



Westcountry Rivers Trust

CONSTRUCTION METHOD STATEMENT – GLYNN WEIR

June 2019 - Rev A.

Proposed works to Glynn Weir (also known as Lady’s Wood Weir) comprising provision of Larinier Fish Pass, Eel Pass and the protection of the left-hand bank downstream of the weir.

Revision	Date	Details	Author	Checked by
0	29.05.2019	First issue for Land Drainage Consent	D Chapman	L Ousley
		Signed		
A	03.06.2019	Additional construction information added, including temporary works	D Chapman	L Ousley
		Signed		

This document seeks to set out the method of construction for the proposed works to improve fish passage at Glynn 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, 02 and 04 (Site Location, Site Block Plan and Temporary Works) and Fishtek Consulting FP0370 1B, 2B and 3B (Site Plan, Orthogonal Views, Section Views).

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 on the true left-hand bank which is owned by Forestry England. A construction laydown area is also available on the left-hand bank.

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 Larinier Super Active Baffle fish pass to provide best practice passage over the weir for salmonids (Salmon and Trout).
- 2 - The formation of an eel pass formed from proprietary eel tiles.
- 3 - Reform and protect left-hand bank downstream of the weir with appropriately sized riprap stone. The higher sections of bank will be dressed with topsoil and seeded with an appropriate grass/wildflower seed mix.

All works have been developed in close liaison with local EA staff and adhere to best practice guidelines. They have been accepted as appropriate by the EA's National Fish Pass Panel.

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

04. Site Infrastructure

Drawing 02, Site Block Plan, indicates the location of the weir in relation with its surroundings with the forestry access track shown leading up to the weir from a southeasterly direction.

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 via the forestry track leading to the weir from the southeast. The access drive leading to Glynn House is always to be kept clear of vehicles.

The site is located within a Forestry England site, as such, all work and laydown areas are to be securely fenced for security and public safety.

05. Method of Work

It is anticipated that the works will be complete by 30 September 2019 subject to river conditions. It is anticipated that the works will take 35 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 fueling 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 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 Site Block Plan.

Site access – the site is accessed from the A38 via the drive leading to Glynn House; the junction off the A38 on to the drive is an acute angle and the drive is single width. The access drive leading to Glynn House is always to be kept clear of vehicles. The weir can be accessed via the gated forestry track off the drive. Prior to commencement of the works, all access

consents will be in place and the householders at Glynn House will be consulted on the undertaking of the works.

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

Dry work areas and temporary dams - The undertaking of all works is dependent on weather conditions and suitably low river levels. It is anticipated that the works will be undertaken sequentially in phases with a separate dry work area being formed for each phase. Only one dry area will be formed at any one time. The phases of work proposed comprise -

1. Construction of Larinier Fish Pass and fitting of fish screen to existing leat off-take.
2. Construction of Eel Pass.
3. Reform and protect bank, left-hand side downstream of the weir.

As the river is relatively small and water flows are limited in periods of dry weather, it is anticipated that dry and fully enclosed work areas will be formed with either a proprietary AquaDam and/or with sandbags and robust plastic sheeting over pumped as required. They would be formed sequentially with only one of the areas indicated formed at any one time. The highest point of any temporary dam is to be a maximum of 600mm above riverbed level measured at that location. Please refer to Westcountry Rivers Trust Drawing 04 for proposed Temporary Works.

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.

Once a work area is complete, the temporary dam will be removed in a controlled manner to ensure normal flows are restored gradually.

Construction Phase - The Technical Design information is currently being prepared by Fishtek Consulting, a specialist fish pass design and engineering consultancy. This design information will provide full construction details.

The site will be accessed from the adjoining forestry access track on the left-hand bank, the compound/laydown area is also to be located on this bank. It is anticipated that a small excavator, fitted with low ground pressure rubber tracks, will be used to help facilitate the works. Concrete will be supplied ready mixed from off-site and pumped to site locations from vehicles parked on the forestry track. All works will be undertaken at times of suitably low river flows and comprise the following elements -

1. Larinier Fish Pass. This is the largest element of the proposed works. Once the dry area is formed the weir face, wingwall and notch will be cleaned down. The existing low flow notch will be cut out along with any loose masonry. The wingwall will be repointed and formwork put in place to pour the concrete base required for the pre-fabricated Larinier unit. At this point any damage to the left-hand side of the weir glacis will be made good with insitu concrete to match existing.

The concrete base will be poured and left for 48 hours before the formwork is struck. The Larinier unit will be prefabricated of aluminium off site to the design and tolerances to

achieve best practice fish passage. Once the new base is suitably cured, the Larinier unit will be put in place and bolted down. In addition, the new fish screen will be fitted over the existing leat off-take.

On completion, all plant and materials will be removed from the work area, it will then be cleaned down prior to the temporary dam being demounted.

2. Eel Pass. Although smaller in scale, this element will be construction in much the same way as the Larinier Fish Pass. Once the dry area is formed the weir face and wingwall will be cleaned down and the notch to receive the eel pass will be cut into the weir glacis. Any loose masonry will be removed, the wingwall will be repointed and formwork put in place for the concrete base required to house the proprietary eel tiles. This will include an additional length of weir toe to allow the eel tiles to be taken to bed level downstream of the weir. At this point any damage to the right-hand side of the weir glacis will be made good with insitu concrete to match existing.

The concrete base will be poured and left for 48 hours before the formwork is struck. Once the new base is suitably cured, the proprietary eel tiles will be bolted down.

On completion, all plant and materials will be removed from the work area, it will then be cleaned down prior to the temporary dam being demounted.

3. Reform and protect left-hand bank downstream of the weir. A small dry works area will be formed along the toe of the bank to be reformed. Suitably sized, locally sourced riprap stone will be used to reinforce this area of scoured bank. This will be bedded on a base formed from lean mix mortar. The bank profile will be naturalist in form tying in seamlessly with adjoining ground levels. The upper sections of bank will be topsoiled and seeded with an appropriate grass/wildflower seed mix.

On completion, all plant and materials will be removed from the work area, it will then be cleaned down prior to the temporary dam being demounted.

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 EA Fisheries staff and the appointed contractor to consider undertaking these. All necessary consents / permits / licenses 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. Flood risk in the area is considered to be low due to the limited size of the river channel and the site's location, largely remote from built infrastructure.