

## **Preliminary Synopsis of the WFD Surveillance Monitoring Fish Stock Survey on Lough Ree in the Shannon International River Basin District, June 2013**

### **1.1 Introduction**

A WFD fish stock survey was conducted on Lough Ree (Fig. 1 and 2) from the 4<sup>th</sup> to the 21<sup>st</sup> of June 2013 by staff from Inland Fisheries Ireland as part of the programme of surveillance monitoring for the Water Framework Directive.

### **1.2 Methods**

Lough Ree was surveyed over eleven nights from the 4<sup>th</sup> to the 21<sup>st</sup> of June 2013. A total of 12 sets of Dutch fyke nets, 48 benthic monofilament multi-mesh (12 panel, 5-55mm mesh size) CEN standard survey gill nets (12 @ 0-2.9m, 11 @ 3-5.9m, 13 @ 6-11.9m, 8 @ 12-19.9m and 4 @ 20-34.9m) and 11 floating monofilament multi-mesh (12 panel, 5-55mm mesh size) CEN standard survey gill nets were deployed randomly in the lake (71 sites). The netting effort was supplemented using nine benthic braided survey gill nets (62.5mm mesh knot to knot) at nine additional sites. Nets were deployed in the same locations as were randomly selected in the previous survey. A handheld GPS was used to mark the precise location of each net. The angle of each gill net in relation to the shoreline was randomised.

All fish apart from perch were measured and weighed on site and scales were removed from all roach, brown trout, pike, and roach x bream hybrids. Live fish were returned to the water whenever possible (i.e. when the likelihood of their survival was considered to be good). Samples of fish were retained for further analysis.

An additional experimental survey using hydroacoustic and pelagic gillnetting techniques was carried out on Lough Ree over eight nights between the 4<sup>th</sup> and 21<sup>st</sup> of June 2013. This survey was carried out as part of a Ph.D. research project which aims to incorporate hydroacoustic technology into the existing standard sampling protocols used to assign ecological and conservation status for the Water Framework and Habitats Directive for conservation and endangered fish species.

The experimental survey concentrated on the deeper sections of the lake (depth >12m) and covered *circa* 80km of hydroacoustic transects. A total of 16 pelagic multi-mesh (12 panel, 6.25-55mm mesh size) and 1 surface monofilament multi-mesh (12 panel, 5-55mm mesh size) CEN standard survey gill nets were set as part of this research.

