

# Our current understanding of river and sea lamprey in the Humber Estuary

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# What will be covered



- River and sea lamprey status:
  - Current understanding in the Humber
- Issues affecting lamprey
- Previous and current projects
- Future work

# Humber lamprey populations

- River and sea lamprey
  - SAC (Humber & Derwent)
  - SSSI (Humber & Derwent)
  - Ramsar (Humber)
- Anadromous species
- ~7 year lifecycle



# Humber Estuary: Sea Lamprey

What we know....

- Humber population
  - Estimate ~200
  
- Feature condition in the Humber
  - 2010: Unfavourable recovering (at risk)

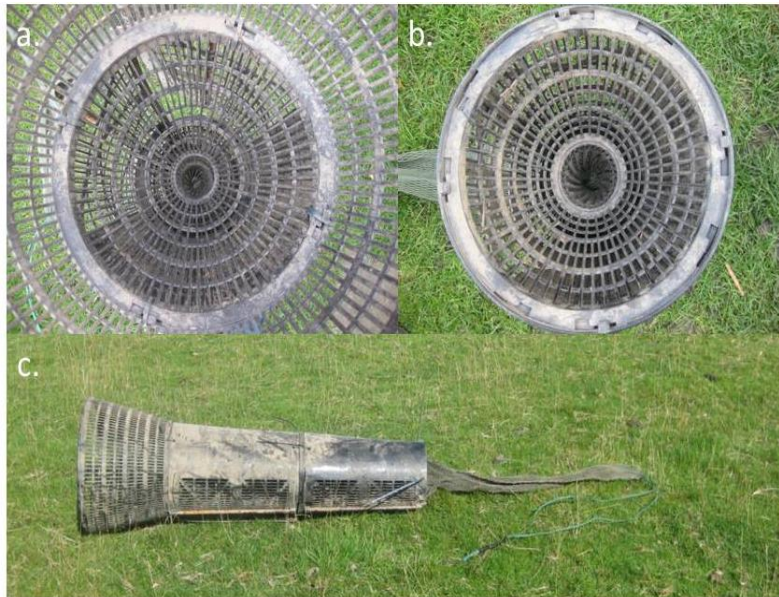


# Sea lamprey status



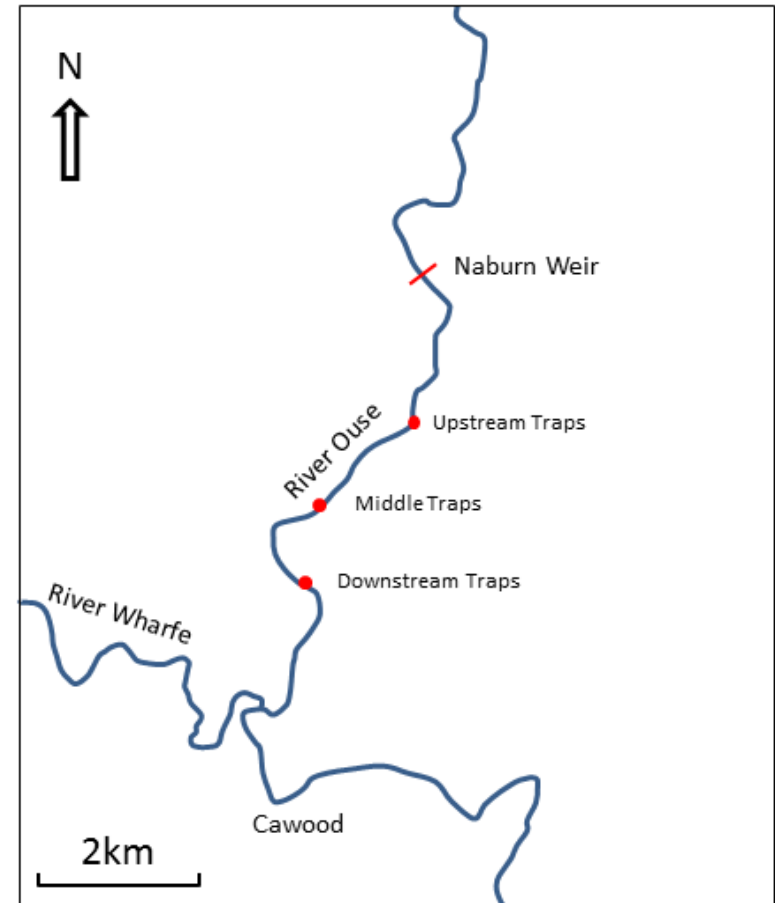
- Dissolved Oxygen (DO) sag
  - 24,000ha Unfavourable SSSI units
  - #1 priority Humber IPENS SIP
  
