

## Priority Marine Features in Scotland's seas

**Table 1 Seabed habitats**

Priority Marine Feature (PMF)	Component biotopes / species (biotope / common name)	Component biotopes / species (biotope code / species name)	Scottish marine area
Blue mussel beds	<i>Mytilus edulis</i> beds on littoral sediments	LS.LBR.LMus.Myt	Territorial waters
	<i>Mytilus edulis</i> and <i>Fabricia sabella</i> in littoral mixed sediment	LS.LSa.St.MytFab	Territorial waters
	<i>Mytilus edulis</i> beds on sublittoral sediment	SS.SBR.SMus.MytSS	Territorial waters
	<i>Mytilus edulis</i> beds on reduced salinity infralittoral rock	IR.LIR.IFaVS.MytRS	Territorial waters
Burrowed mud	Seapens and burrowing megafauna in circalittoral fine mud	SS.SMu.CFiMu.SpnMeg	Both
	Burrowing megafauna and <i>Maxmuelleria lankesteri</i> in circalittoral mud	SS.SMu.CFiMu.MegMax	Both
	Tall seapen	<i>Funiculina quadrangularis</i>	Both
	Fireworks anemone	<i>Pachycerianthus multiplicatus</i>	Both
	Mud burrowing amphipod	<i>Maera loveni</i>	Both
Carbonate mound communities	Carbonate mound communities	No code	Offshore waters
Cold-water coral reefs	Coral reefs	SS.SBR.Crl	Both
Coral gardens	Coral gardens	No code	Offshore waters
Deep sea sponge aggregations	Deep sea sponge aggregations	No code	Offshore waters
Flame shell beds	<i>Limaria hians</i> beds in tide-swept sublittoral muddy mixed sediment	SS.SMx.IMx.Lim	Territorial waters
Horse mussel beds	<i>Modiolus modiolus</i> beds with hydroids and red seaweeds on tide-swept circalittoral mixed substrata	SS.SBR.SMus.ModT	Territorial waters
	<i>Modiolus modiolus</i> beds on open coast circalittoral mixed sediment	SS.SBR.SMus.ModMx	Territorial waters
	<i>Modiolus modiolus</i> beds with fine hydroids and large solitary ascidians on very sheltered circalittoral mixed substrata	SS.SBR.SMus.ModHAs	Territorial waters
	<i>Modiolus modiolus</i> beds with <i>Chlamys varia</i> , sponges, hydroids and bryozoans on slightly tide-swept very sheltered circalittoral mixed substrata	SS.SBR.SMus.ModCvar	Territorial waters

Priority Marine Feature (PMF)	Component biotopes / species (biotope / common name)	Component biotopes / species (biotope code / species name)	Scottish marine area
Inshore deep mud with burrowing heart urchins	<i>Brissopsis lyrifera</i> and <i>Amphiura chiajei</i> in circalittoral mud	SS.SMu.CFiMu.BlyrAchi	Territorial waters
Intertidal mudflats	Littoral mud	LS.LMu	Territorial waters
Kelp and seaweed communities on sublittoral sediment	Kelp and seaweed communities on sublittoral sediment <sup>1</sup>	SS.SMp.KSwSS	Territorial waters
Kelp beds	<i>Laminaria hyperborea</i> forest with a faunal cushion (sponges and polyclinids) and foliose red seaweeds on very exposed upper infralittoral rock	IR.HIR.KFaR.LhypFa	Territorial waters
	<i>Laminaria hyperborea</i> with dense foliose red seaweeds on exposed infralittoral rock <sup>2</sup>	IR.HIR.KFaR.LhypR	Territorial waters
	<i>Laminaria hyperborea</i> on tide-swept, infralittoral rock	IR.MIR.KR.LhypT	Territorial waters
	<i>Laminaria hyperborea</i> on tide-swept infralittoral mixed substrata <sup>3</sup>	IR.MIR.KR.LhypTX	Territorial waters
	<i>Laminaria hyperborea</i> and foliose red seaweeds on moderately exposed infralittoral rock <sup>4</sup>	IR.MIR.KR.Lhyp	Territorial waters
Low or variable salinity habitats	Faunal communities on variable or reduced salinity infralittoral rock	IR.LIR.IFaVS	Territorial waters
	Kelp in variable or reduced salinity	IR.LIR.KVS	Territorial waters
	Submerged fucoids, green or red seaweeds (low salinity infralittoral rock)	IR.LIR.Lag	Territorial waters
	Sublittoral mud in low or reduced salinity (lagoons)	SS.SMu.SMuLS	Territorial waters
	Bird's nest stonewort	<i>Tolypella nidifica</i>	Territorial waters
	Baltic stonewort	<i>Chara baltica</i>	Territorial waters
	Foxtail stonewort	<i>Lamprothamnium papulosum</i>	Territorial waters
	Small brackish water snail	<i>Hydrobia acuta neglecta</i>	Territorial waters
Maerl beds	Maerl beds	SS.SMp.Mrl	Territorial waters

