How to use the Marine Habitat Classification for Britain and Ireland version 15.03

(This document is available from https://mhc.jncc.gov.uk/resources#userguide. Edited June 2019)

Overview

The quickest way to get an overall view of the classification is to look at the expandable classification hierarchy, which lists all types, from broad habitat level to sub-biotope level, in hierarchical order. The different levels in the hierarchy are colour-coded in a standard colour scheme. The expandable hierarchy is hyperlinked to the descriptions for each individual type, which can be accessed by clicking on the relevant title in the list.

Habitat matrices and hierarchy structure diagrams have been developed to help users find their way around the individual broad habitats.

The biotope search page can be used to search for biotope descriptions which contain specific keywords or species names. Users who are familiar with the classification system can also search for descriptions belonging to specific codes.

This guide includes:

1. The layout and components of each biotope description
2. Guide to understanding the biotope codes
3. Explanation of the species nomenclature

The introduction to version 04.05 the classification (Connor et al, 2004) covers the background and development of the classification system in some detail. It also contains a section on field recording (page 43), which explains the terminology used for physical habitat parameters within biotope descriptions.

Comparative tables enable a rapid comparison of the species composition and the principal physical characteristics between user-defined sets of biotopes (and other classification units). There are no tables for the deep-sea section added in 2015; therefore, they are only relevant to littoral and sublittoral zones - equivalent to version 04.05 of the classification.

A guidance document (Parry, 2015) has been produced about how to interpret survey data and assign a biotope using the classification, or EUNIS. This document provides a step by step guide to reviewing evidence, suggestions for dealing with common problems, and a template biotope report structure.

1 Understanding the codes

Construction of codes follows a few simple rules, which achieve consistency throughout the classification whilst aiming to keep the resultant codes relatively short and intuitive. Familiarity with the rules for code construction and with the types themselves, by those working regularly with the classification, results in rapid use of codes as a short-hand means of referring to the types defined.

Codes are defined for each level in the classification. Within a level, they comprise one or several elements. They are based on the following rules:

1. Broad habitat and main habitat codes are based on habitat factors or gross biological features (e.g. macrophytes and biogenic reefs).
2. Biotope complex, biotope and sub-biotope codes are based wherever possible upon the most characteristic taxa (which preferably also dominate spatially/numerically) (preferably no more than two per biotope complex, biotope or sub-biotope).
3. Where the biological composition is too complex to derive a simple code, features of the habitat are used (e.g. VS for variable salinity).
4. Codes for habitat factors, higher taxa and descriptive community features (e.g. park, crustose) are derived from a standard lexicon (see Appendix). A full list of codes used is contained in the hierarchical list which can be downloaded from the classification website.
5. Codes for names of genera are derived using the first three letters of a genus or higher taxon name (e.g. Ala for ***Ala**ria*, Chr for **Chr**ysophyceae). Codes for species names are derived using the first letter of the genus and the first three letters of the specific name (e.g. Ldig for ***L**aminaria **dig**itata*) (see Appendix: Lexicon of code elements**Error! Reference source not found.**).
6. Within the code each new element of the code starts with a capital letter.
7. As far as practical the code elements are unique, but some duplication is adopted in the interests of keeping codes short. The code for any given type (i.e. for the level defined, regardless of whether it is stringed with higher codes – see below) is always unique.
8. All the biotope/sub-biotope codes are unique, so users familiar with the classification can refer to individual biotopes using only the codes for these levels in the hierarchy.
9. The full codes are compiled using the code for each level in the hierarchy, separated from the next level by a full stop, starting with the broad habitat (level 2), followed by the main habitat, biotope complex and so on. For example LS.LSA.MoSa.AmSco.Eur:

Level	Category	Example biotope name	Example biotope code
2	broad habitat	littoral sediment	LS
3	main habitat	littoral sand	LSa
4	biotope complex	mobile sand	MoSa
5	biotope	Amphipods and *Scolelepis* spp.	AmSco
6	sub-biotope	*Eurydice* sub-biotope	Eur

NOTE: to avoid confusion, others using the classification should not erect similar codes for types not currently described in the national classification.

2 Species nomenclature

All species names are given according to Howson & Picton (1997), excepting for angiosperms, which follow Stace (1991), and lichens, which follow Purvis *et al.* (1992). Guiry & Dhonncha (2002) provides a later checklist for algae and additional useful information; the present publication and database does not yet follow this revised checklist.

