Low Mill Weir

Part of the Eden River Restoration Strategy

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2017

Eden Rivers Trust
The Eden Rivers Trust is a Charitable Trust set up in 1996 with two main aims:

- Conserve, protect and improve the River Eden, its tributaries and the flora and fauna in and adjacent to them.
- Increase public awareness of the importance of the River Eden and its catchment through education.

These aims are met through our research, conservation and education projects.

- Main river over 145 km in length
- Catchment over 2300 km²
- Part of designated SAC
- Numerous SSSI features and SAC species
6 year strategy to restore natural processes for the benefit of people and wildlife (2015–2021)

Over 200 known man-made structures river
Extensive studies and surveys:
- Feasibility and Heritage Assessment – 2015-16
- Contaminated sediments analysis – 2015-16
- Lots of hydraulic modelling – 2015-17
- Scour assessments (levels 1&2) – 2016-17
- Core foundation survey (bridge) – 2017

Coordinated approach
Community engagement
Multiple drivers – SAC, WFD, Flood Action Plan, Eden Fisheries Plan, Services & Highways

Legend
- 100-yrCC Weir Removed
- 100-yrCC Baseline
1.8 Low Mill Weir Removal - Long Section

**Upstream**

- **EAMT01_9822m**
- **EAMT01_97711#** Rapid XS A-A
- **EAMT02_9752**
- **EAMT02_0045**
- **EAMT02_0059u**
- **Boulders to protect cables**
- **4m**
- **0.53 m nom.**
- **Existing location of shallow underground electric cables (Disconnected) which require removal approx 21m upstream of weir. Coordinate with ENW regarding these cables.**
- **Sour hole (if present) to be raised on left side of channel as part of rapid feature, as per Figure 1.15.**
- **Rapid XS D-D’**
- **EAMT01_9614**
- **EAMT01_9614#**
- **Rapid XS C-C’**
- **EAMT01_9630#**
- **5m**
- **Assumed location of underground 11kv electric cables. Exact details of location to be obtained from ENW trial pits. Specification of crossing to be determined by the electricity board. Minimum depth of cover to be maintained to electric cables (to be specified by ENW).**

**Labels refer to cross sections plotted in Drawings 3-4**

**Downstream**

**Detail 1.5 Plan Section - Bank Protection between Eamont Bridge and weir (to be removed)**

- **Rock roll mattresses bank protection to begin approx. 50 m upstream of weir**
- **60 m**
- **30 m**
- **115.5 m AOD PGL**
- **Leat channel**
- **Key**
  - EGL Existing Ground Level
  - PGL Proposed Ground Level
  - Area of bed lowering towards leat channel
  - Area of bed raising to create rapid feature

**DRAFT**
Ready to move forward with removal?

Not quite…..

Area of predicted increase in velocity and potential scour
Options going forward:

- Relocate Waste Water pipe
  - Pro’s – Flood alleviation, fish passage, remove pollution risk, removes weir liability;
  - Con’s – Expensive, delay in progress, thus increased immediate pollution risk

- Protect in current location
  - Pro’s – Mitigate immediate pollution risk, low cost;
  - Con’s – Increases local flood risk, barrier to fish migration, maintains weir liability;

- Open to ideas..............
Thank you