Skomer Marine Conservation Zone annual report 2025/26

NRW Evidence Report No: 956

Kate Lock, Mark Burton, Jen Jones, Ali Massey

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Dyma Adroddiad Blynyddol Parth Cadwraeth Morol Sgomer i'r Pwyllgor Cynghori. Mae'r Pwyllgor Cynghori yn cynnwys sefydliadau ac unigolion sydd â diddordeb yn yr ardal y mae'r Parth Cadwraeth Morol yn ei gwmpasu.

Mae'r adroddiad yn crynhoi pob agwedd ar waith y Parth Cadwraeth Morol gan gynnwys dadansoddiad o waith maes staff, gwaith ystâd, defnydd hamdden o'r warchodfa, digwyddiadau, cyswllt, wardeinio, goruchwylio, monitro a gwaith ymchwil. Mae hefyd yn cynnwys canlyniadau rhai prosiectau monitro a chrynodebau o adroddiadau a gyhoeddwyd.

Executive summary

This is the Skomer Marine Conservation Zone (Skomer MCZ) Annual Report to its Advisory Committee. The Advisory Committee is made up of organisations and individuals with an interest in the area covered by the Skomer MCZ.

The report summarises all aspects of the work of the Skomer MCZ including a breakdown of staff fieldwork, estate work, recreational use of the reserve, incidents, liaison, wardening, patrol, monitoring and research. Also included are results of some monitoring projects and summaries of published reports.

2. Summary of the year

Thankfully due to good conditions many of the dive monitoring projects were completed during May and June, by late summer the weather was not so kind but luckily a calm spell in October allowed us to finished all our diving work.

Settled weather during spring tides allowed all our intertidal site surveys to be completed including MarClim sites on Skokholm and mainland Pembrokeshire. The Hopgang lichen monitoring site was completed with the aid of John Archer Thomson. John was contracted to analyse the splash zone lichen data and a report has been completed.

A return to our sea fan sites found that a further 8 seafans were missing which will be re-checked and confirmed in 2026. The continued loss of sea fans, along with the poor condition we are observing due to large numbers of catshark eggs, necrosis (dead tissue) and other attached seaweeds and animals, is a concern. PhD student Kaila Wheatley, from Exeter University, joined the team to set up a small research area at one site and transfer some juvenille seafans grown in an aquarium. The transfer went well and they will be checked in spring 2026 to see if they have survived the winter.

In 2025 the volunteer diving survey was territorial fish, urchin, starfish and crustacean communities on reefs. As always, we are grateful for the help and enthusiasm of our volunteer divers. They had a successful weekend surveying in June but sadly the July weekend was too stormy, so our team along with local volunteers managed to continue the survey whenever we could to complete all the sites.

The Skomer MCZ team supported other marine monitoring surveys during 2025, these included Water Environment Regulations (2017) water quality sampling and Water Framework Directive (WFD) fish, saltmarsh surveys and Pembrokeshire SAC diving.

3. Staff

3.1 Staffing

The staff complement at Skomer MCZ: Kate Lock, Mark Burton, Jen Jones and Ali Massey, make up the NRW team based at Martins Haven. Kate and Mark are both full-time, Ali works year-round on a 3-day week. Jen is full time but splits her year: 6 months with the Skomer MCZ from April to September, and then from October to March completes other work within the Marine Monitoring team. This allows the Skomer MCZ to field a 4-person team during the diving field season as required for HSE diving at work, and to complete the busy fieldwork schedule.

The Skomer MCZ team is part of the Marine Monitoring, Assessment and Reporting Team (MMART) within NRW's Marine Service. The MMART team is responsible for delivering all marine monitoring work in Wales and has a team of skilled staff that support each other's work areas. In 2025 the Skomer MCZ team helped deliver Water Framework Directive (WFD) fish and saltmarsh surveys. We also complete the Pembrokeshire MarClim shore surveys, SAC Lagoon monitoring, SAC dive monitoring and conducted water sampling at different sites during the winter months.

Emma Lowe and Mair Elliot from the NRW Marine Area Advice and Monitoring team joined us for the intertidal survey and lagoon surveys as an opportunity to gain valuable experience.

3.2 Volunteers

Diving volunteers, qualified to dive under HSE regulations, continued to supplement our own diving team when required. In 2025 this was particularly valuable with the territorial fish, urchin, starfish and crustacean communities survey. A big thank you to Phil Newman, Blaise Bullimore, Kerry Lewis, Francis Bunker, Jon Moore, James Perrins, Becky Tooby and Kaila Wheatley.

In 2025 we welcomed a team of volunteer recreational divers for one weekend to complete the territorial fish, urchin, starfish and crustacean communities survey (see Section 8.1.12 and 8.1.13). A second weekend was planned but sadly was stormed off.

Figure 3.1 Volunteer recreational divers 2025

3.3 Development and training

In April 2025 the Skomer MCZ team, along with volunteers Becky Tooby and Blaise Bullimore, completed a one-day dive refresher training day. The training allowed the team to practice diver recovery drills and become familiar with dive rescue operations on *Skalmey*.

The team all completed RYA first aid refresher training and, to comply with changes to Marine Coastguard Agency (MCA) workboat codes, completed a small boats safety management training course.

In June Francis Bunker delivered an algae identification course for the team in Marloes village hall and we were joined by placements students from Celtic Deep. Francis dived and collected samples from Martins Haven for us to identify.