3 Layout and components of biotope descriptions

Descriptions for each unit in the classification, from broad habitats to sub-biotopes, are laid out as follows:

Code
A unique letter code, reflecting the level of the described type within the classification hierarchy. A "breadcrumb trail" of codes is shown in the standard classification colour scheme, which indicates what level of the biotope classification is being currently looked at, and allows a direct link to the "parents" of the type currently being looked at.

Title
The title gives the key biological and physical features of the type, with emphasis on the features which help to distinguish it from closely related types of the same level in the hierarchy. The habitat part of the title usually includes the zone, substratum and another key habitat factor. To avoid becoming overly clumsy the titles do **not** cover all habitat characteristics or characterising species, and common names are not given (although they are given in the text description).

NOTE: It is very important to refer to the full description and to the habitat matrices to determine the full nature of the type and not to rely on the title alone.

Habitat characteristics
The typical habitat characteristics of the type for salinity, wave exposure, tidal currents, substratum, zone, height or depth band and, where appropriate, other factors critical to that particular type. The range given for each factor tends to be broader for higher types and more tightly defined for lower types. When assigning samples to types, it should be noted that in some cases the type may occur outside the range given (see profiles given in the comparative tables which show that a small proportion of records may occur outside the typical range for the type), though care should be taken to ensure that another type has not been described to cover the example being considered. All heights and depths are corrected to chart datum.

Previous code
Codes used in versions 6.95, 96.7, and 97.06 (Connor *et al*. 1995, 1996, 1997 a, b) are given where different to the current code. Where communities from previous versions have been combined or split, previous codes are shown as far as possible. Some communities in the revised classification are newly defined and may not relate directly to types in the previous classification. Correlation tables which help to translate between 2015, 2004 and 1997 codes (and vice versa) are available to download.

Distribution map
A distribution map is included, showing the location of field survey records assigned to the biotope on the JNCC marine database. The red dots show the location of core biotope records, i.e. those records on which the biotope description is based (see the data analysis section (page 17) of Connor et al, 2004 for details). Blue dots show other certain records of the biotope, whilst black dots denote uncertain records of that biotope (i.e. field records that have been tentatively assigned to the biotope - they may not match the description fully, or they may be incomplete records). Note that the distribution maps only show those records that are held on the JNCC marine database, and therefore do not reflect the full extent of the biotope.

Description
An account of the general nature of the habitat and community characteristics, and its micro-habitat features (e.g. crevices, under-boulders, kelp stipes) if present.

Situation
Describes the general situation on the shore or in the sublittoral, in relation to other types (i.e. along gradients of substratum, zonation, wave exposure, tidal currents, salinity etc.).

Temporal variation
This section outlines the known natural temporal dynamics of the type described, such as seasonal changes in community structure or physical environment. In general, much more information is needed for this section. In some cases separate types may have been defined because there is a lack of knowledge that the communities are temporal variations within a single habitat type.

Similar types
Attention is drawn to similar types which should be considered before assigning a field record to a particular biotope. The main similarities and principal distinguishing features are described for each similar biotope, and the codes are hyperlinked directly to the relevant descriptions.

Characterising species
A list of those species which contribute most to the overall similarity between core records assigned to the type, i.e. characterise the type, with associated information on their frequency of occurrence, their individual contribution to the similarity within the core data set of records, and the typical abundance at which they occur.

For each type, characterising species have been determined using the SIMPER routine in PRIMER (Clarke & Warwick, 2001). For a given set of records (in this case, core records of each type), SIMPER indicates and ranks the individual contribution of each species to the overall similarity within the data set. Both the frequency of occurrence of each species within the dataset and their abundance (using the SACFOR abundance scale) for epifaunal data and numeric counts for infaunal data) are taken into account during this process. Species that contribute more than 1% to the overall similarity of the records within the data set are defined as 'characterising species', and listed in a characterising species table. Those that contribute less that 1% are not listed. Species which qualify according to the SIMPER routine, but are Present or Rare on the MNCR SACFOR scale and present in fewer than 20% of the records, are occasionally excluded from the characterising species table.

Care has been taken to mention each of the characterising species in the descriptions for each type. Sometimes additional species are mentioned that are particularly indicative (faithful) of that type or characteristic of a biogeographic region, but which have not qualified as 'characterising species' according to the SIMPER routine.

Some of the biotope descriptions, especially in the sublittoral sediment section, have been based on a mixture of epifaunal (semi-quantitative) and infaunal (quantitative) sample data. In these cases, separate SIMPER analyses were carried out for the two types of data, and the outcome was combined into a single characterising species table. Where there is overlap between species recorded in the epifaunal and infaunal data, there are duplicate entries for species: the entries relating to the infaunal datasets have figures for "numbers per metres squared", whereas entries relating to epifaunal datasets only have SACFOR entries.

