

Managing risks to deliver projects

Ennerdale Mill Weir removal, River Keekle restoration

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Our catchment

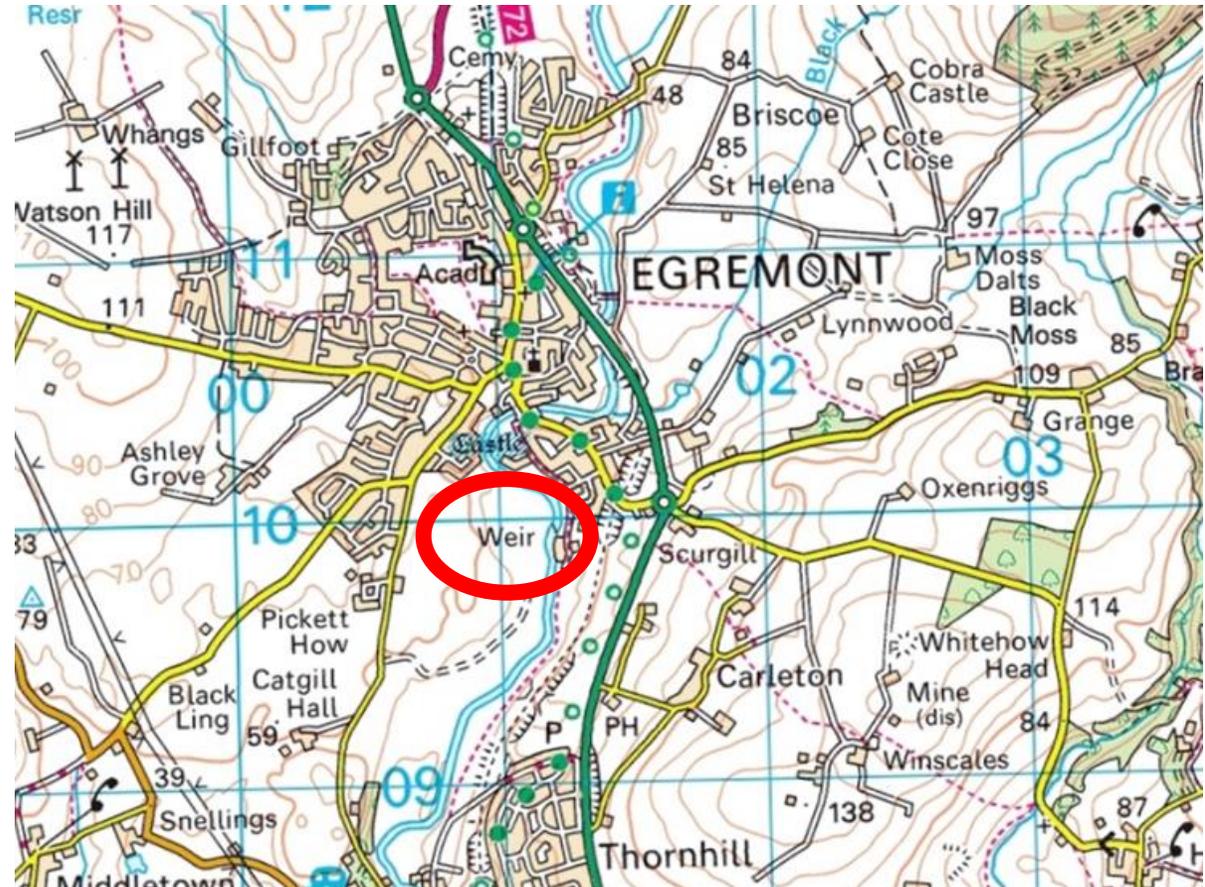


Ennerdale Mill weir removal

- Large failing weir on River Ehen
- Barrier to salmon migration
- Surveys forecast failure in short term
- Risks:
 - Devastating impact on FWPM
 - Severe flood risk to adjacent land (including minor road and business park)
 - Angry anglers
 - Loss of heritage



Location



Before...



