

# River Darent Restoration Strategy

## Summary Information



### Main Objective

'To promote a holistic approach to managing the river for the benefit of ecology, and local people.'

The main focus being to develop a river management and restoration strategy to enable characteristic chalk river habitats to be maintained, enhanced, restored or created through the promotion of projects and sensitive river management.

### Key Historical River Darent Facts

- Considered the finest trout rivers in the country during the 1800s
- Catastrophic pollution in early 1900s killed everything in the river downstream of Otford
- Ecological recovery thought to have occurred by 1930s
- Dramatic increase in water abstractions during 1950s
- Drought of 1976: Many Kilometres dry downstream of Lullingstone
- During droughts and low flows areas continued to dry and concern grew during 1980s and early 1990s
- Darent Action Plan 1992 began work to resolve over abstraction
- Phase 1 now complete, Phase 2 completion date due 2008
- Darent Restoration Strategy 2005: work to compliment the improved flows with restoration and enhancement of river habitat



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### Summary of Restoration Strategy (Environmental Appraisal)

- For most feature interests, status is even throughout the river;
- For trout, invertebrates and macrophytes, status is better between Otford and Lullingstone than it is downstream.
- Invertebrates are still most impacted in the middle reach that suffered failure of flow up until 1990.
- Most channel habitat degradation is evident in the most downstream reach.

Feature Interest	Status above Lullingstone	Lullingstone to Westminster Mill	Westminster Mill to Dartford
Otter	Unfavourable – only transient individuals passing through		
Water vole	Unfavourable and stable – animals present in low numbers		
Salmon	Naturally Unfavourable?? (no significant change in past 20 years) – May be naturally unfavourable, or historically impacted		
Lampreys	Probably Naturally Unfavourable (no significant change in past 20 years)		
Bullhead	Favourable - Not adequately known - probably recovered in past 10 years		
Trout and grayling	TROUT: Unfavourable (only V. slight recovery) GRAYLING: Unfavourable	TROUT & GRAYLING: Unfavourable and so far not recovering here	TROUT & GRAYLING: Unfavourable and not recovering
Other fish communities	Unfavourable & Recovering - Moderate except in, and after, major drought years		
Invertebrate communities	Near-favourable or close to maximum potential	Unfavourable Recovering	Close to maximum potential
Crayfish	Unfavourable (destroyed)		
Macrophyte community	Near-favourable or close to maximum potential	Close to maximum potential or Unfavourable Recovering	Close to maximum potential or Unfavourable Recovering
River Habitat	Most near-favourable or close to maximum potential	Range from Unfavourable to Near-favourable	Majority Unfavourable

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### Summary of main negative impacts on the ecology of the River Darent

#### Main Impacts Include:

- Periodic drying & low-flows (over abstraction and droughts)
- Flood Defence Management and siltation
- Historic Modifications to the channel

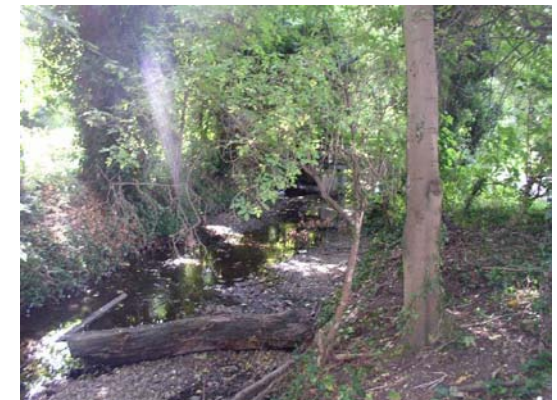
#### Lesser Impacts include:

- Historic pollution event
- alien species
- adjacent land use
- outside catchment effects



### Summary of the Proposed Programme of Actions

- Fully Implement Phase II of the Darent Action Plan
- A clear policy on river maintenance
- A long-term plan for river re-habilitation
- Review the fluvial audit esp. structures
- Fisheries Action Plan
- Detailed species survey
- Partnership working and monitoring



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### River Re-habilitation Project

#### ➤ Hawley Manor September 2005



**BEFORE:** The river was over wide, shallow, concreted, & silted gravels, and uniform profile. There was none or little in channel vegetation. (July 2005)

Re-habilitation Projects aim to restore natural features to parts of the river where due to past modifications and low flows these features have been lost.