The **% contribution to similarity** column of the table shows the contribution of each characterising species to the similarity within the type, i.e. the higher the contribution, the higher the importance of the species. The number of species in the table reflects the species diversity within each type. In types with a high species richness, a large number of species each contribute with a relatively low amount to the similarity within the group. If a type has low diversity, then a small number of species contribute with relatively large amounts to the overall similarity and hence fewer species are listed in the table. In a few cases, a long species list indicates low overall similarity of records within the type.

The **% frequency of occurrence** column of the table shows the occurrence of a species within a certain biotope. The symbols represent percentage occurrence in the samples as follows:

Occurs in 81-100% of the records for the type
Occurs in 61-80% of the records for the type
Occurs in 41-60% of the records for the type
Occurs in 21-40% of the records for the type

The **typical abundance** column of the table shows the mean SACFOR abundance for each characterising species within the samples where it is present. Quantitative infaunal counts have been converted to the SACFOR scale for compatibility of data presentation. For types where the core records are exclusively quantitative infaunal records (e.g. most of the littoral sediment types), an additional column is included in the characterising species table, showing mean counts per m^2 for each species within the core data set.

Example photographs

Where they are available, photographs are shown to illustrate the appearance of the biotope in the field.

4 References

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5 Appendix: Lexicon of code elements

Code element	Meaning	Type	Level	97.06 code
Aalb	*Abra alba*	Genus/species	4, 5, 6	Abr
Aasp	*Ascidiella aspersa*	Genus/species	4, 5, 6	Aasp
Abr	*Abra*	Genus/species	4, 5, 6	
Abra	*Amphiura brachiata*	Genus/species	4, 5, 6	
Achi	*Amphiura chiajei*	Genus/species	4, 5, 6	Achi
Act	*Actinothoe*	Genus/species	4, 5, 6	
Adia	*Alcyonidium diaphanum*	Genus/species	4, 5, 6	Adia
Adig	*Alcyonium digitatum*	Genus/species	4, 5, 6	Alc
Afal	*Ampharete falcata*	Genus/species	4, 5, 6	Amp
Afil	*Amphiura filiformis*	Genus/species	4, 5, 6	Afil
Aglo	*Alcyonium glomeratum*	Genus/species	4, 5, 6	
Ahn	*Ahnfeltia*	Genus/species	4, 5, 6	Ahn
Airr	*Astropecten irregularis*	Genus/species	4, 5, 6	
Al	Algae/algal	Taxon group	4, 5, 6	Al
Ala	*Alaria*	Genus/species	4, 5, 6	Ala
Am	Amphipods	Taxon group	4, 5, 6	A
Amen	*Ascidia mentula*	Genus/species	4, 5, 6	Amen
Amp	*Ampelisca*	Genus/species	4, 5, 6	
Amy	*Amythasides*	Genus/species	4, 5, 6	
An	Anemones	Taxon group	4, 5, 6	An
Ang	Angiosperms	Taxon group	4, 5, 6	Ang
Anit	*Abra nitida*	Genus/species	4, 5, 6	
Ant	*Antedon*	Genus/species	4, 5, 6	Ant
Aope	*Aequipecten opercularis*	Genus/species	4, 5, 6	
Aph	*Aphelochaeta*	Genus/species	4, 5, 6	Aph
Apri	*Abra prismatica*	Genus/species	4, 5, 6	
Aps	*Apseudes*	Genus/species	4, 5, 6	
Are	*Arenicola*	Genus/species	4, 5, 6	Are

