



**HR Wallingford**  
*Working with water*

**HR Wallingford, UK**

**Valerie Bain**

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- 1947 UK Government Hydraulics Research Station formed
- 1982 Privatisation to create HR Wallingford
- Limited by guarantee, non profit distributing, independent
- Profits invested in research
- Turnover £20 M
- £12 million in total assets
- Offices and agents world-wide - more than half our income from overseas
- Over 240 staff including world leading experts



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## Marine

- Aggregate dredging sediment studies, wave forecasting and hindcasting, hydrodynamics modelling

## Coastal

- Coastal geomorphology, beach design, structures

## Water

- Water resources, integrated catchment management, climate change

## Floods

- Flood risk management, risk assessment, river flow modelling, hazard mapping, conveyance estimation

## Energy

- Offshore renewables, energy terminal design, pipelines, ships and navigation

Previous EC projects in environmental river management:

<http://www.urbem.net/>

<http://www.floodsite.net/>

<http://www.smurf-project.info/index.html>

Water



HR Wallingford

We have extensive practical experience in technical, operational and strategic aspects of water and environmental management. HR Wallingford has been involved in EC research for 20 years, with a total of over 40 projects in various programmes in the water sector, in Marie Curie, and in large facilities; including coordination of networks, research projects, an Integrated Project in FP6 as well as role as partner.

**ENV.2011.3.1.9-1 Eco-Innovation Call:  
Rehabilitation of degraded zones**

**ENV.2011.2.1.1-1 Lagoons in the context of  
climate change**

**ENV.2011.2.1.2-1 Hydromorphology and  
ecological objectives of the WFD**

- **HRW expertise in:**
  - Modelling conveyance and hydromorphology
  - Ecological modelling

## HR Wallingford's work:

- Focuses on the state of the aquatic environment and the effects of changes to that state.
- Uses tools to describe the existing or baseline environment and predict the extent and magnitude of any changes.
- Is essential in supporting development projects, normally as part of a wider EIA.
- Can also be used in a research capacity e.g. to inform present and future policy decisions.

## Uniquely HR Wallingford

- **Brings together research scientists, environmental specialists and operational experts**
- **Develops a client-focussed solution based on**
  - Latest scientific knowledge
  - Knowledge of environmental legislative requirements
  - Sound understanding of project commercial and programming objectives
- **Designs effective mitigation and monitoring using our understanding of how contractor is likely to approach the project**

## Background in a range of environmental topics including:

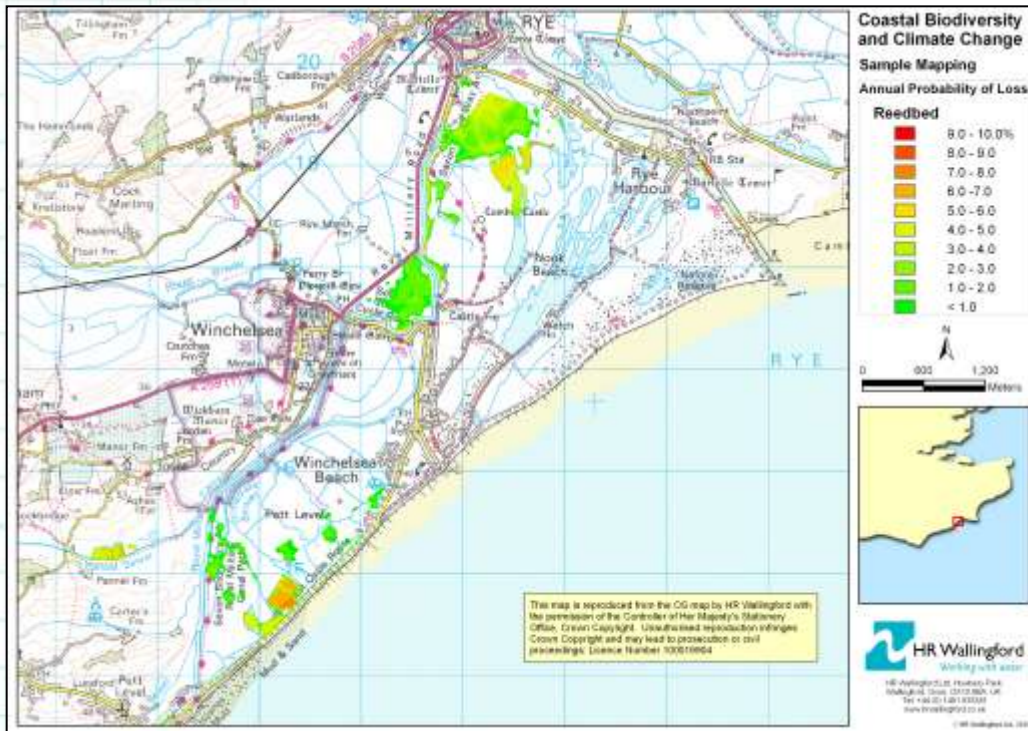
- Environmental Impact Assessment
- environmental legislation and policy support
- marine and freshwater ecology (including ecological modelling)
- ecosystem management
- sediment and water quality (including numerical modelling)

- Environmental Impact Assessment (EIA)
- Environmental legislation
- Environmental risk assessment and management plan development
- Environmental mitigation and monitoring programmes
- Environmental statistics
- Marine ecology (including benthos, coral, fisheries etc)
- Sediment and water quality
- Muddy habitat creation and management (saltmarsh and mudflat)
- Flood risk and associated environmental issues
- Freshwater habitat restoration
- Climate change impacts and adaptation in the natural environment
- Environmental impacts of dredging
- Environmental river management including river design and geomorphology
- Ecosystem function and modelling
- Environmental water management (sustainable urban drainage)
- Coastal geomorphology

## Course on urban river rehabilitation



## Climate Change impacts on coastal BAP habitats



## UKCP09 climate change projections and land management for environmental benefit



## Fisheries Classification for the WFD: Bayesian model





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