



THE USE OF SEAL SCARERS TO REDUCE PREDATION WITHIN FISHERIES

Background

Seal scarers, or Acoustic Deterrent Devices (ADDs), are a non lethal method of reducing predation by seals upon fisheries. They work by producing sounds that are painful to seals but are non-audible to salmon. The Sea Mammal Research Unit (SMRU) at St Andrews University has carried out research into the effectiveness of ADDs within rivers (during the winter - the time of year when seal incursions are thought to be most common). Their results showed that ADDs can be effective if deployed correctly, however, there are many variables that must be considered when deploying ADDs, and it has been commented that the locating of the devices is the most challenging aspect of their use. Some of these variables are as follows:

- It is important that the devices are powered from the mains and not by batteries. If the devices operate on low power for any length of time, seals become habituated to them and they do not resume effectiveness even when maximum power is reinstated. A power cut-off system is useful to prevent habituation in the event of power reduction.
- If powered by batteries, these have to be charged or replaced daily, and still the devices may not function properly.
- The devices must be set away from banks, water surface, underwater obstructions, shallows, rapids or anything that will deflect and scatter sound.
- At or around the tidal limit is a potentially favourable location for deploying ADDs. However, they must be anchored to the substrate so that they sit at least 30 cms above the substrate surface. Therefore, the substrate type will determine how difficult and how expensive it is to install them.
- The maximum effectiveness that can be expected from a correctly deployed array is 85%, so a reduction rather than an eradication is the aim.

Follow the link below for more information

<http://www.smru.st-and.ac.uk/documents/987.pdf>

Supplier

SMRU recommend Lofitech, a Norwegian company, as a supplier.

River Forth Fisheries Trust

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2 Commercial Street
Edinburgh
EH6 6JA

Email: trust@fishforth.co.uk
Tel: 07592 511395
Website: www.fishalmond.co.uk/rfft

Cost

Each Lofitech ADD unit costs between £6-8,000, and one unit is required for each 30m width of channel. Installation/anchorage costs will depend on the morphology of the site and the nature of the substrate. Once up and running with a trickle feed, running costs are low.

Maintenance

Weekly maintenance is required to keep the devices clear of weed and debris and to ensure effective functioning and continued anchorage (especially following floods).

Experience of other Trusts

The Dee DSFB have two devices located upstream of Aberdeen harbour. They have been in situ for nearly a year now. They report spending around £200 per year to a nearby householder for electricity – perhaps a similar cost to running one light bulb. They still get seals 25 miles upstream and have not yet quantified the benefit of deploying the ADDs (if any). Their feeling is that they are very expensive for something that is not 100% effective, and so there would need to be a lot of money around to consider doing it. It is possible however, that by deploying ADDs, there is a greater chance of obtaining a licence to shoot. ADDs are really only one tool in the box and not a complete solution.