Code element	Meaning	Type	Level	97.06 code
As	Ascidians	Taxon group	4, 5, 6	As
Asc	*Ascophyllum*	Genus/species	4, 5, 6	Asc
Ascmac	*Ascophyllum nodosum ecad mackaii*	Genus/species	4, 5, 6	Asc*mac
Asqu	*Amphipholis squamata*	Genus/species	4, 5, 6	
Aten	*Angulus tenuis*	Genus/species	4, 5, 6	
Aud	*Audouinella*	Genus/species	4, 5, 6	
Axi	Axinellid sponges	Taxon group	4, 5, 6	Axi
B	Barnacles	Taxon group	4, 5, 6	B
B	Biogenic [reefs]	Community feature	2, 3	
Bal	*Balanus*	Genus/species	4, 5, 6	Bal
Bar	Barren	Community feature	4, 5, 6	Bar
Bat	*Bathyporeia*	Genus/species	4, 5, 6	Bat
Beg	*Beggiatoa*	Genus/species	4, 5, 6	Beg
Bif	*Bifurcaria*	Genus/species	4, 5, 6	Bif
Blan	*Branchiostoma lanceolatum*	Genus/species	4, 5, 6	Bra
Bli	*Blidingia*	Genus/species	4, 5, 6	Bli
Blyr	*Brissopsis lyrifera*	Genus/species	4, 5, 6	Bri
Bo	Boulders	Habitat factor	4, 5, 6	Bo
Br	Brachiopods	Taxon group	4, 5, 6	Br
Bri	Brittlestars	Taxon group	4, 5, 6	Bri
Bug	*Bugula*	Genus/species	4,5,6	Bug
By	Bryozoans	Taxon group	4, 5, 6	By
C	Circalittoral	Habitat factor	2, 3	C
C	Coarse [sediment]	Habitat factor	2, 3	
Cap	*Capitella*	Genus/species	4, 5, 6	Cap
Cape	Cape-form (kelp)	Community feature	4, 5, 6	
Car	*Caryophillia*	Genus/species	4, 5, 6	Car
Care	*Corophium arenarium*	Genus/species	4, 5, 6	Cor
Cb	Cobble	Habitat factor	4, 5, 6	

Code element	Meaning	Type	Level	97.06 code
CC	Crustose coralline algae	Taxon group	4, 5, 6	CC
Ccas	*Cordylophora caspia*	Genus/species	4, 5, 6	Cor
Ccor	*Clathrina coriacea*	Genus/species	4, 5, 6	Cla
Cer	*Cerastoderma*	Genus/species	4, 5, 6	Cer
Cha	*Chara*	Genus/species	4, 5, 6	
Cho	*Chorda*	Genus/species	4, 5, 6	Cho
Chr	Chrysophyceae	Taxon group	4, 5, 6	Chr
Cht	*Chthamalus*	Genus/species	4, 5, 6	Cht
Cio	*Ciona*	Genus/species	4, 5, 6	Cio
Cir	Cirratulid polychaetes	Taxon group	4, 5, 6	
Cla	*Cladophora rupestris*	Genus/species	4, 5, 6	
Cllo	*Cerianthus lloydii*	Genus/species	4, 5, 6	
Co	Colonial [ascidians]	Community feature	4, 5, 6	
Cod	*Codium*	Genus/species	4, 5, 6	Cod
Coff	*Corallina officinalis*	Genus/species	4, 5, 6	Coff & Cor
Con	*Conopeum*	Genus/species	4, 5, 6	Con
Cor	Corallinaceae/coralline	Taxon group	4, 5, 6	Cor
Cr	Crusts/crustose	Community feature	4, 5, 6	C
Cre	*Crepidula*	Genus/species	4, 5, 6	Cre
Cri	Crisiid bryozoans	Taxon group	4, 5, 6	Cri
Crl	Coral (reefs e.g. *Lophelia*)	Taxon group	4, 5, 6	
CrSp	Crustose sponges	Taxon group	4, 5, 6	SC
Cset	*Chaetozone setosa*	Genus/species	4, 5, 6	
Cu	Cushion [sponges]	Community feature	4, 5, 6	CuS
Cum	Cumaceans	Taxon group	4, 5, 6	
Cup	Cup corals (Scleractinia)	Taxon group	4, 5, 6	Cup
Cv	Caves	Habitat factor	4, 5, 6	Cv
Cvar	*Chlamys varia*	Genus/species	4, 5, 6	Cvar
Cvir	*Corynactis viridis*	Genus/species	4, 5, 6	Cor
Cvol	*Corophium volutator*	Genus/species	4, 5, 6	Cor

