

Technical Appendix

This Appendix contains more detailed information about the surveys undertaken and records made. It includes:

- dive details
- biotope list (not available for 1991)
- species list (not available for 1991)

The data has been validated, verified and entered into the Marine Recorder database by the North-East England Seasearch Co-ordinator. It is available in Snapshot format on request.

Preliminary data (dive details) have been included from the 2016 survey dives although the events have not yet been entered into the Marine Recorder database.

MR Survey Names (and MR Survey Keys):

- “2009 Seasearch North East Durham Heritage Coast survey” (MRMCS01600000002)
- “2010 Seasearch North East Durham Heritage Coast Survey” (MRMCS01600000009)
- “2011 Seasearch North East England Survey” (MRMCS01600000011)
- “2012 Seasearch North East England Durham Heritage Coast Survey” (MRMCS01600000019)
- “2013 Seasearch North East England survey of the Durham Heritage Coast” (MRMCS0160000001E)
- “2014 Seasearch North East England Survey of Durham Heritage Coast” (MRMCS01600000022)
- “2015 Seasearch North East England survey of the Durham Heritage Coast” (MRMCS01600000026)

Dive details (2009-2016)

Date	Site	Latitude (WGS84)	Longitude (WGS84)	Divers submitting forms
30/8/2009	Nose's Point	54.8257	-1.3178	Keith Best Joanna Jackson Paula Lightfoot Chris Newton
30/8/2009	Phil's Drift	54.8563	-1.3368	Keith Best Joanna Jackson Paula Lightfoot Christine Maddison Chris Newton
30/8/2009	Salterfen Rocks	54.8811	-1.3489	Paula Lightfoot Christine Maddison Gavin Scott
31/8/2009	Kelp Garden	54.8478	-1.3331	Allison Gleadhill Carrie Pillow Michelle Simpson Caroline Slater Jane Willis
31/8/2009	Phil's Drift East	54.8559	-1.3343	Spencer Cook Mark Hammond Carrie Pillow Caroline Slater Jane Willis

Date	Site	Latitude (WGS84)	Longitude (WGS84)	Divers submitting forms
31/8/2009	Pincushion (Anemone carpet)	54.8637	-1.3418	Spencer Cook Allison Gleadhill Mark Hammond Carrie Pillow Caroline Slater
15/5/2010	Blackhall Rocks 1	54.7467	-1.2598	John Camm Allison Gleadhill Paula Lightfoot Chris Newton Gavin Scott
15/5/2010	Blackhall Rocks 2	54.7472	-1.2597	John Camm Paula Lightfoot
15/5/2010	Phil's Sandy Bottom	54.7278	-1.2378	Allison Gleadhill Paula Lightfoot Chris Newton Gavin Scott Michelle Simpson
8/8/2011	North edge of DHC	54.8860	-1.3286	Claire Goodwin
9/9/2012	Pincushion East	54.8641	-1.3338	Debbie Dallison Paula and Phil Lightfoot Fran Mudd Steve Mustow Derek Weldon
9/9/2012	Ryhope Reef	54.8711	-1.3417	Debbie Dallison Nicola Faulks Paula and Phil Lightfoot Fran Mudd Steve Mustow Derek Weldon
11/8/2013	Salterfen Rocks north	54.8815	-1.3445	Tom Clarke Dave Holmes Paula Lightfoot Kerry Netherway
11/8/2013	Salterfen Rocks South	54.8790	-1.3448	Tom Clarke Derek Dawson Dave Holmes Paula Lightfoot
11/8/2013	Sunderland Promenade	54.8885	-1.3403	Tom Clarke June Coomber and Derek Dawson Dave Holmes Paula Lightfoot
22/9/2013	Off Ryhope Dene	54.8602	-1.86	Paula Lightfoot
22/9/2013	Salterfen Rocks North	54.8803	-1.3465	Paula Lightfoot Chris Newton
1/7/2014	Blackhall Rocks	54.7465	-1.2729	Ivan Dunn
26/7/2014	Nose's Point	54.8212	-1.2613	Sandra Burgan Tom Clarke Debbie Dallison John Lampett Kevin Rawson Michelle Simpson Mark Taylor

Date	Site	Latitude (WGS84)	Longitude (WGS84)	Divers submitting forms
26/7/2014	Off Salterfen Rocks	54.8834	-1.3232	Sandra Burgan Tom Clarke Spencer Cook Debbie Dallison John Lampett Paula Lightfoot Kevin Rawson Mark Taylor
17/8/2014	Off Salterfen Rocks	54.8823	-1.345	Debbie Dallison Winter Dotto Nicola Faulks Paula Lightfoot Tim Parmley
17/8/2014	S. of Rocky Dean Scars	54.8920	-1.3438	June Coomber Debbie Dallison Winter Dotto Nicola Faulks Paula Lightfoot Tim Parmley
16/9/2014	Easington Colliery	54.7881	-1.3126	Ivan Dunn
29/8/2015	Pincushion North	54.8662	-1.3348	Dan Calton Paula Lightfoot Richard Moss Kerry Netherway Chris Newton John Woodcock
29/8/2015	Hendon Rock	54.9028	-1.3315	Dan Calton Paula Lightfoot Richard Moss Chris Newton John Woodcock
2/7/2016	Dredger Wreck	54.9008	-1.3225	Tom Clarke Robert Jackson John Lampett Kevin Lee and Bryonie King Paula Lightfoot Jim and Sue McDougall Tim Parmley
2/7/2016	Hendon Rock	54.9030	-1.3315	Tom Clarke Robert Jackson John Lampett Kevin Lee and Bryonie King Paula Lightfoot Jim and Sue McDougall Tim Parmley
13/8/2016	SS Lonclara wreck	54.9003	-1.3225	Kevin Lee
13/8/2016	MV Balzac wreck	54.9089	-1.3264	Kevin Lee
28/8/2016	Off Ryhope	54.8743	-1.3073	Alison Gleadhill Robert Jackson Paula Lightfoot

