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

Citation for Special Area of Conservation (SAC)

Name:	River Ehen
Unitary Authority/County:	Cumbria
SAC status:	Designated on 1 April 2005
Grid reference:	NY031144
SAC EU code:	UK0030057
Area (ha):	24.39
Component SSSI:	River Ehen (Ennerdale Water to Keekle Confluence) SSSI

Site description:
The River Ehen forms the outfall from Ennerdale Water and flows some 20 km before reaching the Irish Sea at Sellafield. For much of its upper length the River Ehen is oligotrophic (nutrient-poor) and flows over bryophyte-dominated shingle, pebbles and rock. Above Ennerdale Bridge the catchment is largely composed of acidic rocks of the Borrowdale Series and Skiddaw Slates. Downstream from Ennerdale Bridge the river is slightly enriched by streams flowing from Limestones and Millstone Grits of the Carboniferous Series.

The designated stretch of the river, between Ennerdale Water and the confluence with the River Keekle at Cleator Moor, meanders across a narrow floodplain with areas of riparian woodland and trees. This stretch of the river supports outstanding populations of the freshwater pearl mussel *Margaritifera margaritifera*, which is known to have recruited successfully within the last 20 years. An important feature of this stretch of the Ehen is the amount of tree shade along the banks, as bank-side shade appears to be of great importance for the mussels. Along with the nutrient-poor status of the river, the shade from direct sunlight helps to reduce the amount of algal growth in the channel. This would otherwise dominate the river bed and make it unsuitable for the 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 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:

- Freshwater pearl mussel *Margaritifera margaritifera*
- Atlantic salmon *Salmo salar*

This citation relates to a site entered in the Register of European Sites for Great Britain.
Register reference number: UK0030057
Date of registration: 14 June 2005
Signed: Trevor Salmon
On behalf of the Secretary of State for Environment, Food and Rural Affairs