Code element	Meaning	Type	Level	97.06 code
Cys	*Cystoseira*	Genus/species	4, 5, 6	Cys
Den	*Dendrodoa*	Genus/species	4, 5, 6	Den
Des	*Desmarestia*	Genus/species	4, 5, 6	
Dic	*Dictyopteris*	Genus/species	4, 5, 6	Dic
Dp	Deep (circalittoral)	Habitat factor	4, 5, 6	
Dys	*Dysidia*	Genus/species	4, 5, 6	
Ec	Echinoderms	Taxon group	4, 5, 6	
Ecor	*Echinocardium cordatum*	Genus/species	4, 5, 6	Ecor
Edef	*Eudorellopsis deformis*	Genus/species	4, 5, 6	
Edw	Edwardsia	Genus/species	4, 5, 6	Edw
Ele	*Electra*	Genus/species	4, 5, 6	Ele
Ens	*Ensis*	Genus/species	4, 5, 6	Ens
Ent	*Enteromorpha*	Genus/species	4, 5, 6	Ent
Eph	Ephemeral (seaweeds)	Community feature	4, 5, 6	Eph
Epus	*Echinocyamus pusillus*	Genus/species	4, 5, 6	
Er	Erect [sponges]	Community feature	4, 5, 6	ErS
Est	Estuarine	Habitat factor	4, 5, 6	Est
Ete	*Eteone*	Genus/species	4, 5, 6	
Eud	*Eudendrium*	Genus/species	4, 5, 6	Eud
Eun	*Eunicella*	Genus/species	4, 5, 6	Eun
Eur	*Eurydice*	Genus/species	4, 5, 6	Eur
F	Features (e.g. rockpools, caves)	Habitat factor	2, 3	
F	Fucoids	Taxon group	4, 5, 6	F
F	Full [salinity] (=marine)	Habitat factor	4, 5, 6	FS
Fa	Fauna/faunal	Taxon group	4, 5, 6	Fa
Fab	*Fabricia*	Genus/species	4, 5, 6	Fab
Fcer	*Fucus ceranoides*	Genus/species	4, 5, 6	Fcer
Fdis	*Fucus distichus*	Genus/species	4, 5, 6	Fdis
Ffab	*Fabulina fabulina*	Genus/species	4, 5, 6	
Fi	Fine [sand or mud]	Habitat factor	4, 5, 6	

Code element	Meaning	Type	Level	97.06 code
Fil	Filamentous (seaweeds)	Community feature	4, 5, 6	Fi
Flu	*Flustra*	Genus/species	4, 5, 6	Flu
Fo	Foliose (seaweeds)	Community feature	4, 5, 6	Fo
For	Foraminiferans	Taxon group	4, 5, 6	For
Fou	Fouling	Community feature	4, 5, 6	
Fser	*Fucus serratus*	Genus/species	4, 5, 6	Fser
Fserr	*Fucus serratus*	Genus/species	4, 5, 6	Fserr
Fspi	*Fucus spiralis*	Genus/species	4, 5, 6	Fspi
Ft	Forest (kelp)	Community feature	4, 5, 6	Ft
Fun	*Funiculina*	Genus/species	4, 5, 6	Fun
Fur	*Furcellaria*	Genus/species	4, 5, 6	Fur
Fves	*Fucus vesiculosus*	Genus/species	4, 5, 6	Fves
G	Green seaweeds (Chlorophyceae)	Taxon group	4, 5, 6	G
G	Gully [surge gully]	Habitat factor	4, 5, 6	G
Gam	*Gammarus*	Genus/species	4, 5, 6	
Glap	*Glycera lapidum*	Genus/species	4, 5, 6	
Gra	*Gracilaria*	Genus/species	4, 5, 6	
Gv	Gravel/gravelly	Habitat factor	4, 5, 6	
Gz	Grazed (seaweed communities)	Community feature	4, 5, 6	Gz
H	High energy (very wave/tide exposed)	Habitat factor	2, 3	E
H	Hydroids	Taxon group	4, 5, 6	H
Hal	*Halidrys*	Genus/species	4, 5, 6	Hal
Hap	Haptophyceae	Taxon group	4, 5, 6	
Har	*Hartlaubella*	Genus/species	4, 5, 6	Har
Hbow	*Halichondria bowerbanki*	Genus/species	4, 5, 6	Hbow
Hchr	*Halcampa chrysanthellum*	Genus/species	4, 5, 6	Hal
Hed	*Hediste*	Genus/species	4, 5, 6	Hed
Helo	*Hesionura elongata*	Genus/species	4, 5, 6	
Het	*Heteromastus*	Genus/species	4, 5, 6	

