



FS 15: Studland Bay rMCZ

Seasearch Site Surveys 2015

This report summarises the results of surveys carried out during 2015 by Seasearch divers in the Studland Bay rMCZ. The aim of the surveys was to continue to add detailed records of the habitats and species found within the area. Particular attention was paid to the Habitat and Species FOCI¹ (features of conservation interest) identified in the Ecological Guidance on the designation of MCZs².

Studland Bay rMCZ was one of 27 MCZs listed for inclusion under 'tranche 2 designation' in February 2014³ (and re-labelled as a 'candidate MCZ' or cMCZ) but was removed from the official consultation⁴ in early 2015 as 'requiring further consideration'⁵. Officially⁶ it remains under consideration for inclusion in the third tranche of consultation and designations (scheduled for 2017-2018).

Physical Features of the Area

Studland Bay is a shallow, east-facing area on the western edge of Poole Bay, sheltered at the southern end from both the prevailing south-westerly winds and the east-west tidal currents of the English Channel. It contains a large proportion of the seagrass (*Zostera marina*) beds in Dorset, which have a coastal protection function as well as sequestering atmospheric carbon dioxide, and which are listed as a priority Biodiversity Action Plan (BAP)⁷ habitat. The seabed is predominantly sand with occasional small outcrops of rocky reef.

Features of the Marine Life

The *Zostera* meadows provide a nursery area for commercially important fish and shellfish (such as black bream (*Spondyliosoma cantharus*), pollack (*Pollachius pollachius*), cuttlefish (*Sepia officinalis*), sole (*Solea solea*)) as well as the protected or listed species *Hippocampus guttulatus* (spiny seahorse), *Hippocampus hippocampus* (short-snouted seahorse) and *Raja undulata* (undulate ray). Studland Bay is unique in the UK as the only known breeding location for both indigenous species of seahorse and all six species of pipefish have been recorded here, including the rare Nilsson's pipefish (*Syngnathus rostellatus*). In the bay, shallow water, sandy plains and outcrops of sandstone reef support a range of shellfish, including the native oyster (*Ostrea edulis*, a BAP/NERC and MCZ FOCI species), the Chinese-hat shell (*Calyptrea chinensis*), hermit and masked crabs, as well as a variety of burrowing bivalves and worms such as lugworm (*Arenicola* sp.) and sandmason worm (*Lanice conchilega*). They also support a variety of commercially important flatfish such as plaice (*Pleuronectes platessa*, also a BAP/NERC species) and sole (*Solea solea*). Andy Jackson's film of the undulate ray sighting is available to view at <https://vimeo.com/137064303>.

¹ <http://jncc.defra.gov.uk/page-4527>

² http://jncc.defra.gov.uk/PDF/100705_ENG_v10.pdf

³ <https://www.gov.uk/government/publications/marine-conservation-zones-february-2014-update>

⁴ <https://consult.defra.gov.uk/marine/tranche2mczs>

⁵

https://consult.defra.gov.uk/marine/tranche2mczs/supporting_documents/Studland%20Bay%20cMCZ%20site%20summary.pdf

⁶ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/492785/mcz-second-tranche-consult-sum-resp.pdf

⁷ The original UK-wide BAP list was used as reference source when superseded by the post-2010 biodiversity framework which created statutory national lists, but its use continues as shorthand for protected species/habitats. In England the relevant legislation is Section S41 of the Natural Environment and Rural Communities (NERC) Act 2006 (see <http://jncc.defra.gov.uk/page-5717> for further details).

The marine life of the Studland Bay seagrass meadows



The long-snouted/spiny seahorse (above left), cuttlefish (above right), dragonet (below left) and sole (below right).



Video screengrabs show the juvenile undulate ray (above left) and spiny seahorse (below left), both of which are **FOCI species** for this recommended/candidate MCZ.

Human Uses

Due to its geographically protected location, Studland Bay is a very popular site for recreational boating activities and provides a safe anchorage as well as private permanent moorings. The National Trust owns a number of beach huts and runs a popular education centre there; they estimate that Studland Bay receives *ca.* 1 million visitors every year (not including visitors arriving by boat, many of whom do go ashore).

Benefits of Protection

Fragmentation of the seagrass beds through physical damage caused by high levels of anchoring or bottom-towed fishing gear would have a severe direct impact on the diverse wildlife community as well as indirectly via their coastal protection and potential carbon sink roles.

Commercial fishing and recreational angling activities would both indirectly benefit from an increased population of fish and crustaceans in this area. Management measures such as minimum landing sizes afford a certain amount of protection but the area is not covered by the Southern IFCA byelaws⁸ at present.