Date	Site	Latitude (WGS84)	Longitude (WGS84)	Divers submitting forms
28/8/2016	Off Seaham	54.8476	-1.2957	Alison Gleadhill Robert Jackson Paula Lightfoot
4/9/2016	Off Hendon	54.9000	-1.3242	Sue McDougall Kerry Rennie
4/9/2016	Balzac Reef	54.9086	-1.3265	Alison Gleadhill Robert Jackson Paula Lightfoot



Legend:

- 2009 – white markers
- 2010 – purple markers
- 2011 – green marker
- 2012 – red markers
- 2013 – yellow markers
- 2014 – blue markers
- 2015 – orange markers

Taxonomic summary list by year (2009-2016)

For each year of survey dives, the total number of recorded taxa is broken down by taxonomic group and dive site. The survey effort at each dive site is also included, using the number of forms submitted as a proxy. The majority of taxa are recorded underwater on the basis of recognition (samples are generally not taken for subsequent analysis), although photographs can provide an invaluable resource for more leisurely examination after the dive, and so the figures reported are undoubtedly a lower estimate than the actual species richness at any one site.

The data from the 2016 survey dives will be input to Marine Recorder during winter 2016 and then uploaded to the NBN in the spring of 2017. The 2016 species data reported here are taken from forms received so far and verified initially by the NE England Co-ordinator; more forms may be received before the full data entry process begins.

2009	Kelp Garden	Nose's Point	Phil's Drift	Phil's Drift East	Pin Cushion (Anemone Carpet)	Salterfen Rocks	
Bryozoans	2	1	2	1	2	3	11
Cnidarians	4	10	5	6	4	3	32
Crustaceans	10	13	14	10	8	10	65
Echinoderms	2	1	3	2	2	3	13
Fish	4	7	5	4	5	4	29
Molluscs	5	1	6	1	4	4	21
Pycnogonids			1			1	2
Sea squirts			2				2
Seaweeds	5	4	3	1	2	2	17
Sponges	5	3	1	5	3	3	20
Worms	2	2	5	1		1	11
Total no. of taxa	39	42	47	31	30	34	223

Survey effort (no. of forms)	6 Observation	6 Observation 1 Survey	6 Observation 1 Survey	6 Observation	6 Observation	3 Observation 1 Survey
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Most recorded taxa in 2009: *Cancer pagurus* (23 records); *Homarus gammarus* (22); Rhodophyta (19); *Necora puber* (18) and *Urticina felina* (16)

2010	Blackhall Rocks	Phil's Sandy Bottom	
Bryozoans	6	1	7
Cnidarians	27		27
Crustaceans	55	8	63
Echinoderms	15		15
Fish	17	4	21
Molluscs	12	4	16
Pycnogonids			
Sea squirts			
Seaweeds			
Sponges	10		10
Worms	12	3	15
Total no. of taxa	154	20	174

Survey effort (no. of forms)	9 forms total	4 forms total
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Most recorded taxa in 2010: *Pagurus bernhardus* (11 records); *Asterias rubens*, *Cancer pagurus*, *Homarus gammarus*, *Mytilus edulis* (9)

2011	Northern Edge of DHC
Bryozoans	16
Cnidarians	14
Crustaceans	10
Echinoderms	8
Fish	8
Molluscs	10
Pycnogonids	
Sea squirts	
Seaweeds	25
Sponges	11
Worms	4
Total no. of taxa	106
Survey effort (no. of forms)	1 Survey (group form)

Most recorded taxa in 2011: There was an even spread of records by taxa on this single dive.

2012	Pincushion East	Ryhope Reef	
Bryozoans	11	12	23
Cnidarians	22	12	34
Crustaceans	36	36	72
Echinoderms	11	6	17
Fish	10	10	20
Molluscs	7	5	12
Pycnogonids			
Sea squirts	1	1	2
Seaweeds	2	4	6
Sponges	12	12	24
Worms	7	5	12
Total no. of taxa	119	103	222

Survey effort (no. of forms)	4 forms	4 forms

Most recorded taxa in 2012: *Homarus gammarus*, *Urticina felina* (9 records each); *Cancer pagurus*, *Galathea nexa*, *Necora puber* (8); *Asterias rubens*, *Pandalus montagui* (7) and *Pholis gunnellus* (6)

2013	Off Ryhope Dene	Ryhope Dene	Salterfen Rocks	Salterfen Rocks (north)	Salterfen Rocks (south)	Sunderland Promenade	
Bryozoans	1		3	13	7	5	29
Cnidarians	3		5	23	4	12	47
Crustaceans	6	4	9	27	20	9	75

2013	Off Ryhope Dene	Ryhope Dene	Salterfen Rocks	Salterfen Rocks (north)	Salterfen Rocks (south)	Sunderland Promenade	
Echinoderms	3	2	5	14	8	9	41
Fish	2	4	1	10	4	2	23
Molluscs	1		5	21	7	6	40
Pycnogonids							
Sea squirts	1		1	3		1	6
Seaweeds	3			7	5	3	18
Sponges	1		1	11	5	3	21
Worms	1	2	3	9	5	2	22
Total no. of taxa	22	12	33	138	65	52	322

Survey effort (no. of forms)						
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Most recorded taxa in 2013: *Asterias rubens* (15 records); *Alcyonium digitatum* (13); *Cancer pagurus* (12); *Henricia*, *Necora puber* (11); *Flustra foliacea*, *Homarus gammarus*, *Tubularia indivisa*, *Urticina felina* (10)

2014	Blackhall Rocks	Easington Colliery	Off Nose's Point	Off Salterfen Rocks	Rocky Dean Scars	Salterfen Rocks	South of Rocky Dean Scars	
Bryozoans			8	29	10	6	13	66
Cnidarians	1	1	17	37	9	7	15	87
Crustaceans	5	5	17	40	7	8	25	107
Echinoderms	1	1	18	31	7	7	14	79
Fish	2	2	13	17	1	4	4	43
Molluscs	1	5	11	38	12	9	24	100
Pycnogonids				2			3	5
Sea squirts			8	11	2	2	9	32
Seaweeds	7	6	2	14		3	5	37
Sponges			3	14	3	5	9	34
Worms				7	2	4	7	20
Total no. of taxa	17	20	97	240	53	55	128	610

