



# Management System

**Project:** 412 Strategic Exe Weirs\_17 Bridgetown

**Tasks:** Installation of a Larinier super-active baffle fishway, and a smolt screen and chute

Revision	Date	Details	Author	Checked by
1	07.04.2021	First issue for Environmental Permit	P Turnbull	
Signed:				

## 1. The proposed works

This project is part of the Strategic Exe Weirs (S.E.W.) partnership programme, designed to mitigate the cumulative delays and other impacts of multiple weirs on upstream and downstream native fish migration. Bridgetown weir (SS 92320 33770) has been identified as a priority structure to receive fish passage improvement works under phase 1 of the S.E.W. programme. Key limiting factors include: poor designed existing fish pass; relative size of the weir compared to location in catchment; overall height and severity of slope; length of weir restricting water depths compared to received flows; lack of significant downstream pool; competing attraction flows; leat and mill infrastructure hazards for downstream migrating fish.

Delivery elements:

1. Larinier super-active baffle fishway at the right hand bank (RHB) of the weir, at location of existing fish pass. To include excavation of riverbank to accommodate restrictive angle of fish pass.
2. Smolt screen (seasonal) at the leat entrance at the left had bank (LHB), with an accompanying smolt chute to efficiently direct downstream migrating fish to main river Exe channel.
3. Raising of the weir crest at the left hand side to produce a more even water flow over the crest and thereby remove/reduce competing attraction flow.

## 2. Site infrastructure

Access to the site is via a forestry/agricultural track, which joins Edbrooke Road at SS 92116 34132. The track is a public byway and therefore all machinery and vehicle movements will be accompanied by appropriately qualified banks personnel, and foot-traffic control may be required depending on how busy the byway is during the construction period. The track borders the woodland to the west of the LHB floodplain of the upper Exe, and will require breaking through a recently coppiced ash hedge and temporary ramp for access to the riparian grassland to the west of the proposed work site. A temporary access track may be required in the form of track boards, and a site compound will need to be formalized next to the proposed work site.

A temporary storage area may be constructed near to the track entrance at SS 92153 34141 for delivered materials, depending on ground conditions during the construction period restricting access by delivery vehicles. In which case, materials will be temporarily stored and moved with appropriate machinery as soon as practicable to reduce risk of theft. It is intended to keep this option open for dynamic reaction to encountered conditions.

Vehicle movements are to be kept to the minimum for safe and efficient performance of project tasks, and to reduce impact on the riparian grassland.

### 3. Method of Work

It is anticipated that the works will take 6-8 weeks to perform. This includes a time to setup and plan access routes and make good any ground disturbed as part of project delivery.

The works will be performed within the appropriate work windows: all in-channel work will be performed between May-September, although an extension may be applied for to work in-river during October. This will depend on gaining relevant permissions and available contractor time due to tight work schedules from Covid-19 related delays. It is believed justified to apply for this, if necessary, due to minimal risk of environmental damage when adhering to the Environmental Risk Assessment that accompanies this document.

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 for works such as the proposed.

#### 3.1 Flood risk:

The works will only be undertaken when river levels are suitably low and weather stations forecast conditions that are likely to remain stable.

The fish pass, chute and weir crest raising will be installed following an appropriate flood risk assessment as required by engineering works of this nature, and considering the legal requirement to protect the ability of the abstraction point to function as stated under the active abstraction licence (14/45/02/2354).

The fish pass and smolt chute will be designed and installed following appropriate flow modelling to ensure appropriate materials and securement techniques, and correct operation and controlled change to the existing flow conditions.

#### 3.2 Damage to riverbanks:

It is proposed to perform the works during appropriate weather conditions, either by foot or by machinery of appropriately low-pressure design. Access routes for machinery to be planned to avoid areas at risk of ground damage (e.g. wet depressions) and work performed systematically to avoid excessive machinery movements.

The Larinier super-active baffle fishway will be installed whereby without bank manipulation, outlet flows would be obliquely angled towards the existing bank. Consultation with the National Fish Pass Panel resulted in this design as appropriate for the site, with risk to the riverbank mitigated by excavation of the riverbank to accommodate a new pool to dissipate flow energies. The new pool and riverbank will be protected by local sourced rock to form a rip-rap revetment.