<sup>1</sup> The following biotopes of 'Kelp and seaweed communities on sublittoral sediment' are specifically excluded: 'Mats of *Trailiella* on infralittoral muddy gravel (SS.SMp.KSwSS.Tra)'; & 'Filamentous green seaweeds on low salinity infralittoral mixed sediment or rock (SS.SMp.KSwSS.FilG)'

<sup>2</sup> The following biotope is specifically excluded: 'Mixed *Laminaria hyperborea* and *Laminaria ochroleuca* forest on exposed infralittoral rock (IR.HIR.KFaR.LhypR.Loch)'

<sup>3</sup> This biotope is also a component of the 'Tide-swept algal communities' PMF

<sup>4</sup> The following biotope is specifically excluded: '*Sabellaria spinulosa* with kelp and red seaweeds on sand-influenced infralittoral rock (IR.MIR.KR.Lhyp.Sab)'

Priority Marine Feature (PMF)	Component biotopes / species (biotope / common name)	Component biotopes / species (biotope code / species name)	Scottish marine area
Maerl or coarse shell gravel with burrowing sea cucumbers	<i>Neopentadactyla mixta</i> in circalittoral shell gravel or coarse sand	SS.SCS.CCS.Nmix	Territorial waters
Native oysters	<i>Ostrea edulis</i> beds on shallow sublittoral muddy mixed sediment	SS.SMx.IMx.Ost	Territorial waters
	Native oyster	<i>Ostrea edulis</i>	Territorial waters
Northern sea fan and sponge communities	<i>Caryophyllia smithii</i> and <i>Swiftia pallida</i> on circalittoral rock	CR.MCR.EcCr.CarSwi	Territorial waters
	Mixed turf of hydroids and large ascidians with <i>Swiftia pallida</i> and <i>Caryophyllia smithii</i> on weakly tide-swept circalittoral rock	CR.HCR.XFa.SwiLgAs	Territorial waters
	Deep sponge communities (circalittoral)	CR.HCR.DpSp	Both
	Northern sea fan	<i>Swiftia pallida</i>	Both
Offshore deep sea muds <sup>5 &amp; 6</sup>	<i>Ampharete falcata</i> turf with <i>Parvicardium ovale</i> on cohesive muddy sediment near margins of deep stratified seas	SS.SMu.OMu.AfalPova	Offshore waters
	Foraminiferans and <i>Thyasira</i> sp. in deep circalittoral fine mud	SS.SMu.OMu.ForThy	Offshore waters
	<i>Levinsenia gracilis</i> and <i>Heteromastus filiformis</i> in offshore circalittoral mud and sandy mud	SS.SMu.OMu.LevHet	Offshore waters
	<i>Paramphinoe jeffreysii</i> , <i>Thyasira</i> spp. and <i>Amphiura filiformis</i> in offshore circalittoral sandy mud	SS.SMu.OMu.PjefThyAfil	Offshore waters
	<i>Myrtea spinifera</i> and polychaetes in offshore circalittoral sandy mud	SS.SMu.OMu.MyrPo	Offshore waters
Offshore subtidal sands and gravels <sup>7</sup>	<i>Glycera lapidum</i> , <i>Thyasira</i> spp. and <i>Amythasides macroglossus</i> in offshore gravelly sand	SS.SCS.OCS.GlapThyAmy	Offshore waters
	<i>Hesionura elongata</i> and <i>Protodorvillea kefersteini</i> in offshore coarse sand	SS.SCS.OCS.HeloPkef	Offshore waters
	<i>Echinocyamus pusillus</i> , <i>Ophelia borealis</i> and <i>Abra prismatica</i> in circalittoral fine sand	SS.SSa.CFiSa.EpusOborApri	Offshore waters