Survey effort (no. of forms)	1 form	1 form	5 forms	9 forms	1 form	1 form	4 forms
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Most recorded taxa in 2014: *Asterias rubens* (23 records); *Echinus esculentus* (19); *Alcyonium digitatum*, *Henricia*, *Janolus cristatus* (17); *Cancer pagurus*, *Necora puber*, *Flustra foliacea* (15)

2015	Pincushion North	Hendon Rock	
Bryozoans	15	12	27
Cnidarians	17	16	33
Crustaceans	34	8	42
Echinoderms	12	10	22

2015	Pincushion North	Hendon Rock	
Fish	5	3	8
Molluscs	14	13	27
Pycnogonids			
Sea squirts	5	6	11
Seaweeds	1	8	9
Sponges	15	2	17
Worms	6	4	10
Total no. of taxa	124	82	206
Survey effort (no. of forms)	1 form	1 form	

Most recorded taxa in 2015: *Asterias rubens*, *Alcyonium digitatum*, *Flustra foliacea*, *Spirobranchus* (8 records); *Balanus balanus* (6); *Crisia* sp., *Nemertesia antennina*, *Necora puber*, *Urticina felina* (5)

2016 (so far)	Dredger wreck	Hendon Rock	SS Lonclara wreck	MV Balzac wreck	Off Ryhope	Off Seaham	Off Hendon	Balzac Reef	
Bryozoans	5	7	2	1	6	6	5	5	37
Cnidarians	11	10	5	2	8	5	4	5	50
Crustaceans	6	4	4	4	3	7	8	6	42
Echinoderms	4	6	3	2	4	4	4	4	31
Fish	12	13	3	1	5	2	6	4	46
Molluscs	13	15		1	10	10	6	3	58
Pycnogonids		1		1				1	3
Sea squirts	3	4		1	2	2	3	2	17
Seaweeds		7							7
Sponges	2	5			5	3	4	8	27
Worms	2	2			2	2	3	2	13
Ctenophora	1	1							2
Total no. of taxa	59	75	17	13	45	41	43	40	333

Survey effort (no. of forms)	5 obs 3 survey	1 survey	1 obs	1 obs	2 obs 1 survey	2 obs 1 survey	1 obs 1 survey	2 obs 1 survey
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Sublittoral Habitats/Biotopes recorded (2009-2015)

Twenty-six distinct biotopes were allocated (a total of 177 over all survey dives), either as a Seasearch (127 instances) or MNCR (50 instances) biotope code. Of the latter, 30% were recorded at EUNIS Level 6, 40% at level 5, 14% at Level 4 and the remaining 16% at Level 3.

The data collected on the 2016 dives has not yet been analysed to have biotopes assigned to the identified habitats.

The table below lists all the biotopes with an indication as to where they were recorded.

Seasearch# or MNCR† Biotope Code	Description	Count	Location*
ABM	Animal bed: mussels	8	3
BS	Barren sediment	3	3
CR.FCR.FouFa	Circalittoral fouling faunal communities	1	3
CR.MCR	Moderate energy circalittoral rock	1	1
CR.MCR.CMus.CMyt	<i>Mytilus edulis</i> beds with hydroids and ascidians on tide-swept exposed to moderately wave-exposed circalittoral rock	1	3
CR.MCR.CSab.Sspi	<i>Sabellaria spinulosa</i> encrusted circalittoral rock	1	1
CR.MCR.CSab.Sspi.ByB	<i>Sabellaria spinulosa</i> with a bryozoan turf and barnacles on silty turbid circalittoral rock	2	1
CR.MCR.EcCr	Echinoderms and crustose communities	2	1
CR.MCR.EcCr.AdigVt	<i>Alcyonium digitatum</i> and faunal crust communities on vertical circalittoral bedrock	3	1
CR.MCR.EcCr.FaAlCr	Faunal and algal crusts on exposed to moderately wave-exposed circalittoral rock	10	1,2
CR.MCR.EcCr.FaAlCr.Adig	<i>Alcyonium digitatum</i> , <i>Pomatoceros triqueter</i> , algal and bryozoan crusts on wave-exposed circalittoral rock	2	1
CR.MCR.EcCr.FaAlCr.Flu	<i>Flustra foliacea</i> on slightly scoured silty circalittoral rock	9	1,3
CR.MCR.EcCr.FaAlCr.Pom	Faunal and algal crusts with <i>Pomatoceros triqueter</i> and sparse <i>Alcyonium digitatum</i> on exposed to moderately wave-exposed circalittoral rock	1	3
EPA	Encrusting pink algae	7	1,2,3
IR.HIR.KFaR.FoR	Foliose red seaweeds on exposed lower infralittoral rock	1	3
IR.MIR	Moderate energy infralittoral rock	1	3
IR.MIR.KR.Lhyp.Ft	<i>Laminaria hyperborea</i> forest and foliose red seaweeds on moderately exposed upper infralittoral rock	1	1
IR.MIR.KR.Lhyp.Sab	<i>Sabellaria spinulosa</i> with kelp and red seaweeds on sand-influenced infralittoral rock	2	1,2
IR.MIR.KR.XFoR	Dense foliose red seaweeds on silty moderately exposed infralittoral rock	4	1

Seasearch [#] or MNCR† Biotope Code	Description	Count	Location*
KP	Kelp park	12	1,2
MS	Mixed seaweeds	22	1,2,3
SAT	Short animal turf on rocks	36	1,2,3
SLA	Sediment with life apparent	18	1,2,3
SS.SCS.CCS	Circalittoral coarse sediment	3	1,2
SS.SCS.CCS.PomB	<i>Pomatoceros triqueter</i> with barnacles and bryozoan crusts on unstable circalittoral cobbles and pebbles	1	1
SS.SCS.ICS	Infralittoral coarse sediment	1	3
SS.SSa	Sublittoral sands and muddy sands	6	1,2,3
SS.SSa.IFiSa	Infralittoral fine sand	1	3
TAT	Tall animal turf on rocks	21	1,2,3

The Seasearch Biotope Key: www.seasearch.org.uk/downloads/SeasearchBiotopeKeyDec07web.pdf