Careful management of the site to enable its responsible and sustainable use would benefit recreational boaters and other visitors as well as the local fishing industry. It would also potentially open the bay up to more low impact recreational watersport use such as kayaking and snorkelling which is currently limited by the unrestricted boating activity, with a possible knock-on effect of benefitting the local business community.

Dorset Wildlife Trust have produced a booklet outlining their vision for the future of Studland Bay – find it and other information about this site at www.dorsetwildlifetrust.org.uk/studlandbay.html .

Acknowledgements

This report has been compiled by Charlotte Bolton (Dorset Seasearch Co-ordinator supported by Dorset Wildlife Trust) based on Seasearch Observation records made by Julie Hatcher, Andy Jackson and Steve Trehwella. Photos as credited; copyright is retained by the photographer. Seasearch would like to thank the volunteer divers for their records and images.

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⁸ <http://www.southern-ifca.gov.uk/byelaws> (particularly those pertaining to towed bottom gear or gathering of resources in seagrass beds).

Technical Appendix

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

- dive details
- biotope list
- species list

The data have been validated, verified and entered into the Marine Recorder database by Charlotte Bolton. A copy of the data in Snapshot format is available on request, or it can be viewed on the NBN Gateway Interactive Map Tool (<https://data.nbn.org.uk/imt/>).

MR Survey Name:

“2015 Seasearch Survey of Studland Bay rMCZ”

MR Survey Key:

MRLRC0150000000A

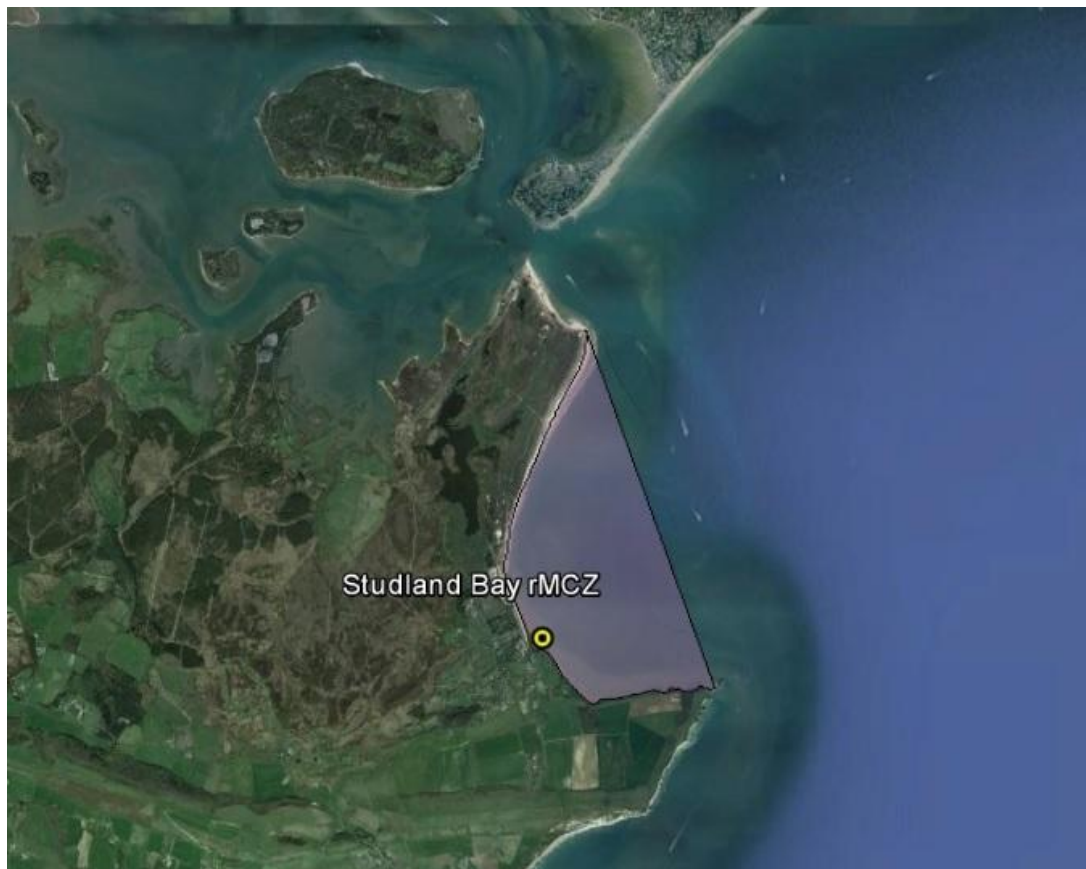
Designated features:

Broad Scale Habitats: Intertidal mud; intertidal sand and muddy sand; Subtidal mixed sediments; Subtidal sand; Seagrass beds (HOCl_17)

