dependent on weather conditions and suitably low river levels. All work is to be undertaken in dry, fully enclosed work areas. **Please refer to drawing 06 – Proposed Temporary Works Plan.**

It is anticipated that the works will be divided into three phases. During Phase 1 the river would be piped through the work area to allow for the clean down, reduction of levels and placement of concrete to form the new glacis; the baffle and eel tiles beneath the bridge would also be fitted. An AquaDam or sandbags will be used to block off river flow upstream of the works with a proprietary orifice plate capturing flows to a large, flexible drainage pipe. This phase of work would take approximately 10 working days although the programme would allow for all temporary works to be demounted and normal river flows restored over weekends and as flow conditions dictate.

Once the proposed glacis has been formed it is anticipated that proprietary AquaDam and/or sandbags and robust plastic sheeting over pumped as required will be employed to create local, fully enclosed work areas for phases 2 and 3. During these phases the fish pass and eel pass will be constructed.

No temporary works will be left in the river over weekends and, should river levels be about to rise, it is highly likely that all temporary works can be removed from the river to allow the high-water event to pass. Should this not be possible the dams will become inundated. Once inundated, the AquaDam will become buoyant and automatically empty of water; the AquaDam will be fixed at its upstream end near the bank, so at this stage it will simply swing into the bank. When inundated, depending on the flow, sand bagging will collapse and, depending on flow velocities and duration of event, wash downstream to slack water where they can be retrieved.

All proprietary AquaDams and sandbagging is to be a maximum of 600mm high above riverbed level.

Once individual work phases are complete, the temporary dams will be removed in a controlled manner to ensure normal flows are restored gradually.

Completion of works – On satisfactory completion of the works the contractor will be allowed to demobilise and vacate the site. The contractor is to leave the site area in an ‘as found’ condition as far as practical.

Defects and Monitoring period - There will be a 12-month defects period for the NEC3 construction contract from the satisfactory completion of the works. During this period, the site will be monitored by the EA/WRT on an approximately monthly basis to ensure it is in good condition and operating correctly.

Should some fine tuning become apparent, we will liaise with Cornwall Council, EA Fisheries Officers and the appointed contractor to consider undertaking these. All necessary consents / permits / licenses and landowner agreements will be obtained prior to any additional works taking place.

#### **06. Contingency Planning**

Should an unexpected event occur during the undertaking of the works, such as bad weather or unexpected ground conditions, it should be possible to react quickly and safely due to the relatively limited nature of the proposed works and the pre-planned control measure to be put in place. In-river temporary works can be removed very quickly, and site staff will be on 24hr call out should a rain event take place.