† The Marine Habitat Classification for Britain & Ireland (v04.05 & v15.03): jncc.defra.gov.uk/marinehabitatclassification

* Sites are separated as follows: 1 = **Southern** (between Seaham and Hartlepool; Phil's Sandy Bottom, Blackhall Rocks, Easington Colliery); 2 = **Central** (Off Hope's Nose); 3 = **Northern** (between Seaham and Sunderland; (South of) Rocky Dean Scars, Sunderland Promenade, (Off) Salterfen Rocks (North/South), Northern Edge of DHC, Ryhope Reef, (Off) Ryhope Dene, Pincushion (North/East), Phil's Drift (East), Kelp Garden, Hendon Rock)

Species List (2009-2016)

No. of unique taxa recorded = 284

Not all records are to species level – some species are impossible to identify underwater and require a sample and subsequent analysis. Seasearch divers are strongly encouraged to record **accurately** to the appropriate level of confidence, hence some identifications are only made at genus or higher taxonomic levels.

1. Porifera (sponges)

Scientific name	Common name	Notes
<i>Amphilectus fucorum</i>	Shredded carrot sponge	
<i>Clathrina</i>		
<i>Clathrina</i> (formerly <i>Guancha</i>) <i>lacunosa</i>		Only Seasearch and MNCR (1993) records on NBN Gateway
<i>Cliona</i>		
<i>Cliona celata</i>	Boring sponge	
<i>Dysidea fragilis</i>	Goosebump sponge	
<i>Grantia compressa</i>		
<i>Halichondria</i> (<i>Halichondria</i>) <i>panicea</i>	Breadcrumb sponge	
<i>Haliclona</i> (<i>Haliclona</i>) <i>oculata</i>	Mermaid's glove	
<i>Hymeraphia</i>		
<i>Leucosolenia</i>		
<i>Myxilla</i>		
<i>Myxilla</i> (<i>Myxilla</i>) <i>incrustans</i>		
<i>Polymastia penicillus</i>	Chimney sponge	

<i>Porifera</i>	Sponges	
<i>Porifera indet crusts</i>	Sponge crusts or encrusting sponges	
<i>Raspailia (Raspailia) ramosa</i>	Chocolate finger sponge	Only Seasearch and MNCR (1993) records on NBN Gateway
<i>Spanioplion armaturum</i>		
<i>Stelligera rigida</i>		
<i>Suberites</i>		
<i>Suberites ficus</i>	Sea orange	
<i>Sycon ciliatum</i>	Purse sponge	
Taxa recorded = 20		

2. Cnidaria (anemones, hydroids, corals, jellyfish) & Ctenophora (comb jellies)

Scientific name	Common name	Notes
<i>Abietinaria abietina</i>		
<i>Actinia equina</i>	Beadlet anemone	
<i>Actiniaria</i>		
<i>Alcyonium digitatum</i>	Dead men's fingers	
<i>Aurelia aurita</i>	Moon jellyfish	
<i>Beroe cucumis</i>	Sea gooseberry	
<i>Caryophyllia (Caryophyllia) smithii</i>	Devonshire cup coral	
<i>Cereus pedunculatus</i>	Daisy anemone	
<i>Corymorpha nutans</i>	Nodding hydroid	
<i>Coryne eximia</i>		
<i>Cyanea</i>	Lion's mane jellyfish	
<i>Cyanea lamarckii</i>	Blue jellyfish	
<i>Eudendrium</i>		
<i>Eudendrium ramosum</i>		
<i>Halecium</i>		
<i>Halecium halecinum</i>	Herring-bone hydroid	
<i>Hydrallmania falcata</i>	Helter-skelter hydroid	
Hydrozoa	Hydroids	
<i>Kirchenpaueria pinnata</i>		
<i>Metridium senile</i>	Plumose anemone	
<i>Nemertesia antennina</i>	Antenna hydroid	
<i>Nemertesia ramosa</i>	Branched antenna hydroid	
<i>Obelia geniculata</i>	Kelp fur	
<i>Pleurobrachia pileus</i>	Sea gooseberry	
<i>Plumularia setacea</i>		
<i>Sagartia</i>		
<i>Sagartia elegans</i>	Elegant anemone	
Scyphozoa	Jellyfish	
<i>Sertularia</i>		
Sertulariidae		
<i>Thuiaria thuja</i>	Bottlebrush hydroid	
<i>Tubularia indivisa</i>	Oaten pipes hydroid	
<i>Urticina</i>		

Scientific name	Common name	Notes
<i>Urticina eques</i>	Horseman anemone	
<i>Urticina felina</i>	Dahlia anemone	
Taxa recorded = 31		

3. Annelida (segmented worms), Nemertea (ribbon worms) & Phoronida (horseshoe worms)

Scientific name	Common name	Notes
Aphroditoidea		
<i>Arenicola</i>		
<i>Arenicola marina</i>	Common lugworm	
<i>Eulalia viridis</i>		
<i>Lanice conchilega</i>	Sand mason worm	
<i>Lineus longissimus</i>	Bootlace worm	
<i>Myxicola infundibulum</i>	Eyelash worm	
Phoronida	Horseshoe worms	
<i>Phoronis hippocrepia</i>		
Polychaeta		
<i>Polydora</i>		
<i>Sabella pavonina</i>	Peacock worm	
<i>Sabellaria spinulosa</i>	Ross worm	
<i>Spirobranchus</i>	Keelworm	
<i>Spirorbis</i>	Spiral worms	
Taxa recorded = 15		

4. Crustacea (crabs, lobsters, barnacles)

Scientific name	Common name	Notes
<i>Balanus</i>		
<i>Balanus balanus</i>	Greater acorn barnacle	
<i>Brachyura</i>		
<i>Carcinus maenas</i>	Shore crab	
<i>Cancer pagurus</i>	Common/edible/brown crab	
Caridea		
Cirripedia	Barnacles	
<i>Corystes cassivelaunus</i>	Masked crab	
<i>Crangon crangon</i>	Brown shrimp	
Decapoda		
<i>Doridicola agilis</i>		
<i>Eualus</i>		
<i>Galathea dispersa</i>		
<i>Galathea nexa</i>		
<i>Galathea strigosa</i>	Spiny squat lobster	
Galatheidae	Squat lobsters	
<i>Homarus gammarus</i>	Common lobster	
<i>Hyas araneus</i>	Sea toad	
<i>Inachus</i>		
<i>Iphimedia obesa</i>		
<i>Jassa falcata</i>		

