

SURVEY FORM GUIDANCE NOTES



The **Seasearch Survey Form** provides much more information than the Observation form and should be completed wherever the recorder is able and willing to record at this level of detail. It is normal for a buddy pair of divers to record the information from their dive on one form and the tasks may be split between the buddy pair or alternatively both divers will record all of the information and co-operate to complete a single form afterwards. Please try to complete all parts of the form. You may need to consult the dive organiser, the skipper and charts – try to do this before leaving the site/boat.

PAGE 1

Your details

We need to know who you are in case of any queries on the results you record and so we can keep you informed of progress with the **Seasearch** surveys

Where your record is part of a wider survey carried out in a specific area or by a club, group or expedition include the group name. If you are recording on your own leave this question blank.

Dive/Site details

This is essential information to locate your dive.

Site name

The name allocated to the site must be clear and precise but not verbose. Use a distinctive feature named on the chart or a map, or make up what you consider to be an appropriate name.

General Location

Describe the location sufficiently for us to check that the position given below is correct. Relate the dive to a feature and give the County or nearest large town, e.g. 1 mile SW of Selsey Bill, West Sussex.

Position

Almost all boats carry GPS - please get this information from the skipper if you need to. Give the location in decimal degrees as this is what most GPS will show. Check if the GPS is using WSG84 (the usual) or OSGB36 datum. As the Greenwich Meridian (0° longitude) crosses the coast in Sussex, and on the Humber estuary, it is important to state whether the site was East or West of this. An OS Grid Reference is an acceptable alternative.

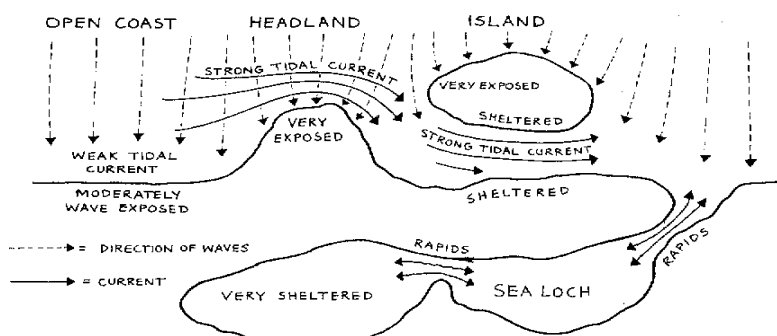
Google Earth is a source for positions for shore dives. Make sure it is configured for decimal degrees and not degrees/mins/secs (which is the default setting)

If you did not move very far on your dive enter a single position in the *Centre of Site* box. If it was a drift dive enter your start position and the position when you left the bottom. Get your skipper to record where your DSMB comes up or after a specific time. We don't want to record where you eventually surface as you may have drifted a good way on your ascent and safety stop.

Exposure of site

We want to know how exposed your dive site is to wind and waves, not at the time of your dive when it was probably fairly calm, but in storm conditions. This will affect the range of marine life that occurs.

Examples of different levels of exposure and tidal streams are shown in the drawing.



The exposure categories are shown in the table on the next page:

<i>Extremely exposed</i>	This category is for the few open coastlines which face into prevailing wind and receive oceanic swell without any offshore breaks (such as islands or shallows) for several thousand kilometres and where deep water is close to the shore (50m depth contour within about 300m, e.g. Rockall).
<i>Very exposed</i>	Open coasts which face into prevailing winds and receive oceanic swell without any offshore breaks (such as islands or shallows) for several hundred kilometres, but where deep water is not close (>300 m) to the shore.
<i>Exposed</i>	Prevailing wind onshore although there is a degree of shelter because of extensive shallow areas offshore, offshore obstructions, or a restricted (<90°) window to open water. Not generally exposed to strong or regular swell. Can also include open coasts facing away from prevailing winds but where strong winds with a long fetch are frequent.
<i>Moderately exposed</i>	Generally includes open coasts facing away from prevailing winds and without a long fetch but where strong winds can be frequent.
<i>Sheltered</i>	Restricted fetch and/or open water window. Coasts can face prevailing winds but with a short fetch (say <20 km) or extensive shallow areas offshore or may face away from prevailing winds.
<i>Very sheltered</i>	Unlikely to have a fetch greater than 20 km (the exception being through a narrow [<30°] open water window). Face away from prevailing winds or have obstructions, such as reefs, offshore.
<i>Extremely sheltered</i>	Fully enclosed with fetch no greater than about 3 km.
<i>Ultra sheltered</i>	Sites with fetch of a few tens or at most 100s of metres.

