

ESK RIVERS & FISHERIES TRUST

ERFT

Putting the fish in efficiency

**FISHERY MANAGEMENT
ISSUES - LUNAN WATER**

**A DESIGNATED SALMON RIVER UNDER
NASCO**

OBJECTIVES OF THE TRUST:

- To advance environmental protection and improvement by conserving and enhancing all species of freshwater fish and their environments
- To advance the education of the aquatic environment
- To improve understanding of aquatic ecosystems, including their fauna, flora and economic or social activity, and river catchment management

Lunan fish species

Salmon and sea trout: in decline – no reported rod catch for 6 years
Brown trout: present – population status unknown
Eels: in decline

Other species recorded but status unknown:

3-spined stickle back
Stone loach
Minnnow

Species not recorded in the river by the ERFT but other records exist:

Rainbow trout – escapees from lochs
Pike – used to be netted by Arbroath AC
Perch

Artificial stocking has been undertaken by angling organisations

Fishery management guiding principles:

When marine survival is low or the cause of any decline is unknown

Managing exploitation can stabilise spawning stocks, other factors being equal

Conversely, when marine survival is high

Habitat improvements become more effective .

The removal of obstacles to migration are always a priority.

ERFT FISHERY MANAGEMENT ACTIVITIES:

Currently focused on Atlantic salmon and sea trout

- **STOCK ASSESSMENT TOOL – ROD CATCH TREND OVER 20 YEARS**
 - ROD CATCH A STATISTICALLY SIGNIFICANT INDEX OF STOCK STATUS
 - MOST RECENT CATCH THE LOWEST IN THE TIME SERIES
 - 2 CATCHES OUT OF THE LAST 3 REPRESENT THE LOWEST IN THE TIME SERIES
 - 4 CATCHES OUT OF THE LAST 6 REPRESENT THE LOWEST IN THE TIME SERIES
 - **RESULT : no recorded rod catches for the last 6 years**
- **REDUCTION IN EXPLOITATION**
 - SALMON FISHING RIGHTS - A HERITABLE TITLE IN SCOTLAND
 - SUSTAINABLE EXPLOITATION REQUIRES A HARVESTABLE SURPLUS
 - PRECAUTIONARY PRINCIPLE
 - IMMEDIATELY EFFECTIVE IN INCREASING SPAWNING ESCAPEMENT
 - CONTROLS CAN HAVE SOCIO-ECONOMIC ISSUES
- **ENVIRONMENTAL MANAGEMENT – FRESHWATER**
 - LONG-TERM
 - NO GUARANTEE OF ADDRESSING THE PROBLEM
 - PRACTICAL CONSIDERATIONS LIMIT ACTIONS TO FRESHWATER
 - SOCIO-ECONOMIC ISSUES FOR STAKEHOLDERS
 - CURRENT ACTIVITIES INCLUDE IMPROVING ACCESS AND BIOSECURITY

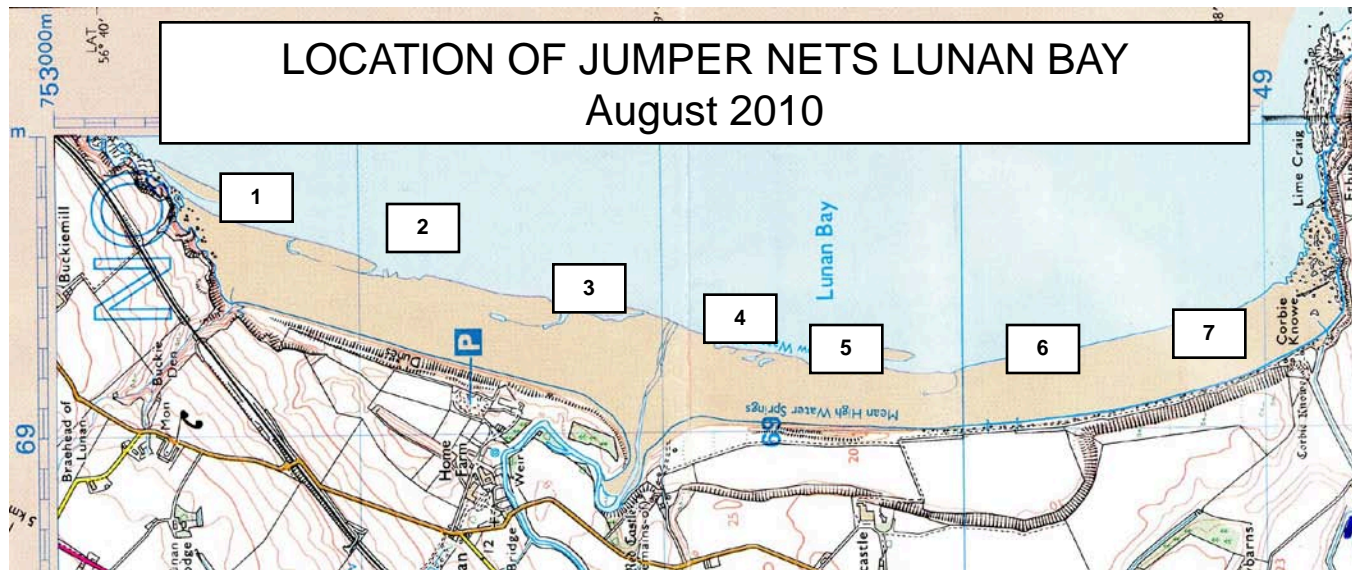
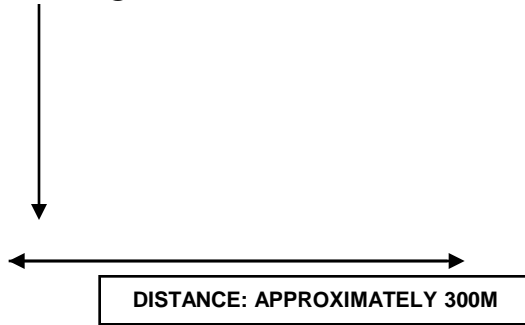
CONTROL OF EXPLOITATION

