Environment Agency Smolt Trial at Old Walls Hydro-electric Plant

Introduction

The West Webburn River is a tributary of the Dart. Old Walls Hydro was built in 1995 and has developed fish protection devices for migrating fish up and down stream. The smolt protection element was looked at. Water is diverted at Jordan Weir into a 460m leat. The 10mm screening for the plant is at the forebay at the downstream end of the leat. A 200mm diameter pipe has been installed immediately upstream of the screener which can be opened when smolt are detected in the forebay tank. This pipe normally discharges directly into a suitable pool on the West Webburn to facilitate the fish migration.

Goals and objectives

The fish pipe was temporarily diverted into the brood stock tank to catch smolts where they could be examined before release to the river. The trial was done to determine the health, well being and numbers of fish travelling downstream.

Method

The diverted fish pipe was left open over night for 12 hours on 3 occasions.

- Friday 4th May 2007
- Wednesday 9th May 2007
- Monday 21st May 2007

Results

Date	Salmon smolts	Sea Trout	Brown Trout parr	Damage
04-05-07	23	11		None
09-05-07	148	132		None
21-05-07	1		14	None

Conclusions

1. The use of a 200mm corrugated land drainage pipe has shown to be totally suitable for the purpose of transporting smolt from the leat to the river.
2. The internal corrugations are smooth which reduces the water velocity but do not harm the fish.
3. The pipe naturally makes gentle bends and therefore creates no sudden changes in direction.
4. 100% success rate for smolt protection.

Signed ..... Date .....

Job title .....