Code element	Meaning	Type	Level	97.06 code
Hia	*Hiatella*	Genus/species	4, 5, 6	Hia
Hil	*Hildenbrandia*	Genus/species	4, 5, 6	
Him	*Himanthalia*	Genus/species	4, 5, 6	Him
Ho	Holothurians	Taxon group	4, 5, 6	Ho
Hocu	*Haliclona oculata*	Genus/species	4, 5, 6	Hocu
Hyd	*Hydrallmania*	Genus/species	4, 5, 6	Hyd
I	Infralittoral	Habitat factor	2, 3	I
K	Kelps	Taxon group	4, 5, 6	K
L	Littoral	Habitat factor	2, 3	L
L	Low [salinity]	Habitat factor	4, 5, 6	
L	Low energy (wave/tide sheltered)	Habitat factor	2, 3	S
Lag	Lagoonal (low or reduced salinity)	Habitat factor	4, 5, 6	Lag
Lan	*Lanice*	Genus/species	4, 5, 6	Lan & Lcon
Lcor	*Lithothamnion corallioides*	Genus/species	4, 5, 6	Lcor
Ldig	*Laminaria digitata*	Genus/species	4, 5, 6	Ldig
Lev	*Levinsenia*	Genus/species	4, 5, 6	
Lfas	*Lithothamnion fasciculatum*	Genus/species	4, 5, 6	Lfas
Lg	Large (solitary) [ascidians]	Community feature	4, 5, 6	SoAs
Lgla	*Lithothamnion glaciale*	Genus/species	4, 5, 6	Lgla
Lhof	*Limnodrilus hoffmeisteri*	Genus/species	4, 5, 6	Lim
Lhyp	*Laminaria hyperborea*	Genus/species	4, 5, 6	Lhyp
Lic	Lichens	Taxon group	4, 5, 6	L
Lim	*Limaria*	Genus/species	4, 5, 6	Lim
Lit	*Littorina*	Genus/species	4, 5, 6	
Lkor	*Lagis koreni*	Genus/species	4, 5, 6	
Loch	*Laminaria ochreleuca*	Genus/species	4, 5, 6	Loch
Lop	*Lophelia*	Genus/species	4, 5, 6	Lop
Lpyg	*Lichaena pygmaea*	Genus/species	4, 5, 6	Lic

Code element	Meaning	Type	Level	97.06 code
Lsac	*Laminaria saccharina*	Genus/species	4, 5, 6	Lsac
Lum	*Lumbrinereis*	Genus/species	4, 5, 6	
M	Mid [estuarine]	Habitat factor	4, 5. 6	
M	Moderate energy (Moderately wave/tide exposed)	Habitat factor	2, 3	M
Mac	*Macoma*	Genus/species	4, 5, 6	Mac
Mag	*Magelona*	Genus/species	4, 5, 6	Mag
Mal	Maldanid polychaetes	Taxon group	4, 5, 6	
Mas	*Mastocarpus*	Genus/species	4, 5, 6	Mas
Max	*Maxmuelleria*	Genus/species	4, 5, 6	
Mdis	*Musculus discors*	Genus/species	4, 5, 6	Mus
Med	*Mediomastus*	Genus/species	4, 5, 6	
Meg	Megafauna (burrowing)	Community feature	4, 5, 6	Meg
Mel	*Mellina*	Genus/species	4, 5, 6	
Mo	Mobile	Habitat factor	4, 5, 6	Mob
Mod	*Modiolus*	Genus/species	4, 5, 6	Mod
Moe	*Moerella*	Genus/species	4, 5, 6	
Mol	*Molgula*	Genus/species	4, 5, 6	Mol
Mp	Macrophytes (angiosperms or seaweeds)	Taxon group	2, 3	
Mrl	Maerl	Taxon group	4, 5, 6	Mrl
Msen	*Metridium senile*	Genus/species	4, 5, 6	Met
Msim	*Microphthalmus similis*	Genus/species	4, 5, 6	
Mu	Mud/muddy [sand]	Habitat factor	2, 3	MU
Mus	Mussels	Taxon group	4, 5, 6	M
MuSa	Muddy sand	Habitat factor	4, 5, 6	MS
Mx	Mixed sediments (mixtures of gravel, sand & mud, often with shell, pebble & cobble)	Habitat factor	2, 3, 4, 5, 6	MX & Mx
Myr	*Myrtea*	Genus/species	4, 5, 6	
Mys	*Mysella*	Genus/species	4, 5, 6	