Risks

- **Getting the project off the ground**
 - Ownership – who owned what?
 - Unadopted road – would this be affected?
 - Funding – paid in arrears
- **Delivery**
 - Adjacent road collapsed before works started
 - Dust (*yes, during a Cumbrian summer...*)

Risks (continued)

- Environmental
 - Silt and FWPM
 - Sand martin nests
- Engagement
 - Local angling group opposed the plans
 - Local residents felt it was a heritage structure ('part of the town')

Solutions: Plan... But stay flexible

- **Getting the project off the ground**
 - Extensive records searches and desktop study
 - Additional design work and innovative method statement from AECOM
 - Specific boulders chosen (non-limestone) at significant additional cost
- **Delivery**
 - Work programme altered at short notice – required contractor flexibility
 - Introduce speed limits across site
 - Engineering investigations, hasty Board meeting, letters to affected businesses
- **Environmental**
 - All works supervised by FWPM experts (acting as ECoW)
 - Close scrutiny of contractor's methods to reduce silt releases

...during...



Solutions: Communication is vital

- **Community engagement**
 - Signs around town and notices in local newspapers
 - Letters to town council and newspaper
 - Leaflet drop to all local residents
 - Events to promote project (e.g. community walk)
 - Meetings with affected businesses
 - Contractor took 'ownership' of project including Comms
- **Partnership working**
 - Stakeholder meetings
 - Work with EA to speed up payments
 - Regular meetings with NE and EA about FWPM

... and after



Project outcomes

- Completed on time and within budget (c. £350,000)
- Zero pollution incidents during construction phase
- FWPM protected – 2019 surveys showed improved conditions
- Natural sediment regime observed
- Increased salmon numbers upstream (anecdotal)
- Ongoing negativity from anglers
- Adjustments to morphology of river alarming to some locals
- River naturally restricting its own width

Lessons learnt

- Consult, consult, consult
- Meet face-to-face
- Take the time to explain the why's and how's
- Ask questions of your designers and consultants. Push them!
- Trust: yourself, colleagues, partners
- Early contractor engagement; build a rapport
- Communication is key
- Work in drought conditions

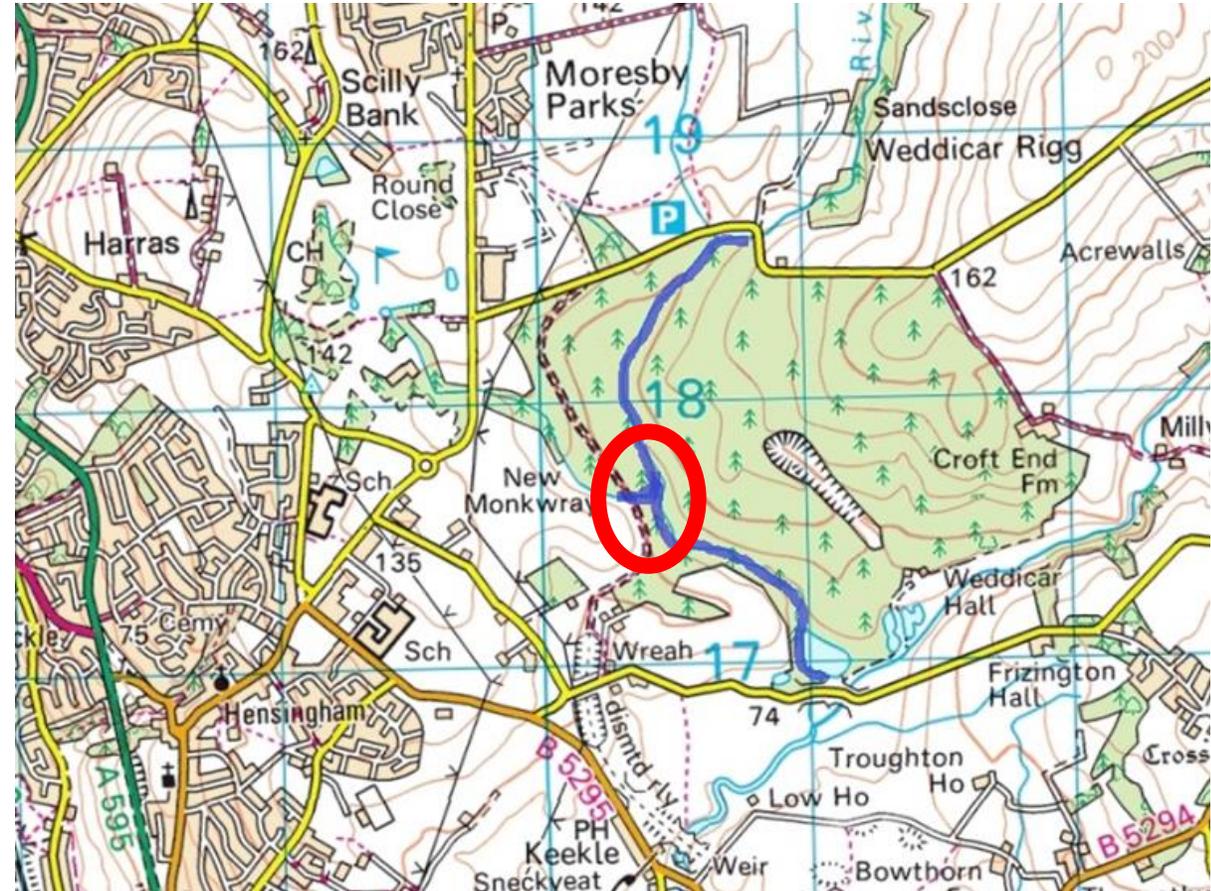
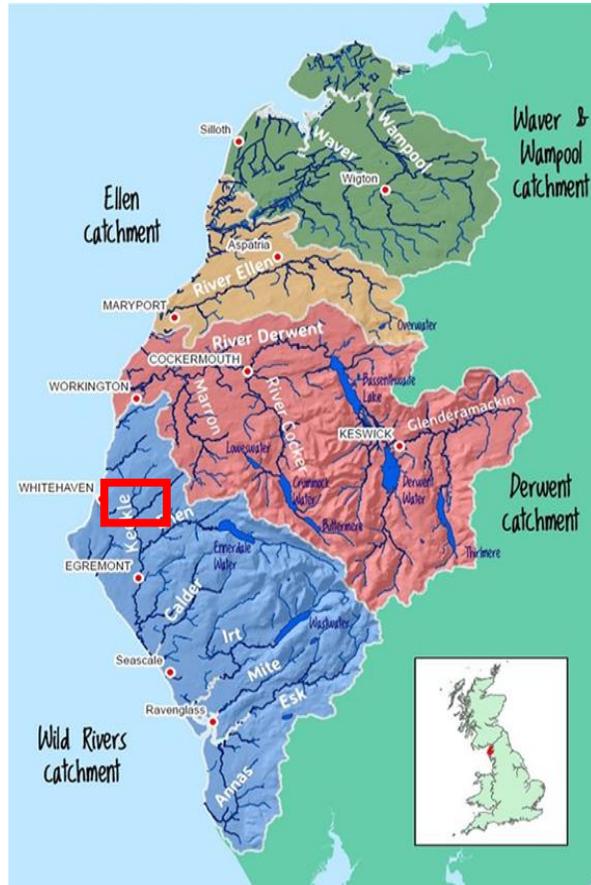