All areas utilised to perform works are to be left in an 'as found' condition as far as practicable on completion. Machine-based working to be performed in summer months which will encourage quick re-establishment of surface vegetation cover.

### **3.3 Pollution:**

Petrol and diesel driven tools and machinery are to be refueled away from the river at designated areas, operating on biodegradable oils and lubricants where possible, and emergency spill kits to be available at all times. Power tools to be battery operated where possible.

Concrete infrastructure to be installed only in areas suitably made dry with dewatering activities. Ensure concrete is appropriately cured before fixing delivery elements and allowing contact with flowing water following installation completion.

Should a pollution incident occur at this site, it will be reported immediately to the Environment Agency on the incident hotline 0800 807060.

### **3.4 Services:**

It is not thought that underground or overhead services exist on or around the proposed work areas. A service/utilities plant check has been performed and has not identified any services within the work area that require mitigative action or poses any risk to the project or personnel. Access to the site will require passage under overhead powerlines, and this will be identified and managed as appropriate by the contractor. For example, by using 'goal post' arrangements to limit machine height passing under the powerlines to within the legal clearance boundaries. The site and its surroundings will be visually inspected prior to any works taking place, and suitable cat-scanning operations will be performed before any ground breakage by the contractor.

### **3.5 Invasive flora and fauna:**

In order to avoid the spread of invasive non- native species all tools, equipment and workwear that will be in the river and surrounding area will either be new or thoroughly disinfected in line with current best practice prior to use. The WRT Biosecurity Policy must be observed by all site personnel during the undertaking of the works.

## **4. Site and Equipment Maintenance Plan**

The Site/Operations Lead Responsible Officer of the contractor will ensure the site is tidied and secure on completion of each day's work; all equipment will also be checked and repaired if required. Due to the relatively short duration of the proposed works, it is anticipated that little if any machinery maintenance will be required. Should maintenance be required, e.g. hose repair, this will be undertaken away from the work area where possible or away from the river and the relevant maintenance record completed.

Every morning, prior to any work commencing, pre-checks of equipment and machinery will take place with all site personnel to agree work procedures for the day with the Site/Operations Lead Responsible Officer.

## **5. Contingency Plan**

If in the event the appropriate consents are not obtained in sufficient time, or riparian owner permission is relented for any reason, the works will be rescheduled, expected summer 2022.



If in the event an appropriate construction contractor cannot be secured, for example due to rescheduled works from 2020 from Covid-19 delays, the works will be rescheduled for the following summer 2022.

Additionally, see section 6. Accident Plan, subheading **Enforced shutdowns** for more details.

## 6. Accident Plan

The proposed works are relatively small in scale and it is anticipated that they will be completed within 20-25 working days, weather and river levels permitting. It is anticipated this operation will not be considered notifiable under Construction (Design and Management) Regulations 2015.

The Accident Plan will be prepared prior to the occupation of the site and reviewed daily. It will provide contact details for all site operatives, off site staff, Westcountry Rivers Trust 24hr contact and the nearest Medical Centre.

All site operatives will be under the supervision of up-to-date first aid and moving water safety trained and certified personnel.

All accidents and near misses will be recorded by the Site/Operations Lead Responsible Officer and reported under the RIDDOR Regulations 2013.

### 6.1 Equipment breakdowns:

Machinery will be inspected during the delivery procedure and accepted only if in full working order with no sign of obvious defect. Machinery will be operated by trained personnel only, within best practice and for the tasks assigned for the machinery only. In the event of breakdown or required maintenance, repairs will be performed off site wherever possible or away from the river. In the event of a major machinery failure, such as immobility due to mechanical issues, recovery will be arranged. If in the case of immobilization in-river, the EA will be alerted and oil booms from spill kits deployed as a precautionary measure before recovery can be arranged. Correct inspection, maintenance, operation and continuous observation will minimise such risks.

The hand tools required are of a standard nature and are readily available should replacements be required at short notice. Spare batteries will be available for battery operated tools.

### 6.2 Enforced shutdowns:

Events that may lead to force shut down of the works include weather/river level related risks, machinery breakdown, or vandalism of equipment or work area.