Species FOCI: Spiny seahorse, *Hippocampus guttulatus* (SOCl_15); Short-snouted seahorse, *Hippocampus hippocampus* (SOCl_16); Native oyster, *Ostrea edulis* (SOCl_22); Undulate ray, *Raja undulata* (SOCl_33)

Dive details

Date	Site Name/Position (OSGB36)	Surveyor(s)	Form(s)
07/08/2015	Middle Beach SZ 038 832	Julie Hatcher, Steve Trehwella	DT15/079
10/08/2015	Middle Beach SZ 036 829	Andy Jackson, Steve Trehwella	DT15/081
11/08/2015	Middle Beach SZ 037 833	Andy Jackson, Steve Trehwella	DT15/080



Sublittoral Habitats/Biotopes recorded

Description	MNCR 15.03 Biotope Code†
<i>Zostera marina</i> / <i>Angustifolia</i> beds on lower shore or infralittoral clean or muddy sand	SS.SMp.SSgr.Zmar

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

Species List

No. of unique taxa recorded = 25

‡ Abundance recorded on the SACFOR scale⁹, plus P for 'present' if no abundance recorded

1. Cnidaria (anemones, hydroids, corals)

Scientific name	Common name	Abundance‡	Notes
<i>Anemonia viridis</i>	Snakelocks anemone	C	Climate-change indicator species

2. Crustacea (crabs, lobsters, barnacles)

Scientific name	Common name	Abundance‡	Notes
<i>Macropodia</i> sp.	Long-legged spider crab	R/P	
<i>Maja squinado</i>	Spiny spider crab	R/P	
<i>Pagurus</i> sp.	Hermit crab	R	

3. Mollusca (snails, bivalves, nudibranchs)

Scientific name	Common name	Abundance‡	Notes
<i>Ostrea edulis</i>	European or native oyster	O/P	OSPAR / BAP/NERC / FOCI species
<i>Sepia officinalis</i>	Cuttlefish	O/P	

4. Tunicata (sea squirts)

Scientific name	Common name	Abundance‡	Notes
<i>Botryllus schlosseri</i>	Star sea squirt	R	

5. Pisces (fish)

Scientific name	Common name	Abundance‡	Notes
<i>Atherina presbyter</i>	Sand smelt	O/P	
<i>Callionymus</i> sp.	Dragonet	C/O/P	
<i>Dicentrarchus labrax</i>	Sea bass	C	
<i>Gobius niger</i>	Black goby	R	
<i>Gobiusculus flavescens</i>	Two-spot goby	C	
<i>Hippocampus guttulatus</i> (male, gravid male and female)	Spiny/long-snouted seahorse	R/P	BAP/NERC, Species FOCI
<i>Labrus bergylta</i> (juvenile)	Ballan wrasse	C	
<i>Pleuronectes platessa</i> (juvenile)	Plaice	P	BAP/NERC species
<i>Pollachius pollachius</i> (adult and juvenile)	Pollack	C/O/P	
<i>Pomatoschistus minutus</i>	Sand goby	C	
<i>Raja undulata</i> (adult and juvenile)	Undulate ray	R/P	BAP/NERC, Species

⁹ <http://jncc.defra.gov.uk/page-2684>

Scientific name	Common name	Abundance‡	Notes
			FOCI
<i>Solea solea</i> (adult and juvenile)	Common or Dover sole	R/P	
<i>Spondylisoma cantharus</i> (adult and juvenile)	Black bream	C/P	
<i>Sympodus melops</i>	Corkwing wrasse	C	
<i>Syngnathus acus</i>	Greater pipefish	R/P	
<i>Syngnathus rostellatus</i> (juvenile)	Nilsson's pipefish	R	

6. Algae (seaweeds)

Scientific name	Common name	Abundance‡	Notes
<i>Sargassum muticum</i>	Jap weed, wireweed	C	Non-native species

7. Angiosperms (flowering plants)

Scientific name	Common name	Abundance‡	Notes
<i>Zostera marina</i>	Common eelgrass	C	BAP/NERC habitat (beds), habitat FOCI (beds)

Dorset Wildlife Trust (DWT), Brooklands Farm, Forston, Dorchester, Dorset, DT2 7AA; Tel: 01305 264620; Fax: 01305 251120.

Registered Charity No. 200222. For more information about DWT, our work and the Seasearch project, please visit www.dorsetwildlifetrust.org.uk or email seasearch@dorsetwildlifetrust.org.uk

Seasearch is a partnership between the Marine Conservation Society (MCS), The Wildlife Trusts, statutory nature conservation bodies and others, co-ordinated nationally by MCS and co-ordinated and delivered locally in England by Wildlife Trust and MCS co-ordinators. For more information on Seasearch and to see all of the partners involved nationally, please visit www.seasearch.org.uk or email info@seasearch.org.uk

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