<sup>5</sup> In addition to the continental shelf biotopes listed, the PMF also includes Atlantic and Arctic influenced offshore deep sea muds occurring on and off the continental slope

<sup>6</sup> The following components of the SS.SMu.OMu 'Offshore circalittoral mud' continental shelf biotope complex are specifically excluded from the 'Offshore deep sea muds' PMF: '*Styela gelatinosa*, *Pseudamussium septemradiatum* and solitary ascidians on sheltered deep circalittoral muddy sediment (SS.SMu.OMu.StyPse)'; & '*Capitella capitata* and *Thyasira* spp. in organically-enriched offshore circalittoral mud and sandy mud (SS.SMu.OMu.CapThy)'

<sup>7</sup> In addition to the continental shelf biotopes listed, the PMF also includes Atlantic and Arctic influenced offshore subtidal sands and gravels occurring on and off the continental slope

Priority Marine Feature (PMF)	Component biotopes / species (biotope / common name)	Component biotopes / species (biotope code / species name)	Scottish marine area
Offshore subtidal sands and gravels <i>cont.</i>	<i>Abra prismatica</i> , <i>Bathyporeia elegans</i> and polychaetes in circalittoral fine sand	SS.SSa.CFiSa.ApriBatPo	Offshore waters
	Maldanid polychaetes and <i>Eudorellopsis deformis</i> in offshore circalittoral sand or muddy sand	SS.SSa.OSa.MalEdef	Offshore waters
	<i>Owenia fusiformis</i> and <i>Amphiura filiformis</i> in offshore circalittoral sand or muddy sand	SS.SSa.OSa.OfusAfil	Offshore waters
Seagrass beds	<i>Zostera noltii</i> beds in littoral muddy sand	LS.LMp.LSgr.Znol	Territorial waters
	<i>Zostera marina/angustifolia</i> beds on lower shore or infralittoral clean or muddy sand	SS.SMp.SSgr.Zmar	Territorial waters
	<i>Ruppia maritima</i> in reduced salinity infralittoral muddy sand	SS.SMp.SSgr.Rup	Territorial waters
Sea loch egg wrack beds	<i>Ascophyllum nodosum</i> ecad <i>mackaii</i> beds on extremely sheltered mid eulittoral mixed substrata	LR.LLR.FVS.Ascmac	Territorial waters
Seamount communities	Seamount communities	No code	Offshore waters
Serpulid aggregations	<i>Serpula vermicularis</i> reefs on very sheltered circalittoral muddy sand <sup>8</sup>	SS.SBR.PoR.Ser	Territorial waters
Submarine structures made by leaking gases	Submarine structures made by leaking gases	No code	Both
Tide-swept algal communities	Fucoids in tide-swept conditions	LR.HLR.FT	Territorial waters
	<i>Halidrys siliquosa</i> and mixed kelps on tide-swept infralittoral rock with coarse sediment	IR.HIR.KSed.XKHal	Territorial waters
	Kelp and seaweed communities in tide-swept sheltered conditions <sup>9</sup>	IR.MIR.KT	Territorial waters
	<i>Laminaria hyperborea</i> on tide-swept infralittoral mixed substrata <sup>10</sup>	IR.MIR.KR.LhypTX	Territorial waters
Tide-swept coarse sands with burrowing bivalves	<i>Moerella</i> spp. with venerid bivalves in infralittoral gravelly sand <sup>11</sup>	SS.SCS.ICS.MoeVen	Territorial waters