If a suitable weather window cannot be identified prior to end of the accepted in-river work season, the works will be cancelled and rescheduled. Should an unexpected weather event occur once works have commenced, works would be paused, demobilized and rescheduled where possible. Risk of events of unexpected severe weather causing disruption to construction elements once committed (e.g. poured concrete is not yet sufficiently set to withstand unexpected pressure) will be minimized by following correct and robust planning procedures. If in the event proper procedure was followed but such an event occurred not through negligence but genuine stochasticity, it would be expected any necessary repairs to the site or local environment would be sought to be covered through a claim on the insurance of the relevant agent.

If machinery breakdown causes significantly delay, due to availability of replacement parts or machinery or complications occur related to recovery, operations can be rescheduled according to agreements subsequently made with the client, landowners/managers, and regulatory bodies.

### **6.3 Fires:**

Controlled fires will not be permitted on the site although appropriate fire extinguishers will be available on site in case of emergency, for example engine or battery related fires.

### **6.4 Vandalism:**

The proposed work sites are in a remote area located near to a public bridleway and road, but on privately owned property. No tools or keys will be left on site overnight, and machinery will be locked and appropriately shielded. The site compound will be appropriately fenced with anti-vandalism fencing (such as appropriately secured Heras fencing), including any material storage areas.

### **6.5 Flooding:**

The proposed works will act to restore a more natural function of the river which is anticipated to have zero to negligible changes to river flows affecting local properties. It is likely that high river flow events will be avoided due to the relatively short duration for performance of the proposed works and the use of long-range weather forecasts.

All in-river and close riparian work areas will be kept clear of equipment, loose materials and waste on completion of each day's work. Installed infrastructure, both temporary (e.g. concrete shutter boarding) and permanent (resulting infrastructure) will be thoroughly checked for secure holding during installation, at end of each working day and upon completion of the works.

## **7. Complaints Procedure**

The works are being developed in close liaison with the owners of the affected structures and land, the local EA Fisheries Technical Specialist, and the Exmoor National Park Authority.

Information will be provided to all the above organisations including details of the proposed works and contact details for the Westcountry Rivers Trust (WRT) Project Manager, and the Site/Operations Lead Responsible Officer.

All complaints should be directed to the WRT Project Manager in the first instance. The WRT Project Manager will address the issues directly with the complainant either verbally or in writing. If this does not satisfactorily resolve the complaint a site meeting will be offered. If this does not resolve the situation the matter will be escalated to the Westcountry Rivers Trust management team. All complaints will be recorded including nature of complaint and actions taken to ensure resolution.

## **8. Staff Competence and Training Record**

The works will be undertaken by suitably qualified and experienced specialist contractors, as appropriate under the Construction (Design and Management) Regulations 2015. All site operatives will be operating under appropriate First Aid officers and trained/experienced in moving water safety. Staff competencies will be sought by WRT from all contractors submitting tenders for the work via the construction tender process. Competency and suitable experience and included as assessment criteria as part of this process.

## 9. Record Keeping

The Bespoke Environmental Risk Assessment, Construction Method Statement and Management System will be retained on site at all times, along with the Site Health & Safety Folder as required by the Construction (Design and Management) Regulations 2015. Dynamic elements will be added to these documents as they arise for inclusion in the project handover document.

Other documents to be provided on completion of the works will include:

- Westcountry Rivers Trust information
- Contractor details
- Details of any materials and components used to complete the works
- Complaints records
- Record of locations of work elements
- Photo record
- Monitoring and maintenance requirements

## 10. Management System Review

This Management System document is a 'live' document, it will be reviewed and updated regularly during the undertaking of the proposed works. Revisions will be included in the document as highlighted text and detailed in the revision record at the beginning of the document; particular attention will be made to changes in methods of work and/or control measures. It will be reviewed as the proposal passes through the Environmental Permitting system, and may include revisions to ensure full compliance with Statutory requirements and best practice guidelines.

This Management System document will also form part of the background information for the on-site operative staff to undertake the works.

Once the site is occupied, the Management System will be reviewed by the WRT Project Manager and the Site/Operations Lead Responsible Officer prior to work operations taking place. The Management System will then be updated during the construction phase should changes in work methods or control measures be considered appropriate.

## 11. Management System Availability

This Management System will be kept up to date by the WRT Project Manager who will seek input from the Site/Operations Lead Responsible Officer, site staff and any other relevant persons including Environment Agency Officers.

A hard copy of the latest revision of this Management System will be available on site at all times; all staff will be briefed according to the document before commencing work on site. This document will be made available through the WRT Project Manager to all other interested parties related to the project.