Tick a single box for your dive site. You may need to consult a map or chart to help you.

Maximum Tidal Stream

Again this is the maximum tidal stream, not the amount of current when you dived it. You can get this information from charts, a tidal streams atlas, or ask your boat skipper. Tick one box for your dive site.

The categories are:

<i>Very strong</i>	> 6 knots (> 3 m/sec.)
<i>Strong</i>	> 3-6 knots (1.5-3 m/sec.)
<i>Moderately strong</i>	1-3 knots (0.5-1.5 m/sec.)
<i>Weak</i>	< 1 knot (< 0.5 m/sec.)
<i>Very weak</i>	negligible

Date and time of dive

The date and start time of your dive is essential information that enables us to adjust observed depths to chart datum. For dive duration enter the bottom time – i.e. when you stopped recording and left the seabed.

Sea Temperature

Most computers record temperature at the deepest depth and this is what you should record.

Underwater visibility

Estimate the distance you can see underwater. Use a single distance, not a range. Obviously, the better the visibility, the more you're likely to see and be able to record.

Drift Dive/Night Dive

Tick as appropriate and if it is a drift dive make sure you enter the start and finish point in the Position box.

Other Information

Please tick if you or your buddy took photos, video, specimens or seaweeds for pressing. Please send us a CD with the form with any interesting photos on it.

Enter the shallowest and deepest points of your survey.

Enter the correction to chart datum if you know it. Otherwise we will use the date and time to work it out.

Seabed Summary

In the summary section we are looking for a brief summary of the site and any special features.

a. describe briefly the main features of the site as a whole. This will put the detailed habitat observations into context. This could include orientation (e.g. south facing open bay) and the main underwater features (e.g. bay with sand in the centre and steep rocky margins with kelp forest on upper parts)

b. describe any unusual features or species. This may be physical features which are uncommon in your experience and any species or communities which are unusual for the area or nationally/locally scarce or rare. Include any BAP species or habitats.

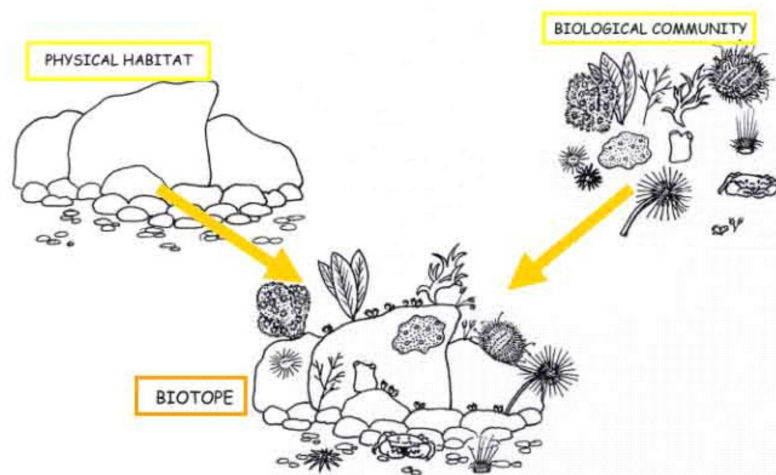
c. describe any human activities or impacts at the site. This could include potting, dredging, diving and sewage or storm water outfalls.

These two pages are used to provide information about underwater habitats and communities (biotopes). Once you have identified the distinctly different habitats you encounter you are asked for a brief description and some quantitative information for each and a sketch or plan which includes all the habitats. The form is designed for up to three habitats and this is as many as most recorders will be able to manage in one dive. If you have details of more attach them on a separate form. If the seabed is all the same only enter one habitat – don't create differences just to fill up the form!

Each habitat is numbered. Make sure the description and quantitative data is entered in the correct columns and that you number your sketch or plan in the same way.