Scientific name	Common name	Notes
<i>Ligia oceanica</i>		
<i>Liocarcinus depurator</i>	Harbour crab	
<i>Macropodia</i>	Long legged spider crabs	
Majidae		
<i>Munida rugosa</i>	Long clawed squat lobster	
<i>Mysida</i>		
<i>Necora puber</i>	Velvet swimming crab	
Paguridae	Hermit crabs	
<i>Pagurus bernhardus</i>	Common hermit crab	
<i>Palaemon</i>		
<i>Palaemon serratus</i>	Common prawn	
<i>Pandalus</i>		
<i>Pandalus montagui</i>	Humpback/northern prawn	
<i>Pisidia longicornis</i>	Long-clawed porcelain crab	
<i>Portumnus latipes</i>		
Pycnogonida	Sea spiders	
Pycnogonidae	Sea spiders	
<i>Verruca stroemia</i>	Verruca barnacle	
Taxa recorded = 39		

5. Mollusca (snails, bivalves, nudibranchs)

Scientific name	Common name	Notes
<i>Acanthodoris pilosa</i>	White hedgehog sea slug	
<i>Aequipecten opercularis</i>	Queen scallop	
<i>Ancula gibbosa</i>		
Anomiidae	Saddle oysters	
Bivalvia	Bivalves	
<i>Buccinum undatum</i>	Common whelk, buckie	
<i>Calliostoma zizyphinum</i>	Painted topshell	Climate change indicator species
<i>Chlamys</i>		
<i>Cuthona concinna</i>		Only Seasearch and MNCR (1993) records on NBN Gateway
<i>Cuthona rubescens</i>		Only Seasearch and MNCR (1993) records on NBN Gateway
<i>Diaphotodoris luceocincta</i>	Fried egg nudibranch	
<i>Doris pseudoargus</i>	Sea lemon	
<i>Doto</i>		
<i>Doto coronata</i> agg. (and eggs)		
<i>Doto fragilis</i>		
<i>Eledone cirrhosa</i>	Curled/lesser octopus	
<i>Eubbranchus farrani</i>		
<i>Eubbranchus pallidus</i>		
<i>Eubbranchus tricolor</i>		
<i>Facelina auriculata</i>		

Scientific name	Common name	Notes
<i>Flabellina</i>		
<i>Flabellina browni</i>		
<i>Flabellina lineata</i>		
<i>Flabellina pedata</i>	Violet sea slug	
<i>Flabellina verrucosa</i>		
<i>Geitodoris planata</i>		First record on DHC
<i>Gibbula cineraria</i>	Grey topshell	
<i>Goniodoris nodosa</i>		
<i>Hiatella</i>		
<i>Hiatella arctica</i>		
<i>Hiatella rugosa</i>	Red nose	
<i>Janolus cristatus</i>	Crystal sea slug	
<i>Jorunna tomentosa</i>		
<i>Lacuna vincta</i>	Striped kelp snail	
<i>Leptochiton asellus</i>		
<i>Limacia clavigera</i>	Orange clubbed sea slug	
<i>Littorina littorea</i>	Common periwinkle	
Littorinidae	Periwinkles	
<i>Modiolus modiolus</i>	Horse mussel	
<i>Monia patelliformis</i>		
<i>Mytilus edulis</i>	Common/blue mussel	
<i>Nassarius reticulatus</i>	Netted dog whelk	
<i>Nucella lapillus</i>	Dog whelk	
Nudibranchia	Nudibranchs	
<i>Onchidoris bilamellata</i>		
<i>Palio nothus</i>		
<i>Patella</i>	Limpets	
<i>Patella pellucida</i>	Blue-rayed limpet	
<i>Pecten maximus</i>	King scallop	
Pectinidae	Scallops	
Pholadidae	Piddocks	
<i>Pholas</i>		
<i>Polycera faeroensis</i>		
<i>Polycera quadrilineata</i>	Lined polycera	
Polyplacophora	Chitons	
<i>Rissoa parva</i>		
<i>Rostanga rubra</i>		Only Seasearch record on NBN (for DHC)
<i>Sepiola atlantica</i>	Little cuttle	
<i>Talochlamys pusio</i>		
<i>Tritia incrassata</i> (was <i>Nassarius incrassatus</i>)	Thick-lipped dog whelk	
<i>Tritonia hombergii</i>	Dead men's finger sea slug	
<i>Trivia</i>	Cowries	
<i>Trivia arctica</i>	Arctic cowrie	
<i>Trivia monacha</i>	European cowrie	

Scientific name	Common name	Notes
Trochidae	Topshells	
<i>Zirfaea crispata</i>	Great piddock	
Taxa recorded = 66		

6. Bryozoa (sea mats/mosses)

Scientific name	Common name	Notes
<i>Alcyonidium diaphanum</i>	Finger bryozoan, sea chervil	
<i>Bicellariella ciliata</i>		
Bryozoa	Sea mosses	
Bryozoa indet crusts	Encrusting bryozoans	
<i>Bugula</i>	Spiral bryozoans	
<i>Bugula flabellate</i>		
<i>Bugula plumosa</i>		
<i>Bugula turbinata</i>		
<i>Cellaria</i>		
<i>Cellaria ?fistulosa</i>		
<i>Celleporella hyalina</i>		
<i>Cradoscrupocellaria</i>		
<i>Crisia</i>	White claw sea moss	
<i>Crisia eburnea</i>		
<i>Electra pilosa</i>	Frosty sea mat	
<i>Eucratea loricata</i>		
<i>Flustra foliacea</i>	Hornwrack	
<i>Membranipora membranacea</i>	Sea mat	
<i>Schizomavella linearis</i>		
<i>Scrupocellaria</i>		
<i>Scrupocellaria scruposa</i>		
<i>Securiflustra securifrons</i>	Square-end hornwrack	
Taxa recorded = 22		