Lough Ree (North), Longford/Roscommon/Westmeath

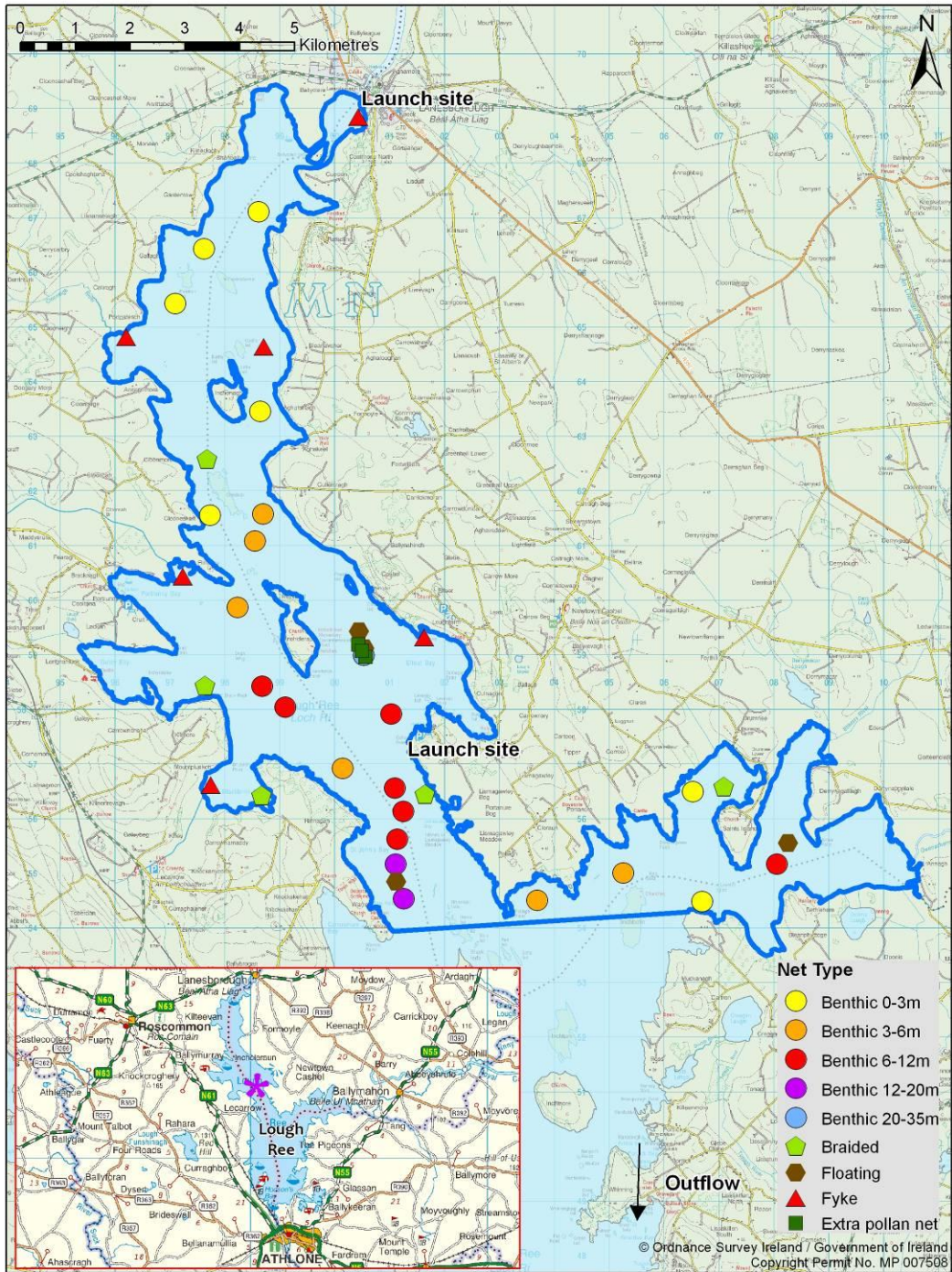


Fig. 1.1. Location map of the North of Lough Ree showing net locations and depths of each net (outflow is indicated on map)