Rules for habitats

- Each habitat should be distinct from others either physically or in terms of the main animal/plant communities
- Each habitat should be physically distinct – don't mix rock and sediment
- Each habitat should be distinct in terms of the main plant and animal communities – don't mix seaweed dominated rock with animal dominated rock, or kelp forest with kelp-free rocky walls
- A habitat should cover an area of at least 5 metres x 5 metres.
- Describe the shallowest habitat first, even if you carried out your dive from deep to shallow



A Seasearch Habitat (or Biotope) consists of the physical habitat and biological community

Page 2 - Habitat descriptions

This should be a brief 'sketch in words' to describe the main characteristics of each habitat and the dominant plant or animal communities. An example would be: "Gently shelving seabed consisting of large boulders up to 1m x 1m with patches of coarse sand collecting between them. Kelp forest on boulders with pink encrusting algae and red seaweeds beneath"

Below each description there are tick boxes for physical and community types. Each habitat should only contain a limited number of physical types. Rock and boulders or cobble and pebbles are fine but avoid identifying habitats containing very different physical characteristics, for instance rock and sand or wreckage and mud. Either split these into separate Habitats or describe them all in the Summary on Page 1 and choose the most significant ones for your survey.

The tick boxes for community types are to identify the **dominant communities**. Each habitat described should rarely have more than one dominant community. For instance if the main cover is kelp forest with pink encrusting algae and anemones on the rocks beneath only tick the kelp forest box because this dominates. Where the dominant community is an animal turf write the main component in the box. This may, for example, be hydroids, jewel anemones or bryozoans, but will not be mobile animals. Animal beds are where large numbers of a particular animal changes the composition of the seabed. Examples are brittlestar beds, mussel beds and gravel sea cucumber beds.

Don't fill in the Biotope Code box unless you are experienced at biotope allocation. We will do it from the information on the form.

Page 3 - Quantitative data

The boxes look daunting but are important to enable entry onto a database. There is a column for each of the (up to) three habitats and ensure you enter the correct format for the data requested.

Depth limits

Enter the recorded range for each habitat in the first two lines and the depths corrected to chart datum if you know them.

Substratum

Record the percentage in each category for each habitat. Make sure each column adds up to 100%

Size ranges for *Boulders*, *cobbles* and *pebbles* are given on the form.

Note the constituents of *gravel* – individual fragments may be of stone or shell.

Coarse sand has large clearly defined grains, usually of a mixture of sizes. Fine sand runs through the fingers and the individual grains are difficult to pick out.

Features – you will normally fill in either the rock or sediment features for each habitat, rarely both.

Features – Rock

Note that rock includes boulders, cobbles & pebbles. Record on a range from ① to ⑤.

Relief of habitat - this can range from ① *very even* (unbroken bedrock with uniform slope) to ⑤ *very rugged* (highly broken slope with wide range of surfaces, including fissures and gullies).

Surface texture - an indication of the smoothness of the rock type, from ① *very smooth* (a hard and well worn rock, or well rounded cobbles) to ⑤ *highly pitted* (a highly pitted or bored rock such as chalk or limestone, or one with very jagged outlines).

Stability - relating to wave action, from ① *very stable* (bedrock or very large boulders which are never moved by wave action) to ⑤ *highly mobile* (frequently turned pebbles, cobbles or small boulders, where colonisation is affected because of such movement).

Scour - an indication of scour by sand, from ① *none* (no scouring apparent) to ⑤ *highly scoured* (base of rocks likely to be smooth and without colonisation).

Silt - the amount of silt settled on rocks, from ① *none* (very clean rock surfaces) to ⑤ *highly silted* (thick layer of silt on all surfaces).

Fissures and Crevices – indicates the presence of micro habitats for different sized species. Note the size split given on the form – crevices are smaller.

Boulder/cobble/pebble shape – another indication of stability and scouring, ranging from ① *smooth rounded shapes* to ⑤ *sharp edged fragments* such as flints or slates.

Sediment on rock – tick where there is rock with a thin layer of sand or mud on top.

Features – Sediment 1 (record with a ✓)

Note that sediment includes gravel, sand & mud.

Mounds/casts – often created by worms or crabs.

Burrows/holes – created by shells, crabs and worms.

Waves and Ripples – note the sizes on the form.

Subsurface coarse layer - was there a firm layer of larger particles underneath a thin layer of sand?

Subsurface anoxic black layer – remove the top few centimetres with your fingers to see if there is a layer of decomposed material beneath.