7. Echinoderms (starfish, brittlestars, feather stars, sea cucumbers, sea urchins)

Scientific name	Common name	Notes
<i>Amphipholis squamata</i>		
<i>Asterias rubens</i>	Common starfish	
Asteroidea	Starfish	
<i>Crossaster papposus</i>	Common sunstar	
<i>Echinocardium cordatum</i>	Common heart urchin	
<i>Echinus esculentus</i>	Common/edible sea urchin	
<i>Henricia</i>	Bloody Henry	
<i>Luidia ciliaris</i>	Seven armed starfish	
<i>Ophiactis balli</i>	Small banded brittlestar	
<i>Ophiocoma nigra</i>	Black brittlestar	
<i>Ophiopholis aculeata</i>	Crevice brittlestar	
<i>Ophiothrix fragilis</i>	Common brittlestar	
<i>Ophiura</i>		
<i>Ophiura albida</i>	White-flecked sand brittlestar	

Ophiuroidea	Brittlestars	
Taxa recorded = 15		

8. Tunicata (sea squirts)

Scientific name	Common name	Notes
<i>Aplidium</i> (formerly <i>Sidnyum</i>) <i>turbinatum</i>		
Asciacea	Ascidians	
<i>Botryllus schlosseri</i>	Star sea squirt	
<i>Ciona intestinalis</i>	Yellow-rimmed sea squirt	
<i>Clavelina lepadiformis</i>	Lightbulb sea squirt	
<i>Corella parallelogramma</i>	Toby jug sea squirt	
<i>Dendrodoa grossularia</i>	Gooseberry sea squirt	
<i>Perophora listeri</i>	Dwarf sea squirt	
<i>Polycarpa scuba</i>		
Tunicata	Tunicates	
Taxa recorded = 10		

9. Pisces (bony & cartilaginous fish)

Scientific name	Common name	Notes
<i>Ammodytes</i>		
Ammodytidae	Sand eels	
<i>Callionymus lyra</i>	Common dragonet	
<i>Chirolophis ascanii</i>	Yarrell's blenny	
<i>Conger conger</i>	Conger eel	
Cottidae		
<i>Ctenolabrus rupestris</i>	Goldsinny wrasse	
<i>Cyclopterus lumpus</i>	Lumpsucker	
<i>Echiichthys vipera</i>		
<i>Eutrigla gurnardus</i>	Grey gurnard	
Gadidae	Gadoids	
<i>Gadus morhua</i>	Cod	Priority (BAP, NERC S41)
Gobiidae	Gobies	
<i>Gobius paganellus</i>	Rock goby	
<i>Gobiusculus flavescens</i>	Two-spot goby	
<i>Labrus bergylta</i>	Ballan wrasse	
<i>Limanda limanda</i>	Dab	
<i>Liparis</i>	Sea snail	
<i>Lipophrys pholis</i>	Shanny	
<i>Merlangius merlangus</i>	Whiting	Priority (BAP, NERC S41)
<i>Microstomus kitt</i>	Lemon sole	
<i>Molva molva</i>	Ling	Priority (BAP, NERC S41)
<i>Myxine glutinosa</i>	Hagfish	
<i>Myoxocephalus scorpius</i>	Bullhead	
<i>Pholis gunnellus</i>	Butterfish	
<i>Phrynorhombus norvegicus</i>	Norwegian topknot	
Pisces		

Scientific name	Common name	Notes
<i>Platichthys flesus</i>	Flounder	
<i>Pleuronectes platessa</i>	Plaice	Priority (BAP, NERC S41)
Pleuronectidae		
Pleuronectiformes		
<i>Pollachius pollachius</i>	Pollack	
<i>Pollachius virens</i>	Saithe	
<i>Pomatoschistus</i>		
<i>Pomatoschistus minutus</i>	Sand goby	
<i>Pomatoschistus pictus</i>	Painted goby	
<i>Scyliorhinus canicula</i>	Small-spotted catshark, lesser-spotted dogfish	
<i>Solea solea</i>	Common sole	Priority (BAP, NERC S41)
<i>Taurulus bubalis</i>	Long-spined sea scorpion	
Teleostei		
<i>Thorogobius ephippiatus</i>	Leopard-spotted goby	
<i>Trisopterus luscus</i>	Bib, pouting	
<i>Trisopterus minutus</i>	Poor cod	
<i>Zeugopterus punctatus</i>	Topknot	
Taxa recorded = 44		

10. Algae (seaweeds)

Scientific name	Common name	Notes
Chlorophyta	Green algae	
<i>Bryopsis</i>	Mossy feather weeds	
<i>Ulva lactuca</i>	Sea lettuce	
<i>Desmarestia viridis</i>	Desmarest's green weed	
<i>Dictyota dichotoma</i>	Divided net weed, brown fan weed	
<i>Fucus serratus</i>	Serrated wrack	
<i>Fucus vesiculosus</i>	Bladder wrack	
<i>Laminaria</i>		
<i>Laminaria digitata</i>	Oar weed, tangle	
<i>Laminaria hyperborea</i>	Forest kelp, cuvie	
<i>Laminariales</i>	Kelps	
<i>Taonia atomaria</i>	Dotted peacock weed	
Rhodophyta	Red algae	
<i>Apoglossum ruscifolium</i>	Veined tongue weed	
<i>Brongniartella byssoides</i>	Brongniart's thread weed	
<i>Callophyllis laciniata</i>	Beautiful fan weed	
<i>Cryptopleura ramosa</i>	Fine-veined crinkle weed	
<i>Delesseria sanguinea</i>	Sea beech	
<i>Dilsea carnosa</i>	Red rags	
Encrusting algae indet.		
<i>Heterosiphonia plumosa</i>	Siphoned feather weed	
<i>Hypoglossum hypoglossoides</i>	Under tongue weed	

