

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

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| Name: | River Kent |
| Unitary Authority/County: | Cumbria |
| SAC status: | Designated on 1 April 2005 |
| Grid reference: | SD508953 |
| SAC EU code: | UK0030256 |
| Area (ha): | 109.12 |
| Component SSSI: | River Kent and Tributaries SSSI |

Site description:

The River Kent's main tributaries have their catchments in the south eastern Lake District fells. Natural mineral enrichment provides the calcium necessary for growth of crayfish. Downstream from Kendal, the main channel of the Kent flows through a series of limestone defiles and gorges. This stretch is influenced by calcium-rich limestone springs. White-clawed crayfish *Austropotamobius pallipes* are found throughout the river system, from the headwaters of the Rivers Kent, Gowan, Mint and Sprint downstream to the lower reaches of the main Kent channel near Sedgwick.

The Kent system presents a variety of habitats for crayfish. This includes extensive areas with a loosely structured but stable stream bed of cobbles and stones. Crayfish are also found in the more unstable, turbulent reaches of the upper Kent and Sprint wherever there are small areas of cobbles and stones at the edge of channels. Two small disused reservoirs at the head of the River Gowan provide important refuge populations of crayfish, which are the most likely to survive in the event of an outbreak of crayfish plague in the Kent system.

In the lower reaches, and particularly through Kendal, there are extensive beds of water-crowfoot *Ranunculus* spp. and alternate-flowered water-milfoil *Myriophyllum alterniflorum* providing a further habitat and food source for crayfish. The main channel of the River Kent has extensive reaches with undisturbed riparian habitats of woodland and tall riparian vegetation. Much of the river system is lined with tall, marginal vegetation of reed canary-grass *Phalaris arundinacea*, hemlock water-dropwort *Oenanthe crocata* and associated tall herbs and grasses. The submerged roots of these plants, and the diversity of habitats created by the riparian vegetation, provide excellent refuges for crayfish.

The Kent and its tributaries have generally high water quality. With a short distance from the headwaters to the mouth of the river, and heavy rainfall on the catchment fells, the river has a high degree of flushing. This maintains the river bed relatively free of silt and algal growth. These conditions also provide suitable habitat for populations of bullhead *Cottus gobio*.

White-clawed crayfish and freshwater pearl mussels *Margaritifera margaritifera* are found together in one of the upper tributaries. In addition to good water quality, this headwater also provides the moderate to fast flow regime, cool temperatures and suitable areas of stable river channel, required by freshwater pearl mussels. Freshwater pearl mussels can live for over 100 years. Their life cycle is however complex and in part dependent upon the maintenance of a healthy salmonid population. The mussels do not mature until 15 years, when the females produce eggs. After initially remaining within the mother's shell the larvae (0.2mm) attach themselves for a short period to young salmon and trout. After dropping off, they remain buried within clean sand and gravel in the stream bed for a further five to ten years. This

buried stage within the life cycle is particularly susceptible to changes in the flow regime, siltation and algal deposition.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation. (Rivers with floating vegetation often dominated by water-crowfoot)

Qualifying species: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes*
- Bullhead *Cottus gobio*
- Freshwater pearl mussel *Margaritifera margaritifera*

This citation relates to a site entered in the Register of European Sites for Great Britain.
Register reference number: UK0030256
Date of registration: 14 June 2005

Signed: *Trevor Salmon*

On behalf of the Secretary of State for Environment,
Food and Rural Affairs