- **Does the DO sag impact sea lamprey migration?**
  - EA DO monitoring (2015-18)
  - NE sea lamprey tagging (2015, 2017)
  - EA spawning surveys (2011-16)

# Sea lamprey tagging project



(Bubb, 2015)

- 20 Apollo II traps
- March to July 2015
- 3 locations



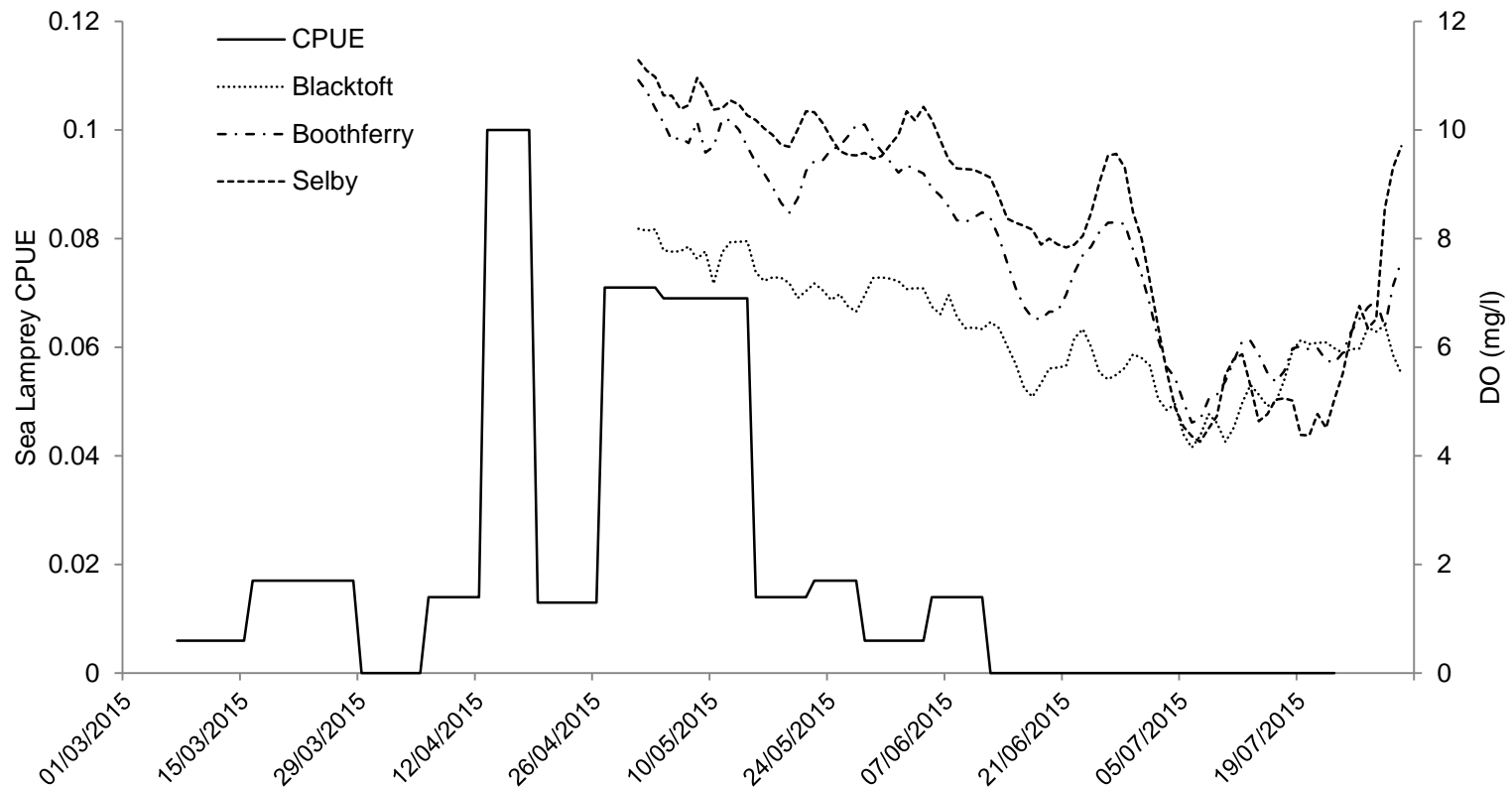
# Project Outcomes: sea lamprey tagging 2015