Once created chalk river habitat through the river's own natural processes.



**AFTER:** Low-flow channel created through gravel re-distribution. Gravel margins and islands created and addition marginal plants. River Water Crowfoot encouraged. Pools and Riffles designed to improve habitat for invertebrates & fish (July 2006)

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### River Re-habilitation Project

Lullingstone Castle, Eynsford February 2006



This reach had a series of small weirs impounding the river, causing siltation of the river gravels. Due to being over-wide there is not enough energy to create clean gravels suitable for fish spawning

Hazel faggots were installed at a few locations to narrow the river, sections of the weirs were removed.

The new margins will vegetate up in time, and the narrower channel is beginning to scour out pools.

For a full copy of the Darent Restoration Strategy on CD please contact: Tom Cook, Technical Officer – Biodiversity, Environment Agency, Orchard House, Endeavour Park, London Road, Addington, West Malling, Kent, ME19 5SH, 01732 223103, [tom.cook@environment-agency.gov.uk](mailto:tom.cook@environment-agency.gov.uk)

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### River Re-habilitation Project

Franks Lane, Horton Kirby March 2007



#### Re-habilitation using gravel re-distribution

Similar to Hawley Manor, new meandering Low flow Channel created. Bars, islands, pools and riffles created to produce a wide diversity in channel morphology.

New habitats will improve the site for invertebrates, fish and water voles.

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### Potential Future Projects

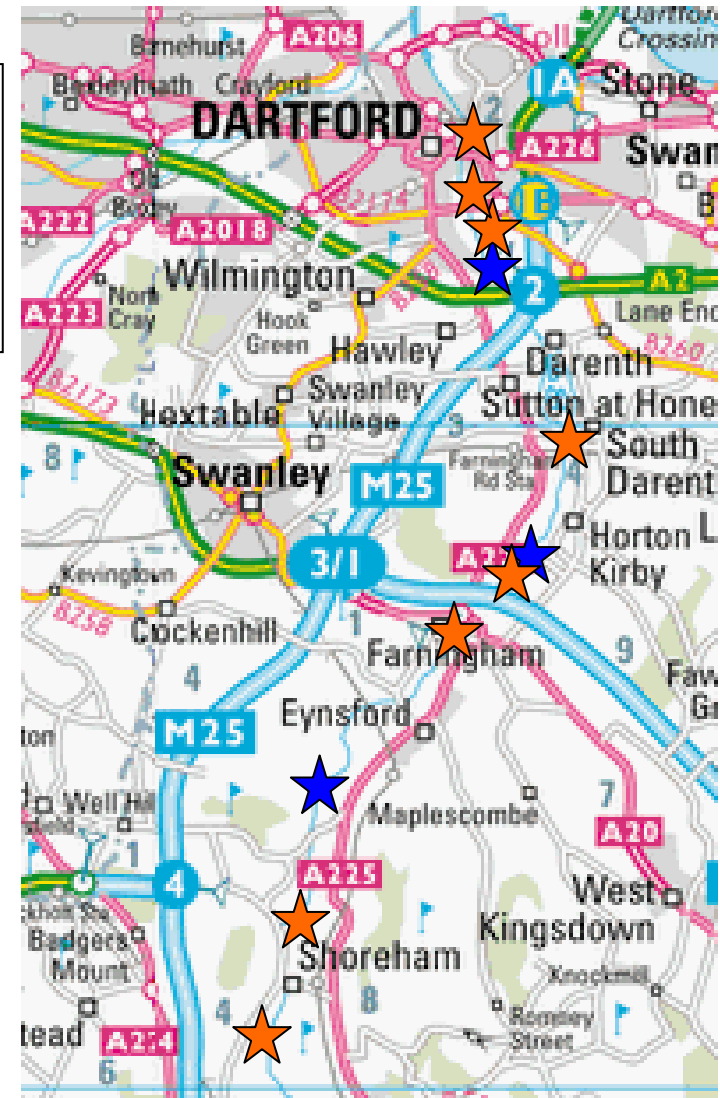


South Darent



Young wild brown trout from the Upper Darent reared in an incubator box, ready for release into the Middle River Darent

- ★ Completed Re-habilitation Projects
- ★ Potential Projects already identified



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