Scientific name	Common name	Notes
<i>Lithothamnion</i>	Maerl	
<i>Mastocarpus stellatus</i>	Grape pip weed	
<i>Membranoptera alata</i>	Winged weed	
<i>Palmaria palmata</i>	Dulse	
<i>Phycodrys rubens</i>	Sea oak	
<i>Plocamium</i>		
<i>Plocamium cartilagineum</i>	Cock's comb, red comb weed	
<i>Polysiphonia</i>	Siphon weed	
<i>Polysiphonia stricta</i>	Pitcher siphon weed	
<i>Porphyra</i>	Laver	
<i>Ptilota gunneri</i>	Feathered wing weed	
<i>Rhodomela confervoides</i>	Straggly bush weed	
<i>Schottera nicaeensis</i>	Shaded weed	
Taxa recorded = 35		

N.B. Priority species are those identified under the (superseded) Biodiversity Action Plan (2007) and the Natural Environment and Rural Communities (NERC) Act 2006 (England)¹

¹ See <http://jncc.defra.gov.uk/page-5705> for more detailed information about priority species and habitats

Taxa ordered by number of records

Taxon	Number of records
<i>Asterias rubens</i>	77
<i>Cancer pagurus</i>	72
<i>Necora puber</i>	66
<i>Homarus gammarus</i>	63
<i>Urticina felina</i>	62
<i>Alcyonium digitatum</i>	58
<i>Flustra foliacea</i>	55
<i>Pandalus montagui</i>	43
<i>Pholis gunnellus</i>	40
<i>Henricia</i>	39
<i>Echinus esculentus</i>	35
<i>Spirobranchus</i>	35
<i>Tubularia indivisa</i>	34
<i>Janolus cristatus</i>	33
<i>Nemertesia antennina</i>	32
<i>Alcyonidium diaphanum</i>	28
Rhodophyta	27
<i>Delesseria sanguinea</i>	26
<i>Pagurus bernhardus</i>	24
<i>Inachus</i>	21
<i>Amphilectus fucorum</i>	19
Encrusting algae indet.	19
Hydrozoa	19
<i>Liocarcinus depurator</i>	19
Paguridae	19
<i>Polycera quadrilineata</i>	19
<i>Cliona celata</i>	18
<i>Halichondria (Halichondria) panicea</i>	18
<i>Balanus balanus</i>	17
<i>Macropodia</i>	17
Porifera indet crusts	17
Cirripedia	16
<i>Corella parallelogramma</i>	16
Nudibranchia	16
<i>Cliona</i>	15
<i>Securiflustra securifrons</i>	15
<i>Electra pilosa</i>	14
<i>Galathea nexa</i>	14
<i>Galathea strigosa</i>	13
<i>Mytilus edulis</i>	13
<i>Obelia geniculata</i>	13
<i>Ophiothrix fragilis</i>	13
<i>Sabellaria spinulosa</i>	13
<i>Sycon ciliatum</i>	13
<i>Taurulus bubalis</i>	13
<i>Thorogobius ephippiatus</i>	13
<i>Bugula</i>	12

Taxon	Number of records
<i>Ciona intestinalis</i>	12
<i>Crisia</i>	12
Laminariales	12
Majidae	12
<i>Botryllus schlosseri</i>	11
<i>Bugula plumosa</i>	11
<i>Crossaster papposus</i>	11
Galatheidae	11
<i>Haliclona (Haliclona) oculata</i>	11
<i>Membranipora membranacea</i>	11
<i>Urticina eques</i>	11
<i>Acanthodoris pilosa</i>	9
<i>Crangon crangon</i>	9
<i>Metridium senile</i>	9
Pycnogonida	9
Bryozoa indet crusts	8
<i>Callionymus lyra</i>	8
<i>Carcinus maenas</i>	8
<i>Ctenolabrus rupestris</i>	8
<i>Doris pseudoargus</i>	8
<i>Goniodoris nodosa</i>	8
<i>Phycodrys rubens</i>	8
Porifera	8
<i>Actinia equina</i>	7
<i>Arenicola marina</i>	7
<i>Buccinum undatum</i>	7
<i>Bugula flabellata</i>	7
<i>Clavelina lepadiformis</i>	7
<i>Gibbula cineraria</i>	7
<i>Laminaria hyperborea</i>	7
<i>Limacia clavigera</i>	7
<i>Munida rugosa</i>	7
<i>Ophiactis balli</i>	7
Ophiuroidea	7
<i>Palaemon serratus</i>	7
<i>Pecten maximus</i>	7
<i>Polydora</i>	7
<i>Trivia</i>	7
Caridea	6
<i>Myxicola infundibulum</i>	6
<i>Myxilla</i>	6
<i>Onchidoris bilamellata</i>	6
<i>Ophiura albida</i>	6
<i>Perophora listeri</i>	6
<i>Pomatoschistus</i>	6
<i>Scyliorhinus canicula</i>	6
<i>Suberites ficus</i>	6
<i>Trivia arctica</i>	6

Taxon	Number of records
<i>Abietinaria abietina</i>	5
Actiniaria	5
<i>Doto</i>	5
<i>Eulalia viridis</i>	5
<i>Flabellina lineata</i>	5
Gobiidae	5
<i>Jorunna tomentosa</i>	5
<i>Lanice conchilega</i>	5
<i>Nemertesia ramosa</i>	5
<i>Pleuronectiformes</i>	5
<i>Sabella pavonina</i>	5
<i>Calliostoma zizyphinum</i>	4
<i>Doridicola agilis</i>	4
<i>Iphimedia obesa</i>	4
<i>Myoxocephalus scorpius</i>	4
<i>Ophiopholis aculeata</i>	4
<i>Pleuronectes platessa</i>	4
Polychaeta	4
<i>Pomatoschistus minutus</i>	4
<i>Sertularia</i>	4
Teleostei	4
<i>Thuiaria thuja</i>	4
<i>Ulva lactuca</i>	4
Anomiidae	3
Asteroidea	3
<i>Balanus</i>	3
<i>Bugula turbinata</i>	3
Cottidae	3
<i>Cyclopterus lumpus</i>	3
<i>Dictyota dichotoma</i>	3
<i>Facelina auriculata</i>	3
<i>Flabellina pedata</i>	3
<i>Hypoglossum hypoglossoides</i>	3
<i>Limanda limanda</i>	3
<i>Microstomus kitt</i>	3
<i>Monia patelliformis</i>	3
<i>Palaemon</i>	3
Pholadidae	3
<i>Pisidia longicornis</i>	3
<i>Plocamium cartilagineum</i>	3
<i>Plocamium</i>	3
<i>Plumularia setacea</i>	3
<i>Sagartia elegans</i>	3
<i>Scrupocellaria</i>	3
<i>Sepiola atlantica</i>	3
<i>Spirorbis</i>	3
<i>Trisopterus luscus</i>	3
<i>Trivia monacha</i>	3

