



**A REVIEW OF
ENVIRONMENTAL STUDIES
IN THE MILFORD HAVEN WATERWAY
1992-2000**

**Commissioned by the Milford Haven Waterway
Environmental Surveillance Group**

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SUMMARY

This report commissioned by Milford Haven Waterway Environmental Surveillance Group reviews the major environmental work undertaken in Milford Haven waterway since the last review was undertaken in 1992 (Hobbs and Morgan, 1992). Work undertaken since 1992 originates from two principal sources: -

- Monitoring and surveillance work arising from the 1992 review;
- Work commissioned after the Sea Empress oil spill.

Monitoring and surveillance programmes since 1992 have focused on the acquisition of baseline water quality and biological data. Routine monitoring data has been reinforced by major biological surveys including intertidal studies (rocky shores, soft sediments, saltmarsh and eelgrass beds) and sub-tidal studies (soft sediment macrobenthos, eelgrass beds and hard substrate communities). Water quality investigations have focused on inputs and sediment contamination. Annual programmes include bird populations and routine surface water quality studies.

Overall, data collected has been of good quality and is well documented, although storage of information has been *ad-hoc* in places. Much effort has been placed on the careful acquisition of high quality material although it is considered that such material sometimes warrants more detailed analysis and interpretation.

Although data is of high quality, ecological studies have not always been able to reflect change due to, for example, pollution. This is because natural and physicochemical gradients make interpretation difficult. In view of this, the report recommends that future monitoring and surveillance should include programmes that might be able to interpret low level impacts due to chronic pollution. It is also important that existing programmes continue in order to build up an increasingly important time series data set. Over the next ten years, it is also considered important to monitor sensitive environments and habitats and recommendations are made in respect of this.

Given the large volume of data generated by MHWESG it is important that data are secure and easily accessible. It is recommended that data are stored in electronic format using industry standard databases and spreadsheets. The report recommends that the Group's information management is formalised and streamlined to avoid data losses and data corruption.

In order that work programme priorities and an analysis of outputs is transparent the report recommends that the Group's annual report is modified to include a brief annual review.

Overall it is considered that MHWESG has been successful in providing a focus for high quality environmental surveillance work in Milford Haven waterway.