

Seasearch diving and recording is carried out by volunteers. Many of them have a professional background in marine biology and conservation but many do not and are self-taught naturalists. The document sets out the processes which are used to assure the quality of Seasearch data so that they can be used by professionals with confidence.

Seasearch Training Programme

Training is available at three levels to all participants.

Observer Level – this is aimed at volunteers without previous experience of marine recording in British and Irish waters. It comprises a one-day course followed by two survey dives where the individual records are reviewed and discussed with a tutor. The Observer qualification is awarded after completion of a further 3 survey forms.

Surveyor Level – this is aimed at experienced Observers and others with previous relevant experience. The training comprises a two-day course which involves the completion of two Survey Forms (one from video and one from an actual dive). The Surveyor qualification comprises completion of a further 5 Survey forms, two of which are supervised by a Seasearch tutor, and the completion of an ID test.

Specialist level – this is aimed at experienced surveyors to either increase their skills in survey methodologies or individual groups of plants and animals. Courses are workshop style and are led by experts in their field. They are often attended by professional biologists as well as Seasearch surveyors.

In addition to the training process Seasearch produces a series of **ID Guides** aimed at improving in-water ID skills. These comprise:

Seasearch Guide to Marine Life – introductory level containing a selection of widely observed species of plants and animals. (Much expanded and updated second edition published December 2018)

Seasearch Guide to Sea Anemones and Corals of Britain and Ireland – comprehensive guide to all of the anemones and corals found in shallow waters, the only guide of its type. (Two editions)

Seasearch Guide to Seaweeds of Britain and Ireland – again the only guide to be illustrated with in-situ photographs to complement recording by collecting specimens. Equally popular with littoral recorders and divers. (Two editions)

Seasearch Guide to Bryozoans and Hydroids of Britain and Ireland – these are difficult groups to identify but important in biotope terms as they often form significant animal ‘turfs’. This is the only guide to contain *in situ* images as opposed to line drawings alone.

Seasearch Guide to Sea Squirts and Sponges of Britain and Ireland - as with bryozoans and hydroids, these groups can form the dominant animal cover in the right conditions but are often confused. As with the other Seasearch guides, this book concentrates on *in situ* features to allow recording without specimen collection. Most of the sea squirts found the shallow waters around Britain and Ireland, together with the more easily recognised sponges, are included in the guide.

These guides help to ensure high quality records as many of our volunteers use cameras and are able to check their images with those in the guide.

Quality Assurance Process for Recording Forms

Validation and verification of the data follows a three-stage process:

Initial validation can be carried out locally or by the National Coordinator depending on who first receives the forms. It comprises allocating a Seasearch number, checking the completeness of the form, checking the position given and checking the species lists for any unlikely species. If there are queries then these are raised with the recorder and photographs requested to check identifications, especially of unexpected species. Either the recorder or the validator can assign a '?' to a taxon record which is then included in the database as an uncertain record. Supporting verification of an identification, in the form of confirmation by a recognised expert, can be appended to the taxon record within Marine Recorder (e.g. "identification confirmed by Bernard Picton" for a rare/unusual nudibranch).

Data Entry into the Marine Recorder database is carried out by a small group of experienced personnel, the majority of whom are professional biologists or extremely experienced recorders. There is a manual and supporting guidance for data entry to ensure consistent standards. The person entering the data can add significant value in the way they describe habitats and they also allocate MNCR Biotopes to the habitats identified in the Survey forms. This is a specialised skill which we do not expect volunteers to have. We have produced two manuals to aid the process and again maintain consistency of approach. At this stage the person entering the data can again refer back to the original recorder to clarify any points.

Merging and final checks are carried out by the National Coordinator, supported by the Seasearch Data Officer. This stage consists of merging all of the separate local datasets into a single UK/Ireland file prior to checking and distribution of the data. Once merged, a 'snapshot' of the data is created which enables checks to be carried out of species (looking for unusual or questionable records), completeness of data and consistency over the dataset as a whole. A map is also created which plots all of the records received and this is also checked for significant positional errors. Any changes required are agreed with the person responsible for entering the data and must be carried out by them to avoid the creation of duplicate datasets. The National Coordinator is responsible for distributing the data to the NBN, JNCC and other users.

Ongoing Data Management

Queries arising from users of the data normally come to the National Coordinator (some through the NBN) but may also arise at a local level. They are discussed and amendments made as appropriate by the holder of the dataset at the local level. Any amendments are incorporated in an, at least, annual update of the whole dataset.

This process we believe makes the Seasearch data reliable and of a professional standard. Whilst many of our volunteer recorders are experts in their own right, that is not always the case and the process ensures that records made by less experienced volunteers are thoroughly checked by experienced people prior to appearing in the dataset.



Charlotte Bolton
National Seasearch Coordinator
Marine Conservation Society
Overross House, Ross Park
Ross on Wye HR9 7US.