Taxon	Number of records
Ammodytidae	2
<i>Ancula gibbosa</i>	2
Aphroditoidea	2
Asciacea	2
<i>Bicellariella ciliata</i>	2
Bryozoa	2
<i>Caryophyllia (Caryophyllia) smithii</i>	2
<i>Cellaria</i>	2
<i>Chirolophis ascanii</i>	2
Chlorophyta	2
<i>Clathrina</i>	2
<i>Clathrina lacunosa</i>	2
<i>Corystes cassivelaunus</i>	2
Decapoda	2
<i>Dysidea fragilis</i>	2
<i>Echiichthys vipera</i>	2
<i>Eubranchus pallidus</i>	2
<i>Eudendrium ramosum</i>	2
<i>Flabellina browni</i>	2
<i>Flabellina</i>	2
<i>Fucus serratus</i>	2
<i>Fucus vesiculosus</i>	2
Gadidae	2
<i>Galathea dispersa</i>	2
<i>Grantia compressa</i>	2
<i>Halecium halecinum</i>	2
<i>Heterosiphonia plumosa</i>	2
<i>Hiatella</i>	2
<i>Hyas araneus</i>	2
<i>Kirchenpaueria pinnata</i>	2
<i>Labrus bergylta</i>	2
<i>Laminaria</i>	2
<i>Leucosolenia</i>	2
<i>Lineus longissimus</i>	2
<i>Lipophrys pholis</i>	2
<i>Modiolus modiolus</i>	2
Mysida	2
<i>Nassarius incrassatus</i>	2
<i>Nassarius reticulatus</i>	2
<i>Palmaria palmata</i>	2
<i>Pandalus</i>	2
<i>Patella pellucida</i>	2
<i>Pollachius pollachius</i>	2
<i>Polycera faeroensis</i>	2
<i>Raspailia (Raspailia) ramosa</i>	2
Sertulariidae	2
<i>Tritonia hombergii</i>	2
<i>Verruca stroemia</i>	2

Taxon	Number of records
<i>Aequipecten opercularis</i>	1
<i>Ammodytes</i>	1
<i>Amphipholis squamata</i>	1
<i>Aplidium turbinatum</i>	1
<i>Apoglossum ruscifolium</i>	1
<i>Arenicola</i>	1
<i>Aurelia aurita</i>	1
<i>Bivalvia</i>	1
<i>Brachyura</i>	1
<i>Brongniartella byssoides</i>	1
<i>Bryopsis</i>	1
<i>Callophyllis laciniata</i>	1
<i>Celleporella hyalina</i>	1
<i>Cereus pedunculatus</i>	1
<i>Chlamys</i>	1
<i>Conger conger</i>	1
<i>Corymorpha nutans</i>	1
<i>Coryne eximia</i>	1
<i>Cradoscrupocellaria</i>	1
<i>Crisia eburnea</i>	1
<i>Cryptopleura ramosa</i>	1
<i>Cuthona concinna</i>	1
<i>Cuthona rubescens</i>	1
<i>Dendrodoa grossularia</i>	1
<i>Desmarestia viridis</i>	1
<i>Dilsea carnosa</i>	1
<i>Doto fragilis</i>	1
<i>Echinocardium cordatum</i>	1
<i>Eledone cirrhosa</i>	1
<i>Eualus</i>	1
<i>Eubranchius farrani</i>	1
<i>Eucreatea loricata</i>	1
<i>Eudendrium</i>	1
<i>Eutrigla gurnardus</i>	1
<i>Flabellina verrucosa</i>	1
<i>Gadus morhua</i>	1
<i>Gobius paganellus</i>	1
<i>Gobiusculus flavescens</i>	1
<i>Halecium</i>	1
<i>Hiatella arctica</i>	1
<i>Hiatella rugosa</i>	1
<i>Hydrallmania falcata</i>	1
<i>Hymeraphia</i>	1
<i>Jassa falcata</i>	1
<i>Lacuna vincta</i>	1
<i>Laminaria digitata</i>	1
<i>Ligia oceanica</i>	1
<i>Liparis</i>	1

Taxon	Number of records
<i>Lithothamnion</i>	1
<i>Littorina littorea</i>	1
Littorinidae	1
<i>Luidia ciliaris</i>	1
<i>Mastocarpus stellatus</i>	1
<i>Membranoptera alata</i>	1
<i>Merlangius merlangus</i>	1
<i>Molva molva</i>	1
<i>Myxilla (Myxilla) incrustans</i>	1
<i>Nucella lapillus</i>	1
<i>Ophiura</i>	1
<i>Patella</i>	1
Pectinidae	1
<i>Pholas</i>	1
Phoronida	1
Pisces	1
<i>Platichthys flesus</i>	1
Pleuronectidae	1
<i>Polycarpa scuba</i>	1
Polyplacophora	1
<i>Polysiphonia</i>	1
<i>Polysiphonia stricta</i>	1
<i>Pomatoschistus pictus</i>	1
<i>Porphyra</i>	1
<i>Portumnus latipes</i>	1
<i>Ptilota gunneri</i>	1
Pycnogonidae	1
<i>Rhodomela confervoides</i>	1
<i>Rostanga rubra</i>	1
<i>Sagartia</i>	1
<i>Schizomavella linearis</i>	1
<i>Schottera nicaeensis</i>	1
<i>Scrupocellaria scruposa</i>	1
Scyphozoa	1
<i>Solea solea</i>	1
<i>Spanioplion armaturum</i>	1
<i>Suberites</i>	1
<i>Talochlamys pusio</i>	1
<i>Taonia atomaria</i>	1
Trochidae	1
Tunicata	1
<i>Urticina</i>	1
<i>Zeugopterus punctatus</i>	1