

Appendix H

Summary of Physical Habitat Data

The most appropriate method of assessing habitat quality for the SAC's features has yet to be determined and is the subject of research within **Life in UK Rivers**. However, there are several sources of useful information that can be used to gain an overview of physical habitat in the River Avon cSAC in the absence of a formal evaluation technique.

River Habitat Survey

River Habitat Survey (RHS) is a method that has been developed for assessing the physical character and quality of river habitats based on results from a standard field survey. The main types of channel modifications recorded during RHS survey are reinforcement, re-sectioning and regulation of flow by impounding structures. The RHS data collected in the field can be used to express the degree of modification of the riverbed and banks (Environment Agency 2002).

RHS has been carried out throughout the Avon catchment, covering approximately a quarter of the river length. The results of these surveys can be obtained from the Environment Agency in Blandford.

The degree of habitat modification for the River Avon and main tributaries (including the Ebbles) are summarised in Figure H1 (note that the Ebbles is not within the cSAC). The majority of sites surveyed (65%) were pristine/semi-natural or predominantly unmodified, with the remainder being classed as either obviously or severely modified.

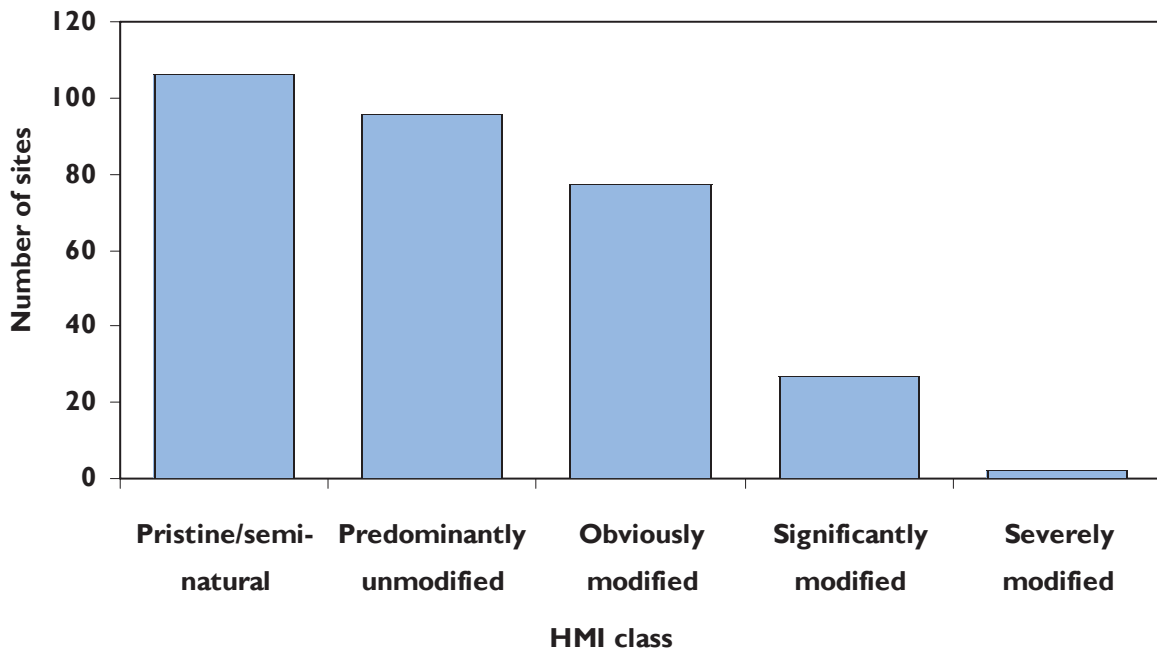


Figure H1. Habitat Modification in the River Avon cSAC and River Ebbles.

The degree of modification varies throughout the catchment, with the rivers Wylfe and Bourne being most modified, and the Nadder and Ebbles least so.

Habitat quality can also be assessed using RHS, giving a broad measure of the diversity and naturalness of a stretch of river. Habitat quality is determined by the presence and extent of features of known wildlife interest such as natural channel substrate, mid-channel islands, exposed tree roots etc.