NETTING

JUMPER 3

JUMPER 4

JUMPER 5



MANAGEMENT ISSUES OF COASTAL FISHERIES

- **MIXED STOCK FISHERIES**
 - CREATE MANAGEMENT DIFFICULTIES (NASCO, ICES,EU)
 - LEVEL OF EXPLOITATION SHOULD BE CONTROLLED BY THE WEAKEST STOCK
- **GENETIC STUDIES ON EXPLOITED STOCKS**
 - IN THE FUTURE RIVER SPECIFIC STOCKS WILL BE IDENTIFIED THROUGH:
 - » MICROSATELLITE DNA
 - » SINGLE NUCLEOTIDE POLYMORPHISMS
- **MANAGEMENT OPTIONS**
 - **MARKET REGULATION**
 - BUY-OUT (WILLING SELLER/WILLING BUYER)
 - **VOLUNTARY OR STATUTORY OPTIONS**
 - REGULATION/CHANGE OF THE CLOSE SEASON
 - » CURRENTLY 16TH FEB – 31ST AUG
 - » A FEW RIVERS EXTEND TO 9TH SEPT
 - ESTUARY DESIGNATION
 - » NONE IN PLACE FOR THE LUNAN WATER
 - » GENERALLY EXTENDS ABOUT 300-500M ON EITHER SIDE
 - **COMPENSATION IS NOT A STATUTORY REQUIREMENT BUT IS FULLY JUSTIFIED**

MANAGEMENT OF ROD FISHERIES

- **ADOPTION OF CATCH-AND-RELEASE**

- **ANGLER ACCEPTANCE**

- **LITTLE RESISTANCE**

- **VOLUNTARY**

- **TOTAL OR PARTIAL**

- **STATUTORY**

- **LAST RESORT**

- **EFFECTIVE**

- **> 90% SURVIVAL TO SPAWNING**

- **CODES TO ENHANCE SAFE RETURN OF SALMON**

- **USE BARBLESS HOOKS**

- **CAN DISTORT ROD CATCH TRENDS AS A SALMON CAN BE CAUGHT > ONCE**



BUSINESS REGULATORY IMPACT ASSESSMENT

INCLUDES:

- PURPOSE AND INTENDED EFFECT
 - OBJECTIVES – BIOLOGICAL AND ECONOMIC
 - BACKGROUND
 - RATIONALE FOR GOVERNMENT INVOLVEMENT
 - MARKET FAILURE
- CONSULTATION – WITHIN GOV., PUBLIC AND BUSINESSES
- OPTIONS
 - COST BENEFIT ANALYSIS
 - IDEALLY AN ECONOMIC IMPACT ASSESSMENT
 - » IMPACT ON HOUSEHOLD INCOME AND EMPLOYMENT
 - THE MAIN GROUPS AFFECTED – STAKEHOLDER INTERESTS
 - QUANTIFICATION OF IMPACTS
- MONITORING

SOCIO-ECONOMIC ISSUES

RADFORD 2004 STUDY – AUGMENTED IN 2009 SALMON AND SEA TROUT ANGLING VALUES

VALUE OF A ROD CAUGHT SALMON IN SCOTLAND

	TOTAL EXPENDITURE	GVA	FTE'S	ANNUAL HOUSEHOLD INC.	ANGL.EXP/JOB
SCOTLAND	£85.76m	£51.01M	3,059	£49.6m	£38,981
PER SALMON	£1,696	£989	0.0605	£981	£0.7709
SOUTH ESK	£2.917m	£1.701m	104	£93,195	£73.236