- **45** sea lamprey captured and tagged
  - None recorded at spawning grounds



- 673 river lamprey

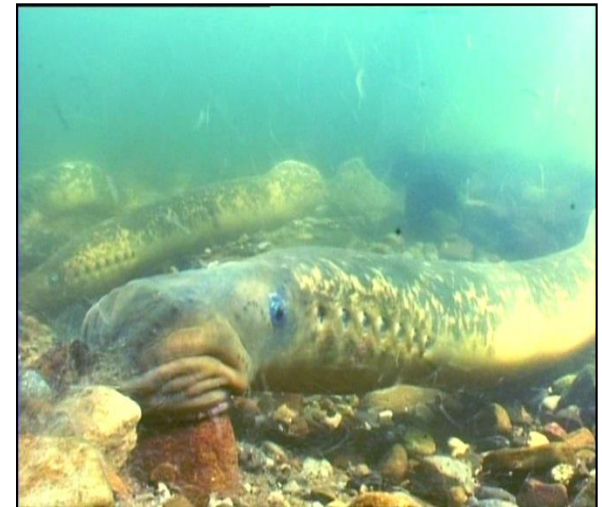
# Project Outcomes: DO monitoring 2015





# Future Projects

- No tagging survey in 2016
- Extended tagging project in 2017
- Collaboration with Cefas in 2017
- DO monitoring will continue in 2017
- Spawning survey 2017



