

Research and analysis: Protecting biota from cooling water intakes at nuclear power stations

New build nuclear power stations in the UK will require large-volume intakes of cooling waters from estuarine or coastal sites, and this report identifies information on techniques and systems to reduce the impact of such intakes on marine and estuarine biota (fish, crustacea, larval forms, plants and microscopic organisms). Available sources of information on the effectiveness and applicability of various biota protection methods are provided and summarised.

There are various engineering methods that may reduce the impact to biota, particularly fish, of large water intakes. Some engineering technologies and operational methods are well established, but others are new, with less information on their effectiveness in different situations.

This scoping report identifies the main sources of information available, and will form a resource for regulatory staff and other interested parties. It is intended as an initial phase of a full review into some or all of these techniques for biota protection in cooling water intakes. Information on biota protection measures from cooling water intakes at existing nuclear and conventional power stations and other large volume water intakes has been included where relevant. The information summarised in this report could have relevance to other large scale water intakes such as tidal hydropower.