<sup>8</sup> As well as the serpulid reefs biotope this PMF includes smaller aggregations of *Serpula vermicularis*

<sup>9</sup> The following biotopes of 'Kelp and seaweed communities in tide-swept sheltered conditions' are specifically excluded: '*Laminaria saccharina* with foliose red seaweeds and ascidians on sheltered tide-swept infralittoral rock (IR.MIR.KT.LsacT)'; & 'Filamentous red seaweeds, sponges and *Balanus crenatus* on tide-swept variable-salinity infralittoral rock (IR.MIR.KT.FiRVS)'

<sup>10</sup> This biotope is also a component of the 'Kelp beds' PMF

<sup>11</sup> Recent data suggests that the community associated with this biotope may also be present in waters deeper than is characteristic of infralittoral biotopes. Pending further assessment and classification, this PMF includes examples of the community associated with SS.SCS.ICS.MoeVen even where it lies outside the typical depth range of the biotope

**Table 2**      **Low or limited mobility species**

<b>Priority Marine Feature (PMF)</b>	<b>Species name</b>	<b>Taxon group</b>	<b>Scottish marine area</b>
Burrowing sea anemone	<i>Arachnanthus sarsi</i>	Sea anemones, sea fans and seapens	Territorial waters
Pink sea fingers	<i>Alcyonium hibernicum</i>	Sea anemones, sea fans and seapens	Territorial waters
White cluster anemone	<i>Parazoanthus anguicomus</i>	Sea anemones, sea fans and seapens	Territorial waters
Northern feather star	<i>Leptometra celtica</i>	Starfish and feather stars	Both
Fan mussel	<i>Atrina fragilis</i>	Snails, clams, mussels and oysters	Both
Heart cockle	<i>Glossus humanus</i>	Snails, clams, mussels and oysters	Territorial waters
Ocean quahog	<i>Arctica islandica</i>	Snails, clams, mussels and oysters	Both

**Table 3 Mobile species**

Priority Marine Feature (PMF)	Species name	Taxon group	Scottish marine area
European spiny lobster	<i>Palinurus elephas</i>	Lobsters and sand hoppers	Territorial waters
Eel (marine part of life cycle)	<i>Anguilla anguilla</i>	Bony fish (catadromous)	Territorial waters
Atlantic salmon (marine part of life cycle)	<i>Salmo salar</i>	Bony fish (anadromous)	Territorial waters
European river lamprey (marine part of life cycle)	<i>Lampetra fluviatilis</i>	Bony fish (anadromous)	Territorial waters
Sea lamprey (marine part of life cycle)	<i>Petromyzon marinus</i>	Bony fish (anadromous)	Territorial waters
Sea trout (marine part of life cycle)	<i>Salmo trutta</i>	Bony fish (anadromous)	Territorial waters
Sparling (marine part of life cycle)	<i>Osmerus eperlanus</i>	Bony fish (anadromous)	Territorial waters
Anglerfish <sup>12</sup>	<i>Lophius piscatorius</i>	Bony fish	Both
Atlantic halibut	<i>Hippoglossus hippoglossus</i>	Bony fish	Offshore waters
Atlantic herring <sup>13</sup>	<i>Clupea harengus</i>	Bony fish	Both
Atlantic mackerel	<i>Scomber scombrus</i>	Bony fish	Both
Black scabbardfish	<i>Aphanopus carbo</i>	Bony fish	Offshore waters
Blue ling	<i>Molva dypterygia</i>	Bony fish	Offshore waters
Blue whiting	<i>Micromesistius poutassou</i>	Bony fish	Offshore waters
Cod	<i>Gadus morhua</i>	Bony fish	Both
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	Bony fish	Offshore waters
Horse mackerel	<i>Trachurus trachurus</i>	Bony fish	Offshore waters
Ling	<i>Molva molva</i>	Bony fish	Both
Norway pout	<i>Trisopterus esmarkii</i>	Bony fish	Both
Orange roughy	<i>Hoplostethus atlanticus</i>	Bony fish	Offshore waters
Round-nose grenadier	<i>Coryphaenoides rupestris</i>	Bony fish	Offshore waters
Saithe <sup>14</sup>	<i>Pollachius virens</i>	Bony fish	Both
Sandeels	<i>Ammodytes marinus</i> & <i>Ammodytes tobianus</i>	Bony fish	Both (although only <i>A. marinus</i> occurs offshore)
Sand goby	<i>Pomatoschistus minutus</i>	Bony fish	Territorial waters

