# Appendix 7.5 Broadscale Habitat Mapping of Northern Ireland Nearshore Waters

**Habitat coding notes (excluding Strangford Lough).**

First letter, where present, indicates energy environment (M = moderate energy/moderately exposed, E= exposed/ high energy). Where there is no first letter the energy regime is unclear, but is usually deemed to be sheltered (eg. MS = sheltered muddy sand). Second pair of letters indicates main substrate type (Bf = boulderfield, Ru = rubble, CS = coarse sediments). Three-letter code is followed by . to add another major substrate or bedform (co = cobbles/pebbles, si = silt, sh = shell, rip = ripples, mrip = megaripples). The code is followed by _ to add a dominant and characterising faunal or floral group (K = kelp, FoR = foliose red algae, M = maerl).

| Habitat code | Substrate description | Characterising fauna/flora | Energy environment | Comments |
|---|---|---|---|---|
| EBf | >70% medium- large boulders or bedrock | Encrusting corallines, short sparse fauna or foliose algae, *Echinus esculentus, Crossaster papposus, Cancer pagurus, Ophiocomina nigra,* in deeper water diverse sponge fauna. | High energy/ very exposed to tidal currents | |
| MBf | >70% medium- large boulders or bedrock | *Flustra foliacea*, echinoderms, tall, often thick, hydrozoan and bryozoan turf, *Caryophyllia smithii, Polymastia* spp. | Moderate energy | Can include sparse kelps ('kelp park') |
| MBf_K | >70% medium- large boulders or bedrock | Kelp forest with red foliose epiphytes, short hydrozoan and bryozoan turf with encrusting coralline algae and sponges, *Echinus esculentus* | Moderate energy | |
| MBf_FoR | >70% medium- large boulders or bedrock | Thick turf of foliose red algae, short hydrozoan and bryozoan turf with encrusting coralline algae and sponges, *Echinus esculentus* | Moderate energy | |
| ERu | >70% small-medium boulders and cobbles with interstitial gravel, pebbles and sand | Short faunal turf, encrusting corallines or bare rock. *Pomatoceros* spp., *Porania pulvillis, Crossaster papposus*, patches of *Flustra foliacea,* ascidians and sponges common in deep water | High energy/ very exposed to tidal currents | |
| ERu.mrip | >50% small-medium boulders and cobbles with interstitial gravel, pebbles and sand on wave crests and boulders and cobbles in troughs | As ERu but with *Pecten maximus, Alcyonidium gelatinosum* on wave crests. | High energy/ very exposed to tidal currents | |
| ERu_K | >50% small-medium boulders and cobbles with interstitial gravel, pebbles and sand | Sparse kelp (*Laminaria hyperborea, L. saccharides* and *Sacchoriza polyschides)*, encrusting corallines, *Echinus esculentus, Crossaster papposus* | High energy/ very exposed to tidal currents | In East Antrim this also includes bedrock and boulderfields with |