Lough Ree (South), Longford/Roscommon/Westmeath

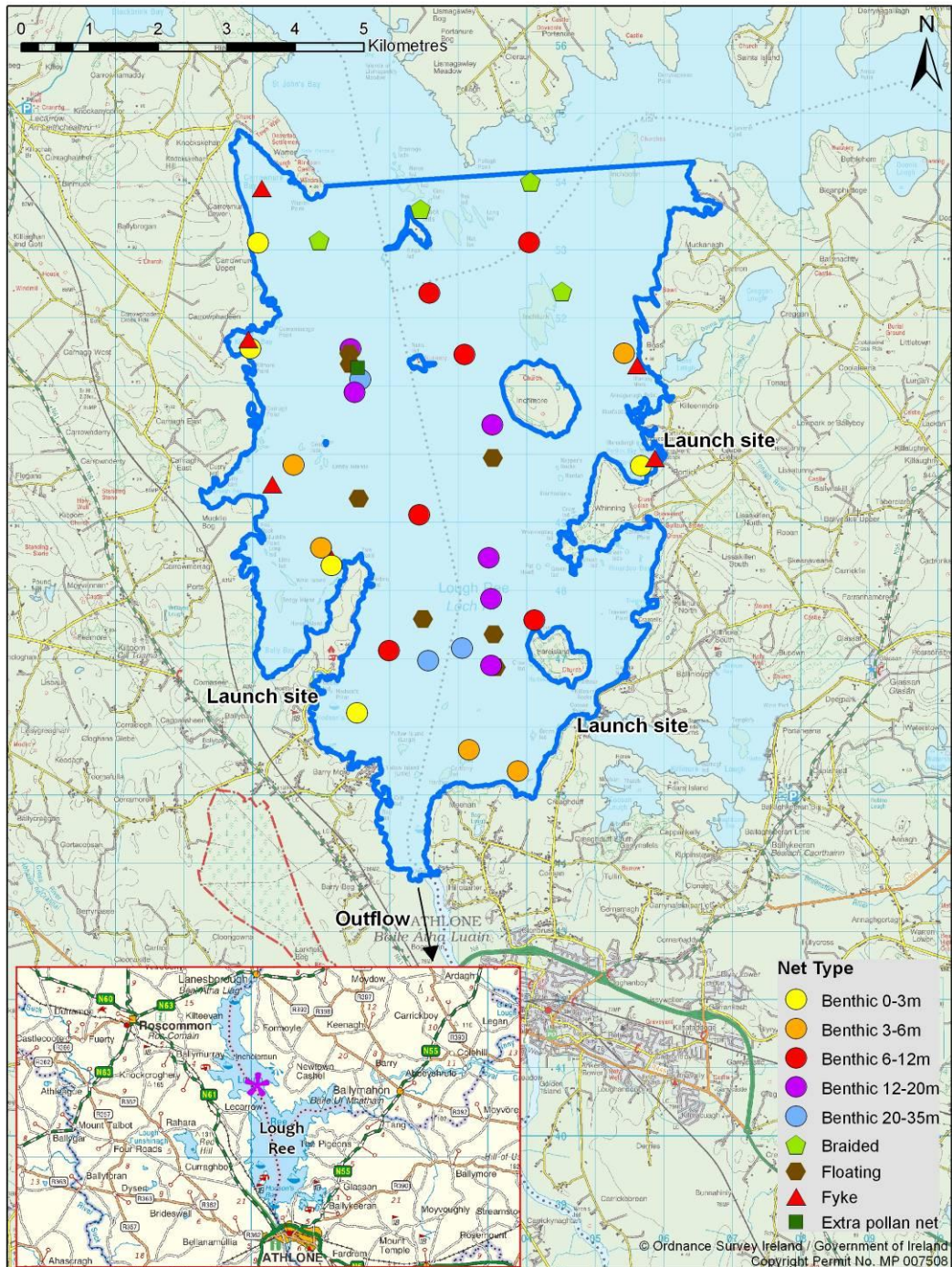


Fig. 1.2. Location map of the South of Lough Ree showing net locations and depths of each net (outflow is indicated on map)

### 1.3 Results

A total of six fish species and one type of hybrid were recorded in Lough Ree, with 1372 fish being captured. The number of each fish species recorded is shown in Table 1.

**Table 1. Number of each fish species recorded in Lough Ree, June 2013**

Species name	Common name	Number
<i>Perca fluviatilis</i>	Perch	897
<i>Rutilus rutilus</i>	Roach	220
	Roach x Bream hybrid	149
<i>Anguilla anguilla</i>	European eel	76
<i>Salmo trutta</i>	Brown trout	23
<i>Esox lucius</i>	Pike	6
<i>Barbatulus barbatulus</i>	Stone loach	1

### 1.4 Further work

Perch will be measured and weighed and opercular bones will be removed in the laboratory. Otoliths will be removed from eels and all fish will be aged after the fieldwork season has ended. Catch per unit effort (CPUE), biomass per unit effort (BPUE) and age profiles will be calculated for all fish species and a more detailed report will be available in early 2014.

The experimental survey work is part of a four year research Ph.D. and results will be published within this timeframe.