

# Lee (Tralee) Estuary



## Sampling Fish for the Water Framework Directive - Transitional Waters 2008



The Central and Regional  
Fisheries Boards

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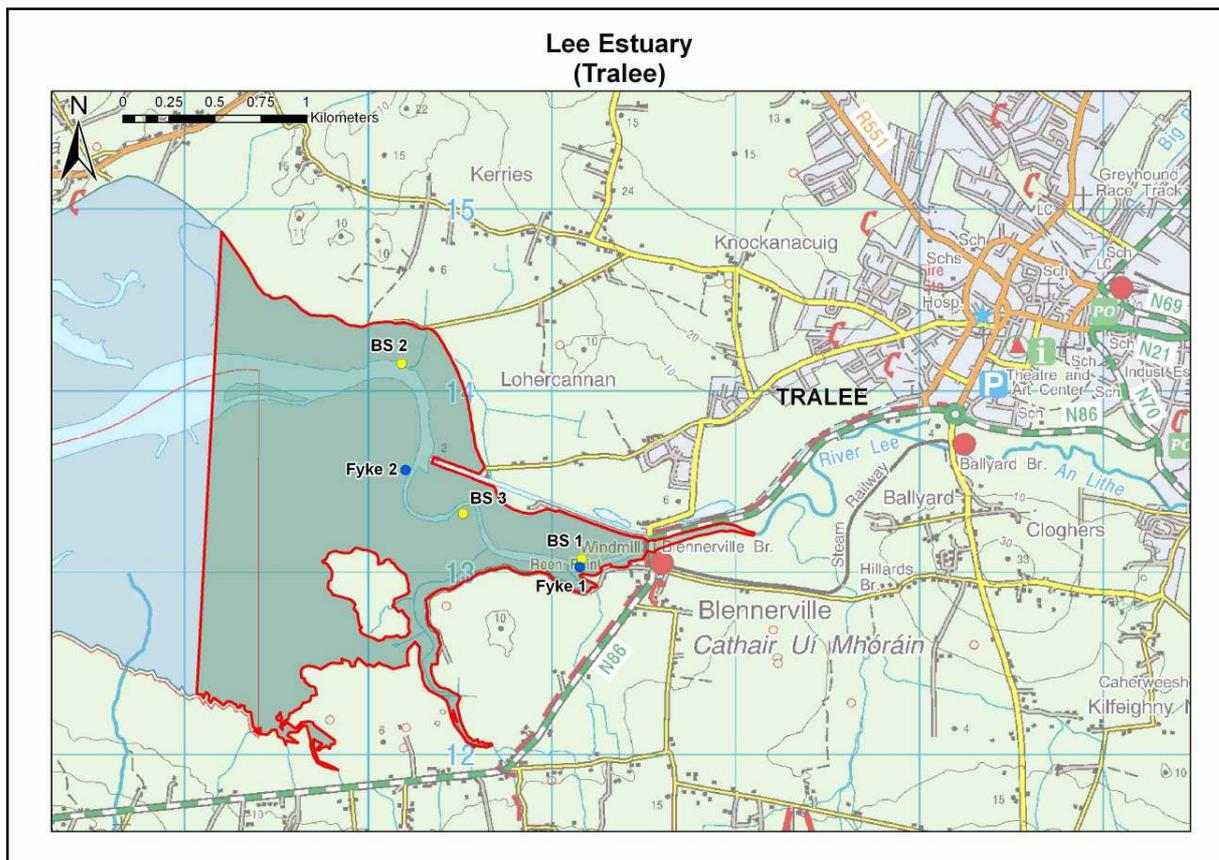
## **INTRODUCTION**

A fish stock survey was carried out at sites on the Lee (Tralee) Estuary, as part of the programme of monitoring for the Water Framework Directive (WFD), between the 31<sup>st</sup> October and the 4<sup>th</sup> of November by staff from the Central Fisheries Board (CFB) and the South Western Regional Fisheries Board (SWRFB).

The Lee Estuary is part of Tralee Bay and is located approximately three kilometres south-west of Tralee, Co. Kerry (Fig. 1). The estuary covers an area of 3.06km<sup>2</sup>. The estuary is extremely shallow and the predominant bed type is soft muddy sediments (Plate 1). The shallowness of the estuary hindered navigation and the soft sediment made sampling difficult. The estuary receives the water of the River Lee which runs west through the town of Tralee and into the estuary (Fig. 1). The river is noted as having sea trout and salmon although neither species was captured during the survey. The estuary is promoted by the South Western Regional Fisheries Board as a good fishing venue for bass, flounder and thornback ray.



**Plate 1: Aerial photo of the Lee Estuary. (Photo courtesy of CFB and No. 3 Operational Wing, Irish Air Corps [Aer Chór na hÉireann])**



**Fig. 1: Location map of the Lee Estuary indicating sampling sites, October 2008.**

## METHODS

Current work in the UK indicates the need for a multi-method netting approach (seine nets, fyke nets and beam trawls) to sampling for fish in estuaries and these procedures are now the standard CFB methodology for fish stock surveys in transitional waters for the WFD monitoring programme. Two sampling methods were used during the Lee Estuary survey (i.e. beach seines and fyke nets). Beam trawling was not attempted due to the rocky and shallow nature of most of the estuary. Portable GPS instruments were used to mark the precise location of each sampling site (Fig. 1).

Three beach seine and two fyke net sites were surveyed in 2008. All sites were chosen to encompass the majority of geographical and, where possible, habitat ranges of the estuary. The shallow nature of the estuary prevented seine netting of the margins thus sampling was restricted to the narrow channel that retains water at low tide.

## RESULTS

Three fish species were captured in the seine nets; the most frequently occurring and abundant fish species was common goby which was captured in all beach seines (Table 1).

Three fish species were also captured in the fyke nets; the most frequently occurring species was 5-bearded rockling, followed by flounder and common goby (Table 1). These species were captured at every fyke net site.

Overall four fish species were captured in the survey. Flounder and common goby was the species caught by both sampling methods utilized during the survey.

Salinity values taken at beach seine sites ranged from 0.80ppt to 4.30ppt.

**Table 1: List of fish species and abundances of each species by net type in Lee Estuary, October 2008**

Scientific name	Common Name	Lee estuary (Tralee)	
		Beach seine (3)	Fyke net (2)
<i>Chelon labrosus</i>	Thick Lipped Grey Mullet	1	-
<i>Platichthys flesus</i>	Flounder	6	5
<i>Pomatoschistus microps</i>	Common Goby	397	2
<i>Ciliata mustela</i>	5-Bearded Rockling	-	24



**Plate 2: Sampling the Lee Estuary at low tide, October 2008**

## **DISCUSSION**

An essential step in the WFD monitoring process is the classification of the status of transitional waters, which in turn will assist in identifying the objectives that must be set in the individual River Basin Management Plans.

The EPA have assigned the Lee Estuary (Tralee) an interim draft classification of “Good”, i.e. must prevent any deterioration below “Good” status, based on general physico-chemical elements, phytoplankton and macroalgal growths (ShIRBD 2008).

A new WFD fish classification tool, Transitional Fish Classification Index or TFCI, has been developed for the island of Ireland (Ecoregion 1) using NIEA and CFB data. This is a multi-metric tool based on similar tools developed in South Africa and the UK (Harrison and Whitfield, 2004; Coates *et al.*, 2007). The Lee estuary has been assigned a draft classification of “Poor” (EQR=0.20) using the fish classification tool.

A final overall classification will be assigned to the estuary in December 2009 after the consultation and review period has been completed.

## **REFERENCES**

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