Meeting Best Practice at River Intakes

Successes and Failures from the Field

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Regulation

- The SAFFA 1975
- Environment Act 1995
- Water Resources Act 1991
- The Eels (England and Wales) Regulations 2009
- Conservation of Habitats and Species Regulations 2010
Good/Best Practice Guides

Guides

- Impoundment and Abstraction – Exclusion of Fish from Intakes. CEGB 1988
- Diversion and Entrapment of Fish at Water Intakes and Outfalls NRA 1992
- Fish Passes and Screens for Salmon MAFF 1997
- UK Guide to Intake Fish-Screening Regulations, Policy and Best Practice. ETSU 1998
- Screening for Intakes and Outfalls: a best practice guide. EA 2005
Unscreened Intake

....Fish may become trapped in pond
Unscreened Intake cont.

Flow deflector guides fish towards intake (culvert)
No by-wash
No flow cue through lakes
Stocked with rainbow trout 5 to 10 lbs
Unscreened Outfall

Stocked with rainbow trout
SAC designation on receiving waterway
Partially Screened Intake
Screen
Provision for Secondary Screening
Screen

- Outfall to a trout stew.
- Panels not fitted within a supporting frame.
Outfall Screens
Top-hung Counterbalanced Gate
Fish Recovery and Return

- Modification of existing buckets required for species such as eel.

Cup screen and launder.  

Buckets on cup screen.
By-wash Facility

- < 2 – 5% By-wash attraction flow
- Poor hydraulic conditions at entrance
- Surface entrance only.
By-wash Facility

- No by-wash facility
Non Conformant Regulatory Advice
Screen Optimisation

• Maintenance
• Resource
• Training
Maintenance and Resourcing
Rotary Disc Screens

• Design believed to benefit from self cleaning abilities.
• Issue of weed becoming wrapped around spindles of the disc requiring periodic removal and maintenance.
Sump Pumps

Sump fitted with a float switch.
Maintenance

- Annual maintenance
- Maintenance of operating environment
Training
Summary

- Significant number of sites visited did not conform with current GPG
- GPG is not finding a section of the target audience.
- Regulators need to engage with the owners and operators of small undertakings
- Improved training and understanding of screening requirements amongst operatives.
Thank You