Code element	Meaning	Type	Level	97.06 code
Myt	*Mytilus*	Genus/species	4, 5, 6	Myt
Ncir	*Nephtys cirrosa*	Genus/species	4, 5, 6	Ncir
Nem	*Nemertesia*	Genus/species	4, 5, 6	Nem
Neo	*Neocrania*	Genus/species	4, 5, 6	Neo
Nhom	*Nephtys hombergii*	Genus/species	4, 5, 6	Nhom
Nint	*Neomysis integer*	Genus/species	4, 5, 6	Neo
Nmix	*Neopentadactyla mixta*	Genus/species	4, 5, 6	Neo
Nten	*Nuculoma tenuis*	Genus/species	4, 5, 6	
Nuc	*Nucula*	Genus/species	4, 5, 6	Nuc
O	Offshore circalittoral	Habitat factor	2, 3	CO
Obor	*Ophelia borealis*	Genus/species	4, 5, 6	
Ocn	*Ocnus*	Genus/species	4, 5, 6	Ocn
Odub	*Ophryotrocha dubia*	Genus/species	4, 5, 6	
Ofus	*Owenia fusiformis*	Genus/species	4, 5, 6	
Ol	Oligochaetes	Taxon group	4, 5, 6	Ol
Oph	*Ophiura*	Genus/species	4, 5, 6	Oph
Osm	*Osmundea*	Genus/species	4, 5, 6	Osm
Ost	*Ostrea*	Genus/species	4, 5, 6	Ost
Ov	Overhangs	Habitat factor	4, 5, 6	Ov
Pal	*Palmaria*	Genus/species	4, 5, 6	Pal
Par	*Paracentrotus*	Genus/species	4, 5, 6	Par
Paur	*Polyclinum aurantium*	Genus/species	4, 5, 6	Paur
Pb	Pebbles	Habitat factor	4, 5, 6	
Pcal	*Phymatolithon calcareum*	Genus/species	4, 5, 6	Phy
Pcom	*Porella compressa*	Genus/species	4, 5, 6	
Pcri	*Phyllophora crispa*	Genus/species	4, 5, 6	Pcri
Pec	*Pectenogammarus*	Genus/species	4, 5, 6	Pec
Pel	*Pelvetia*	Genus/species	4, 5, 6	Pel
Pen	*Pentapora*	Genus/species	4, 5, 6	
Pful	*Paraonis fulgens*	Genus/species	4, 5, 6	

Code element	Meaning	Type	Level	97.06 code
Pha	*Phakellia*	Genus/species	4, 5, 6	Pha
Phi	*Philine*	Genus/species	4, 5, 6	Phi
Phy	*Phyllophora*	Genus/species	4, 5, 6	Phy
Pid	Piddocks (bivalves)	Taxon group	4, 5, 6	Pid
Pil	*Pilinia*	Genus/species	4, 5, 6	
Pjef	*Paramphinome jeffreysii*	Genus/species	4, 5, 6	
Pk	Park (kelp)	Community feature	4, 5, 6	Pk
Pkef	*Protodorvillea kefersteini*	Genus/species	4, 5, 6	
Plon	*Photis longicaudata*	Genus/species	4, 5, 6	
Pmax	*Pecten maximus*	Genus/species	4, 5, 6	
Pnk	Plankton	Taxon group	2, 3	
Po	Polychaetes	Taxon group	4, 5, 6	P
Pol	*Polydora*	Genus/species	4, 5, 6	Pol
Pom	*Pomatoceros*	Genus/species	4, 5, 6	Pom
Pon	*Pontocrates*	Genus/species	4, 5, 6	Pon
Por	*Porphyra*	Genus/species	4, 5, 6	Por
Pova	*Parvecardium ovale*	Genus/species	4, 5, 6	Par
Ppel	*Phaxus pellucidus*	Genus/species	4, 5, 6	
Pra	*Prasiola*	Genus/species	4, 5, 6	Pra
Pro	*Protanthea*	Genus/species	4, 5, 6	Pro
Prot	*Polyides rotundus*	Genus/species	4, 5, 6	Pol
Psa	*Psammechinus*	Genus/species	4, 5, 6	Psa
Pse	*Pseudamussium*	Genus/species	4, 5, 6	
Puly	*Patella ulyssiponensis*	Genus/species	4, 5, 6	
R	Red seaweeds (Rhodophyceae)	Taxon group	4, 5, 6	R
R	Reduced [salinity]	Habitat factor	4, 5, 6	RS
R	Reef (biogenic)	Habitat factor	2, 3	
R	Rock (bedrock, boulders, stable cobbles & pebbles)	Habitat factor	2, 3	R
Rho	*Rhodothamniella*	Genus/species	4, 5, 6	Rho