<sup>12</sup> In territorial waters the focus is on juveniles

<sup>13</sup> In territorial waters the focus is on juveniles and spawning adults

<sup>14</sup> In territorial waters the focus is on juveniles

Priority Marine Feature (PMF)	Species name	Taxon group	Scottish marine area
Whiting <sup>15</sup>	<i>Merlangius merlangus</i>	Bony fish	Both
Basking shark	<i>Cetorhinus maximus</i>	Sharks, skates and rays	Both
Common skate	Formerly <i>Dipturus batis</i> now split provisionally into <i>D. cf. flossada</i> and <i>D. cf. intermedia</i>	Sharks, skates and rays	Both
Leafscale gulper shark	<i>Centrophorus squamosus</i>	Sharks, skates and rays	Offshore waters
Porbeagle shark	<i>Lamna nasus</i>	Sharks, skates and rays	Offshore waters
Portuguese dogfish	<i>Centroscymnus coelolepis</i>	Sharks, skates and rays	Offshore waters
Sandy ray	<i>Leucoraja circularis</i>	Sharks, skates and rays	Offshore waters
Spiny dogfish	<i>Squalus acanthias</i>	Sharks, skates and rays	Both
Atlantic white-sided dolphin	<i>Lagenorhynchus acutus</i>	Whales, dolphins and porpoises	Offshore waters
Bottlenose dolphin	<i>Tursiops truncatus</i>	Whales, dolphins and porpoises	Both
Fin whale	<i>Balaenoptera physalus</i>	Whales, dolphins and porpoises	Offshore waters
Harbour porpoise	<i>Phocoena phocoena</i>	Whales, dolphins and porpoises	Both
Killer whale	<i>Orcinus orca</i>	Whales, dolphins and porpoises	Both
Long-finned pilot whale	<i>Globicephala melas</i>	Whales, dolphins and porpoises	Offshore waters
Minke whale	<i>Balaenoptera acutorostrata</i>	Whales, dolphins and porpoises	Both
Northern bottlenose whale	<i>Hyperoodon ampullatus</i>	Whales, dolphins and porpoises	Offshore waters
Risso's dolphin	<i>Grampus griseus</i>	Whales, dolphins and porpoises	Both
Short-beaked common dolphin	<i>Delphinus delphis</i>	Whales, dolphins and porpoises	Both
Sowerby's beaked whale	<i>Mesoplodon bidens</i>	Whales, dolphins and porpoises	Offshore waters
Sperm whale	<i>Physeter macrocephalus</i>	Whales, dolphins and porpoises	Offshore waters
White-beaked dolphin	<i>Lagenorhynchus albirostris</i>	Whales, dolphins and porpoises	Both
Harbour / common seal	<i>Phoca vitulina</i>	Seals	Both
Grey seal	<i>Halichoerus grypus</i>	Seals	Both
Otter	<i>Lutra lutra</i>	Otter	Territorial waters

<sup>15</sup> In territorial waters the focus is on juveniles