Based on 2004 data updated to 2009

VALUE OF A NET CAUGHT SALMON IN SCOTLAND

No real information available

Sales price salmon £12-30/kg grilse £3-12/kg sea trout £3-12 /kg wholesale market prices

REQUIRE ECONOMIC IMPACT DATA TO ESTABLISH COMPARABLE VALUES

NB SIZE IS NOT A MEASURE OF ECONOMIC IMPACT RATHER THE ANTICIPATED CHANGE IN GVA ARISING FROM ANY REGULATIONS

NOTE THAT :

- THE VAULE OF SALMON TO THE GENERAL PUBLIC EXCEEDS ALL OTHER VALUATIONS
- INSUFFICIENT INFORMATION EXISTS PARTICULARLY FOR THE NETTING SECTOR TO ESTIMATE ECONOMIC IMPACT

IMPROVING ACCESS

BOYSACK DYKE – INTALLATION OF A FISH PASS

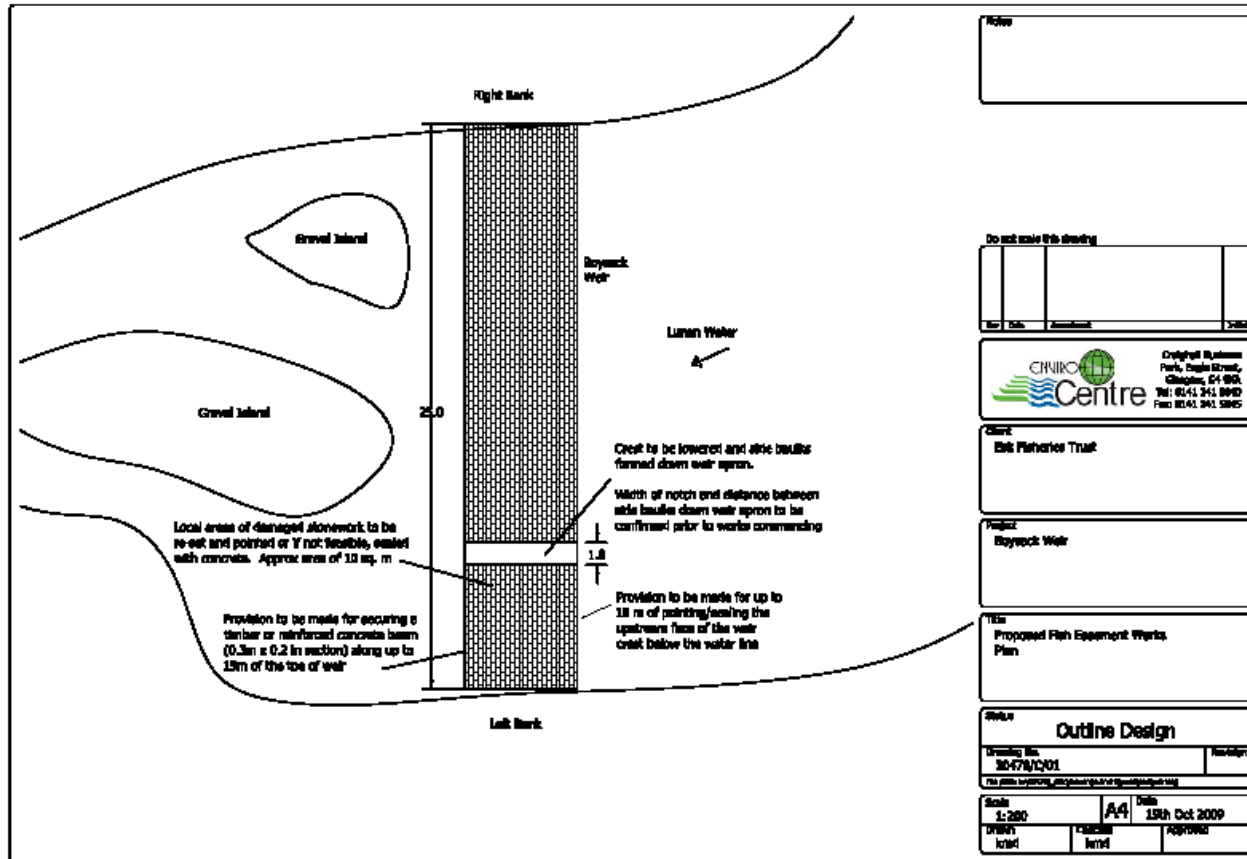


ERFT – PUTTING THE FISH IN EFFICIENCY

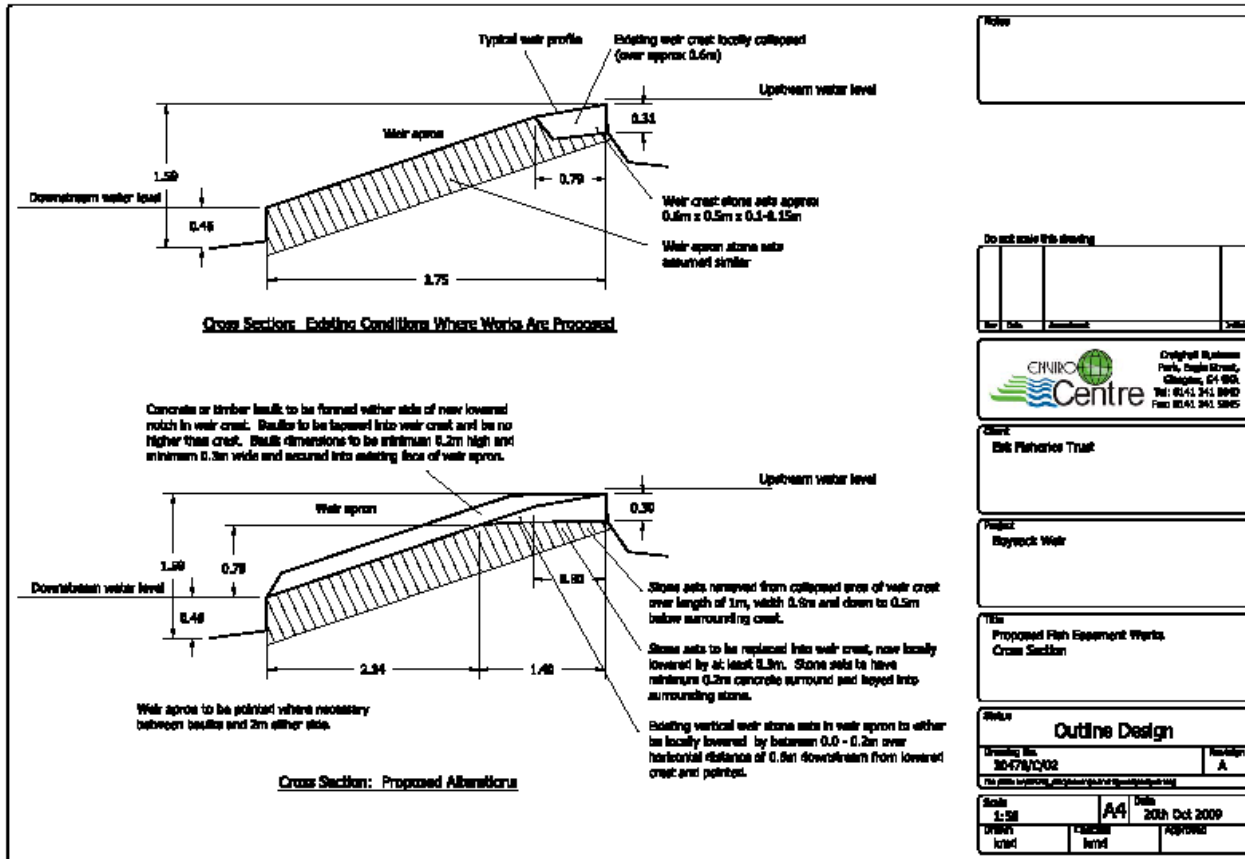
Boysack dyke – Recent changes



Fish pass installation



Fish pass installation



THE NEW FISH PASS



BOYSACK FISH PASS



Monitoring and further work

- Consider installation of an eel pass
- Annual monitoring of sites within catchment

OTHER BARRIERS

FRIOCKHEM POND SLUICE AND WEIR



GUTHRIE WEIR



LUNAN CATCHMENT – BIOSECURITY ISSUES MINK, GYRODACTYLUS AND INVASIVE WEEDS

Catchment surveyed in 2009

Japanese Knotweed (lower catchment and junction with Vinny Water):

- 6 records total 918 sq m

Giant Hogweed (restricted to the mouth):

- 6 individual plants and 1 area of 900 sq m

Himalayan Balsam:

- 118,876 sq m of dense plants in 172 locations
- 14,118 sq m of scattered plants in 114 locations
- 1,491 sq m of occasional plants in 139 locations

TREATMENT COMMENCED IN 2010

ALL JAPANESE KNOTWEED AND GIANT HOGWEED
SPRAYED 4 TIMES IN 2010

FURTHER SPRAYING PLANNED IN 2011-



TREATMENT OF GIANT HOGWEED