Code element	Meaning	Type	Level	97.06 code
Rkp	Rockpools	Habitat factor	4, 5, 6	Rkp
Rup	*Ruppia*	Genus/species	4, 5, 6	Rup
S	Salinity (Full, Variable, Reduced, Low)	Habitat factor	4, 5, 6	S
S	Sediment	Habitat factor	2, 3	S
S	Sublittoral	Habitat factor	2, 3, 4, 5, 6	S
S	Surge [gully]	Habitat factor	4, 5, 6	SG
Sa	Sands/sandy [mud]	Habitat factor	2, 3, 4, 5, 6	Snd & S
Sab	*Sabellaria*	Genus/species	4, 5, 6	Sab
Sac	*Saccorhiza*	Genus/species	4, 5, 6	Sac
Sag	*Sagartia*	Genus/species	4, 5, 6	
Salv	*Sabellaria alveolata*	Genus/species	4, 5, 6	Salv
SaMu	Sandy mud	Habitat factor	4, 5, 6	SMu
Sar	*Sargassum*	Genus/species	4, 5, 6	Sar
Sco	*Scolelepis*	Genus/species	4, 5, 6	
Scr	Scoured	Habitat factor	4, 5, 6	Scr
Scr	*Scrobicularia plana*	Genus/species	4, 5, 6	
Scup	*Sertularella cupressina*	Genus/species	4, 5, 6	Scup
Sec	*Securiflustra*	Genus/species	4, 5, 6	Sec
Sed	Sediment	Habitat factor	4, 5, 6	Sed
Sem	*Semibalanus*	Genus/species	4, 5, 6	Sem
Ser	*Serpula*	Genus/species	4, 5, 6	Ser
Sf	Soft [rock]	Habitat factor	4, 5, 6	SfR
Sgr	Seagrass	Taxon group	4, 5, 6	Sgr
Sh	Shingle	Habitat factor	4, 5, 6	Sh
Sm	Saltmarsh	Taxon group	4, 5, 6	Sm
Sm	Small (solitary) [ascidians]	Community feature	4, 5, 6	
Sp	Sponges	Taxon group	4, 5, 6	S
Spav	*Sabella pavonina*	Genus/species	4, 5, 6	

Code element	Meaning	Type	Level	97.06 code
Spn	Seapens	Taxon group	4, 5, 6	Sp
Sspi	*Sabellaria spinulosa*	Genus/species	4, 5, 6	Sspi
St	Strandline	Habitat factor	4, 5, 6	
Str	*Streblospio*	Genus/species	4, 5, 6	
Sty	*Styela*	Genus/species	4, 5, 6	Sty
Sub	*Suberites*	Genus/species	4, 5, 6	Sub
Sund	*Sagartiageton undatum*	Genus/species	4, 5, 6	
Sw	Seaweeds	Taxon group	4, 5, 6	Sw
Swi	*Swiftia*	Genus/species	4, 5, 6	Swi
T	Tide-swept	Habitat factor	4, 5, 6	T
Tal	Talitrid amphipods	Taxon group	4, 5, 6	Tal
Tb	Tube/tube-building	Community feature	4, 5, 6	Tube
Tben	*Tubificoides benedii*	Genus/species	4, 5, 6	Tub
Tf	Turf	Community feature	4, 5, 6	Tf
Thy	*Thyasira*	Genus/species	4, 5, 6	Thy
Tra	*Trailliella*	Genus/species	4, 5, 6	Tra
Ttub	*Tubifex tubifex*	Genus/species	4, 5, 6	Ttub
Tub	*Tubularia indivisa*	Genus/species	4, 5, 6	Tub
Tubi	*Tubificoides*	Genus/species	4, 5, 6	Tub
U	Upper [estuarine]	Habitat factor	4, 5. 6	
Ulo	*Ulothrix*	Genus/species	4, 5, 6	Ulo
Uro	*Urospora*	Genus/species	4, 5, 6	Uro
Urt	*Urticina*	Genus/species	4, 5, 6	Urt
V	Variable [salinity]	Habitat factor	4, 5, 6	VS
Ven	Venerid bivalves	Taxon group	4, 5, 6	Ven
Ver	*Verrucaria*	Genus/species	4, 5, 6	Ver
Vir	*Virgularia*	Genus/species	4, 5, 6	Vir
Vmuc	*Verrucaria mucosa*	Genus/species	4, 5, 6	
Vsen	*Venerupis senegalensis*	Genus/species	4, 5, 6	Vsen
Vt	Vertical	Habitat factor	4, 5, 6	V

Code element	Meaning	Type	Level	97.06 code
WC	Water column	Habitat factor	2, 3	
X	Mixed (rocky) substrata (boulders, stones & sediment mixtures)	Habitat factor	4, 5, 6	X
XFa	Mixed fauna	Taxon group	4, 5, 6	XFa
XFoR	Mixed foliose red seaweeds	Taxon group	4, 5, 6	
XK	Mixed kelps	Taxon group	4, 5, 6	XK
YG	Yellow & grey lichens	Taxon group	4, 5, 6	YG
Zmar	*Zostera marina*	Genus/species	4, 5, 6	Zmar
Znol	*Zostera noltii*	Genus/species	4, 5, 6	Znol