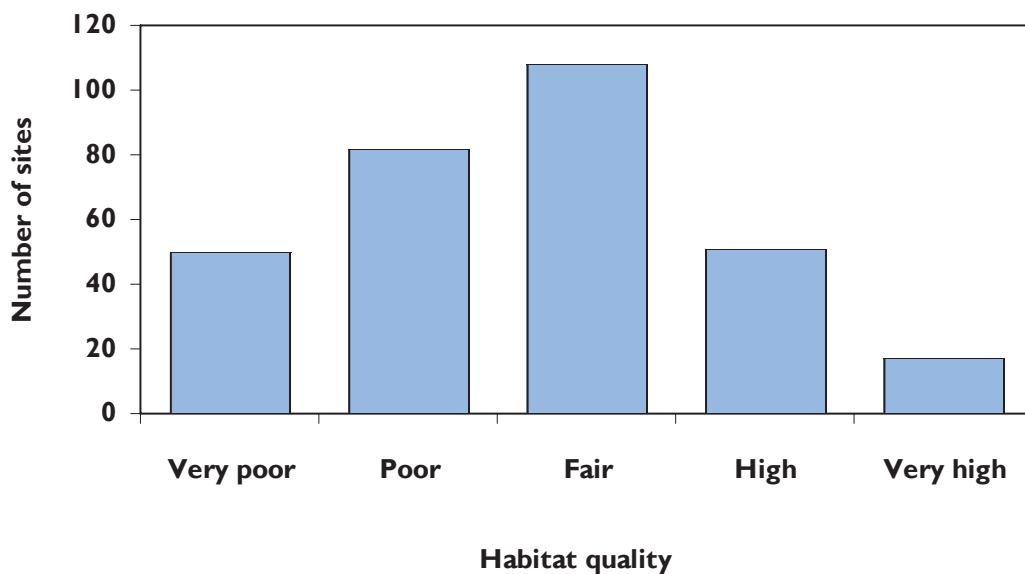


Figure H2. Habitat quality in the River Avon cSAC and River Ebble.

Habitat quality for the River Avon and main tributaries is summarised in Figure H2.

Only 22% of the sites surveyed were of high or very high habitat quality. Habitat quality varies throughout the catchment, with the rivers Avon, Bourne and Wylye having the worst habitat quality and the Ebble and Nadder the best.

The results in Figure H2 appear to contradict the habitat modification results. However, a full habitat quality analysis might show that the sites are of better quality than the preliminary analysis suggests, particularly in comparison with other chalk rivers. Full analysis and comparison with other rivers is very time-consuming and is unlikely to be carried out for all sites within the catchment.

Further analysis has been undertaken on RHS data for the Nine Mile River. It was found that the river has a very low degree of modification and high level of habitat quality, probably due to its rural nature and position within MOD land (Cullis 2002b). Both the Nine Mile River and the River Ebble are not currently SSSIs or within the cSAC boundary.

Geomorphological audit of the River Wylye

As part of **Life in UK Rivers**, a full geomorphological audit of the River Wylye has been undertaken. The main objective of the project is to develop an understanding of the physical processes in the river and to examine the impact of existing river rehabilitation projects and the link between geomorphology, salmon and *Ranunculus* communities. The study also identifies sediment supply, storage and transport in the Wylye catchment and how these relate to past and present management at a catchment and river channel scale (Geodata 2002).

The geomorphological audit is a fluvial geomorphological assessment technique. Details of this and related techniques can be found in *River Geomorphology: a practical guide, Guidance Note 18, R +D 661* (1988), Universities of Nottingham, Newcastle and Southampton.

The geomorphological audit of the Wylye was carried out in several stages:

- Desk study. Historical maps, records of past and present management and interviews with local Environment Agency and river users provided information regarding the history of change on the catchment and its management.

- Field investigations to determine the present geomorphological situation.
- Identification of catchment trends.
- Geomorphological dynamics assessment to investigate natural and rehabilitated reaches to determine their potential as habitats for key species.

The main outputs of the project are as follows:

- A map of the historical and current management regime.
- Geomorphology study showing channel processes.
- Initial assessment of a small number of existing rehabilitation schemes and their effect on geomorphology.
- Indications of the links between channel process and form, salmon and *Ranunculus* (as a substitute for *Ranunculus* communities).

The outputs from the study are intended to provide the foundation for future sustainable rehabilitation, river channel and bank management on the River Wylfe. The definition of geomorphological processes should ultimately enable identification and assessment of management problems. Along with RHS data, the geomorphological audit could provide a strategy for planning future in-channel rehabilitation works. It may also be a useful tool for assessing the impact of fisheries and flood-defence works on the cSAC.