| Habitat code | Substrate description | Characterising fauna/flora | Energy environment | Comments |
|---|---|---|---|---|
| | | | | kelp |
| MRu | >70% small-medium boulders and cobbles with interstitial gravel, pebbles and sand | Short hydrozoan and bryozoan turf, *Antedon pertasus*, ophioroids | Moderate energy | Heterogeneous with patches of larger boulders |
| MRu_K | >70% small-medium boulders and cobbles with interstitial gravel, pebbles and sand | Kelp forest with red foliose epiphytes, short hydrozoan and bryozoan turf with encrusting coralline algae and sponges, *Echinus esculentus* | Moderate energy | |
| MRu_FoR | >70% small-medium boulders and cobbles with interstitial gravel, pebbles and sand | Thick turf of foliose red algae, short hydrozoan and bryozoan turf with encrusting coralline algae and sponges such as *Polymastia* spp., *Echinus esculentus* | Moderate energy | |
| MRu_M | >70% small-medium boulders and cobbles with interstitial gravel, pebbles and sand, comminuted shell. | Maerl (*Phymatolithon calcareum, Lithothamnion glaciale?,* encrusting *Lithothamnion coralliodes), Ophiocomina nigra, Ophiothrix fragilis, Glycymeris glycymeris, Caryophyllia smithii,* chitons, *Pomatoceros triqueter, Flustra foliacea,* hydrozoan and bryozoan turf | Moderate energy | |
| ECS.co | >70% consolidated pebbles and/or cobbles on sand and/or gravel | Short faunal turf, encrusting sponges and coralline algae or bare rock patches, *Flustra foliacea, Pomatoceros* spp., *Asterias rubens, Echinus esculentus* | High energy | |
| MCS.co | >70% pebbles and/or cobbles on sand and/or gravel | Hydroid and bryozoan turf, inc. *Flustra foliacea*, Echinoderms *Asterias rubens*, *Crossaster papposus*, *Antedon pertasus, Balanus* spp., *Pomatoceros* spp. where specified | Moderate energy | Homogeneous, level and compacted |
| MCS.co.si | >70% pebbles and/or cobbles on sand and/or gravel with significant proportion of fine sand or silt | Bryozoan turf, brittlestar *Ophiocomina nigra* (occasional dense patches) | Moderate energy | |
| MCS.co_K | >70% pebbles and/or cobbles on sand and/or gravel | Sparse Kelp forest (park?) with red foliose epiphytes, short hydrozoan and bryozoan turf with encrusting coralline algae, *Echinus esculentus* | Moderate energy | |
| MCS.co_FoR | >70% pebbles and/or cobbles on sand and/or gravel | Turf of foliose red algae, occasional kelp plant. Hydrozoan and bryozoan turf with encrusting coralline algae, *Echinus esculentus.* | Moderate energy | |
| MCS.co_M | >70% pebbles and/or cobbles on sand and/or gravel | Maerl (*Phymatolithon calcareum, Lithothamnion glaciale?,* encrusting *Lithothamnion coralliodes), Ophiocomina nigra, Ophiothrix fragilis, Glycymeris glycymeris, Pomatoceros* spp., | Moderate energy | Includes dead maerl gravel and maerl megaripples |

| Habitat code | Substrate description | Characterising fauna/flora | Energy environment | Comments |
|---|---|---|---|---|
| | | *Lanice* spp.*, Pecten maximus,* chitons, hydrozoan and bryozoan turf | | |
| MCS.co.rip | >70% pebbles and/or cobbles on sand and/or gravel, part-rippled with cobbles in troughs, sand on crests | Hydroid and bryozoan turf, inc. *Flustra foliacea*, Echinoderms *Asterias rubens*, *Crossaster papposus*, *Pomatoceros* spp., *Pecten maximus* | Moderate-high energy | |
| ECS.rip | >70% sand and comminuted shell with a few cobbled | Encrusting corallines on cobbles, otherwise barren | High-very high energy | Highly mobile substrate |
| MCS | >70% sand or gravel, with some pebble | *Pagurus* spp.*, Liocarcinus depurator, Pecten maximus, Asterias rubens.* Diatom film common in Church Bay. | Moderate energy | |
| MCS.rip | >70% sand or gravel, rippled | ***1.1.1 Pagurus* spp., *Corystes cassivelaunus.* Diatom mat on crests common in Church Bay.** | Moderate energy | Includes tidal and wave-induced ripples which may overlay eachother. |
| MCS.mrip | >70% sand or gravel, mobile substrate in megaripples | Largely barren | Moderate-high energy | Homogeneous |
| S/Fine S | Medium to coarse sand, well sorted and stable; fine sand where specified | *Asterias rubens, Pagurus* spp., *Liocarcinus depurator,* worm casts and often *Zostera marina* on fine sand (eg. East Antrim). Diatom film in sheltered areas. | Moderate to low energy | |
| MS and MS_burrows where specified | >70% muddy sand | Evidence of bioturbation (*Carcinus maenus, Goneplax rhomboides, Nephrops norgevicus, Calocaris macandreae* where specified). *Liocarcinus depurator, Pagurus* spp., *Buccinum undatum, Amphiura* spp. Diatom film in sheltered areas. | Low energy | |
| MS.rip | >70% muddy sand | *Liocarcinus depurator, Pagurus* spp., Diatom film in sheltered areas on crests, coarser sand in troughs. | Low energy | |
| MU | >70% mud | In Carlingford Lough: *Virgularia mirabilis (*sea pens), *Philine aperta.* | Low energy/sheltered | |