# Humber Estuary: River Lamprey

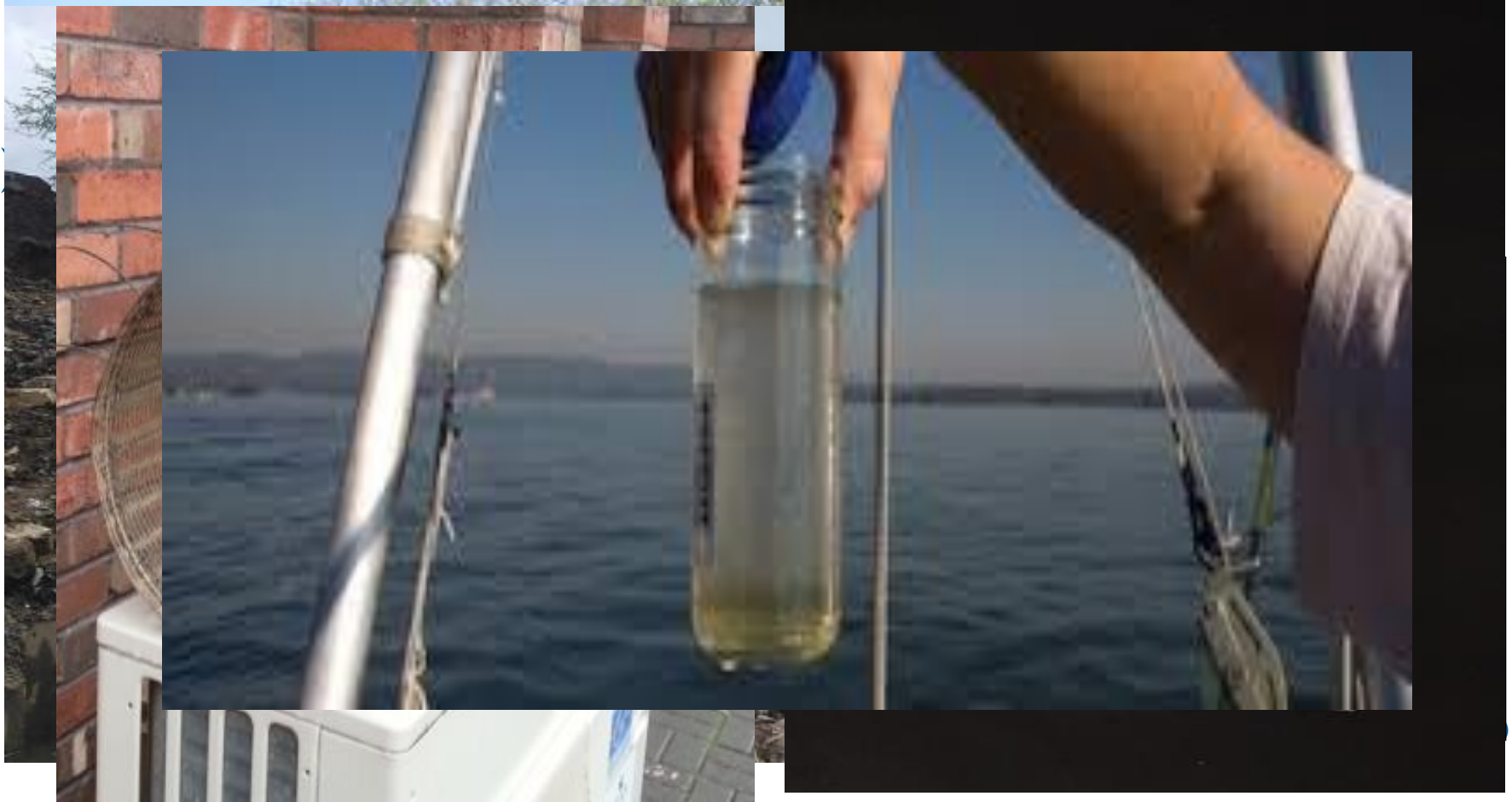
What we know....

- Humber population
  - Widely used estimate ~300,000  
(Masters *et al* 2004)
- Feature condition in the Humber
  - Unfavourable recovering



# River lamprey impacts

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## ➤ **Current Key Questions....**

- Is the river lamprey commercial fishery sustainable?
- What are the impacts of low head hydropower schemes on rivers?
- What are the impacts of barriers including weirs and unsuitable fish passes?

# Current and future work



- Ongoing discussions between NE, EA, local experts
  
- New methodology for commercial fishery
  - Trial for 2016 season
  - Working with netsmen
  - CPUE data

# Current and future work

- Addressing barrier impacts
  - Fish pass improvement work



- Addressing potential impacts from low-head hydropower schemes
  - Durham University
  - Cefas studies



# Future projects

## ➤ NE Lamprey mapping project 2016/2017

- Full literature review
- Spawning/ammocoete surveys
- Mapping key areas



## ➤ Lamprey strategy



# Positive outcomes



- ✓ Starting to know more about the Humber river and sea lamprey than ever before
- ✓ Working towards improving the status of 24,000ha unfavourable Humber SSSI units and #1 priority of the Humber IPENS SIP
- ✓ Partnership working to raise awareness and profile of the species



Thank you for listening!

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## ➤ **Targets** for DO:

- DO should not fall below 2mg/l
- DO should not fall below 5mg/l for more than 5 consecutive days
- Following a period of DO of less than 5mg/l there should be at least 2 consecutive days where DO remains above 5mg/l