River Keekle restoration

- Plastic-lined for 2.5 km
- Former opencast coal mine
- 2019: Trial site
 - Fully funded by the EA
 - 170m of river restored, lessons learned
- 2020: Remainder to be restored
 - WEG funded
 - Expect to complete by October 2020



Location



Drone flyover



Drone flyover



Before...



Risks

- **Getting the project off the ground**
 - Cost – difficult to secure funding
 - Unique problem – very little precedence to follow
 - Liability – who was responsible for the river?
- **Environmental**
 - What to do with tonnes of plastic?
 - Toxic spoil under the site
 - FWPM present downstream
 - Flashy river
- **Engagement**
 - Small but vocal local complainers

Solutions

- **Getting the project off the ground**
 - 2017: Comprehensive desk-top study to identify owner and map out history of site
 - EA staff continually pushed for funding
 - Decision to split project into 2 phases
 - Strategic choice of trial site location
- **Environmental**
 - Recycling companies approached for help
 - Specialist environmental contractor chosen with understanding of environmental risks
 - Very dry period in June / July (luck)
- **Engagement**
 - Guided walks, community events, press releases
 - Extensive meetings and updates with partners

... during ...



... and after



Outcomes

- Phase 1 successfully completed in 5 weeks (except plastic processing)
 - In-river works complete in 2 weeks
- 9 tonnes of plastic recycled
- Features successfully tested by post-restoration rainfall
- Benefits of trial phase:
 - Ongoing monitoring to assess techniques used
 - Directly influenced the methodology for 2020
 - Phase 2 considerably de-risked

Lessons learnt

- Research
- Be creative; be tenacious
- Work with trusted and competent contractor
- Ask questions of your designers and consultants. Push them!
- Trust: yourself, colleagues, partners
- Work in drought conditions (again)

... oh, and about that luck...



11 June
Week prior to mobilisation



12 July
Mid-restoration



22 July
Day of planned reconnection

Result



Thank you

www.westcumbriariverstrust.org