Features – Sediment 2 (record from ① to ⑤)

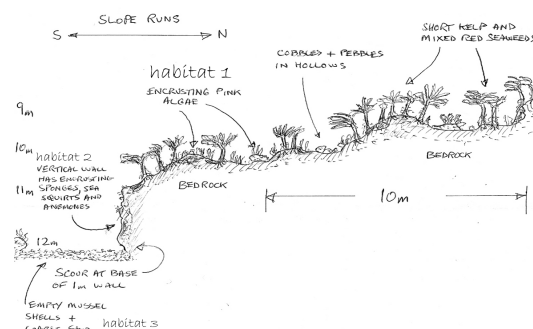
Firmness - the degree of softness or compactness of the sediment: ① *very firm* (difficult to dig with fingers), ② (fingers only in), ③ (hand in), ④ (can penetrate up to elbow), to ⑤ *very soft* (whole arm in!).

Stability - from ① *highly stable* (movement of sediment very unlikely) to ⑤ *highly mobile* (sediment constantly being moved).

Sorting - an indication of the uniformity of the particle size, from ① *very well sorted* (sediment composed of a single particle size) to ⑤ *very poorly sorted* (sediment with wide range of particle sizes).

Sketches and Plans

Instructions are on the form itself. Choose whatever form of sketch shows the features of the site most clearly. This may include both a plan and a profile. Make sure you annotate the habitats you have described and given the quantitative data for. Depths, scale and direction are essential.



Species List

Here you enter the species observed in **each habitat** described on pages 2&3.

The species section is to enable you to record all of the species you can reliably identify. Please **do not** write down any names that you are unsure about - this will only lead to wrong information going into the database. It would be better to leave blanks in this section rather than have dubious records listed. Scientific names are preferred, but you can use common names as long as they are unambiguous. Please enter the species in groups as listed on the form.

Species abundance

The Abundance scale is **Super abundant, Abundant, Common, Frequent, Occasional, Rare**

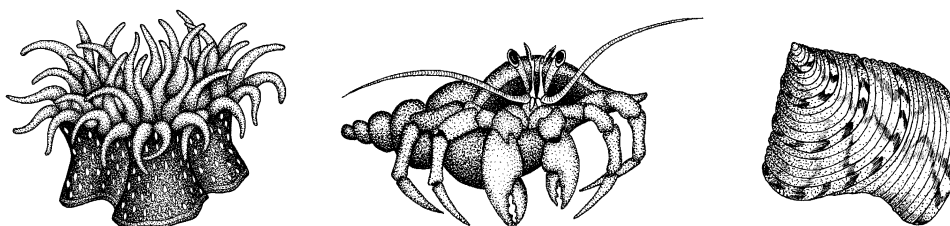
The JNCC has a cunningly devised table for working out the abundances of various plants and animals depending on their size and the group to which they belong. However, on a Seasearch survey you are unlikely to be recording at this level of detail. Instead, you are asked to give an indication of a particular species' abundance in your own judgement based on the simplified scale below.

Abundance	Encrusting and turf species e.g. encrusting algae/sponge, jewel anemones, hydroids, barnacles, mussels, seaweeds	Small plants and animals (1-5cm) e.g. worms, small sponges, anemones, cup-corals, shells, solitary sea squirts	Large plants and animals (> 5cm) e.g. large sponges, sea fans and pens, large anemones, crabs and lobsters, starfish, fish,
Superabundant	80-100% cover	10,000 per m ²	100 per m ²
Abundant	40-80% cover	1000 per m ²	10 per m ²
Common	20-40% cover	100 per m ²	1 per m ²
Frequent	10-20% cover	10 per m ²	1 per 10m ²
Occasional	5-10% cover	1 per m ²	1 per 100m ²
Rare	< 5% cover	< 1 per m ²	1per 1000m ²

If you identify something from a photograph and have no idea of abundance you can put **P** for *present* in the abundance column.

There is also a column for you to record whether or not you have taken a photograph of each species during the dive. This can help to clarify any uncertainties as to identification later.

Once you have completed the Survey Form please remember to return it to the Dive Organiser or send it off to Seasearch at Marine Conservation Society, Over Ross House, Ross Park, Ross-on-Wye, HR9 7QQ. We are now getting a summary of all records received onto Google Earth and also trying to write reports as soon after the event as possible. Information on forms received late may well not be included.



Text by Chris Wood. Drawings by Bob Foster-Smith, Robert Irving & Sue Daly.