Figure 3.2 Francis Bunker delivering algae identification training.

Figure 3.3 Algae sample identification.

In September the team attended a two-day intertidal training course in North Wales, focussing on survey planning and risk management along with rescue scenarios in muddy shores, open coast and fast flowing water.

Figure 3.4 Rescue drills in muddy saltmarsh ditch.

Figure 3.5 Rescue drills in fast flowing water

3.4 Health and safety

Skomer MCZ team continue to maintain health and safety documentation linked to diving and boat operations as well as more routine office-based safety elements. Diving and boat safety and rescue procedures are tested during the annual training days.

A new workboat code from the Maritime and Coastguard Agency (MCA Workboat Code Edition 3) came into force in December 2023, to be fully complied with by 2026. These codes will apply to both *Skalmey* and *Morlo* in March/April 2026. To comply with the code a new Safety Management System (SMS) document has been prepared for each boat.

3.5 Diving operations

Diving operations at Skomer MCZ continue to operate under the HSE's Scientific and Archaeological Diving Agreed Code of Practice, with staff assuming the legal responsibilities associated with the role of diving supervisor, and Kate acting as NRW's Skomer Dive Project Manager.

Harry Goudge in the MMART team acts as NRW's Dive Officer and is the representative on the Scientific Diving Advisory Committee, which is the HSE-recognised representative body for the Scientific and Archaeological diving sector.

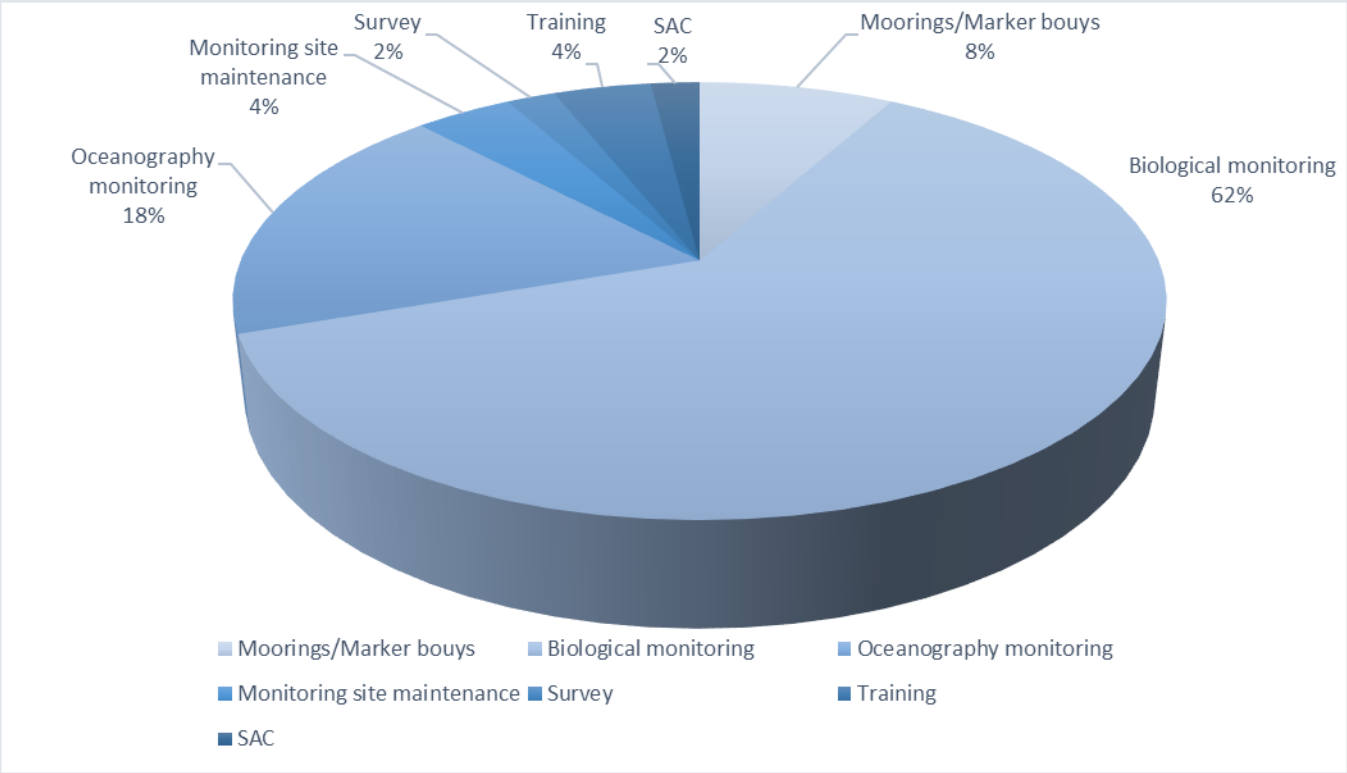
In 2025, 48 dive days were completed with a total of 207 dives and 124 hours logged underwater, the average dive time was 36 minutes (see Table 3.1). 20% of the dives were completed by volunteers supporting the Skomer MCZ team.

Biological monitoring contributed to 62% of the dive time and 18% on oceanographic monitoring projects (see Figure 3.6).

Table 3.1 Summary of Skomer MCZ Diving Activity 2025

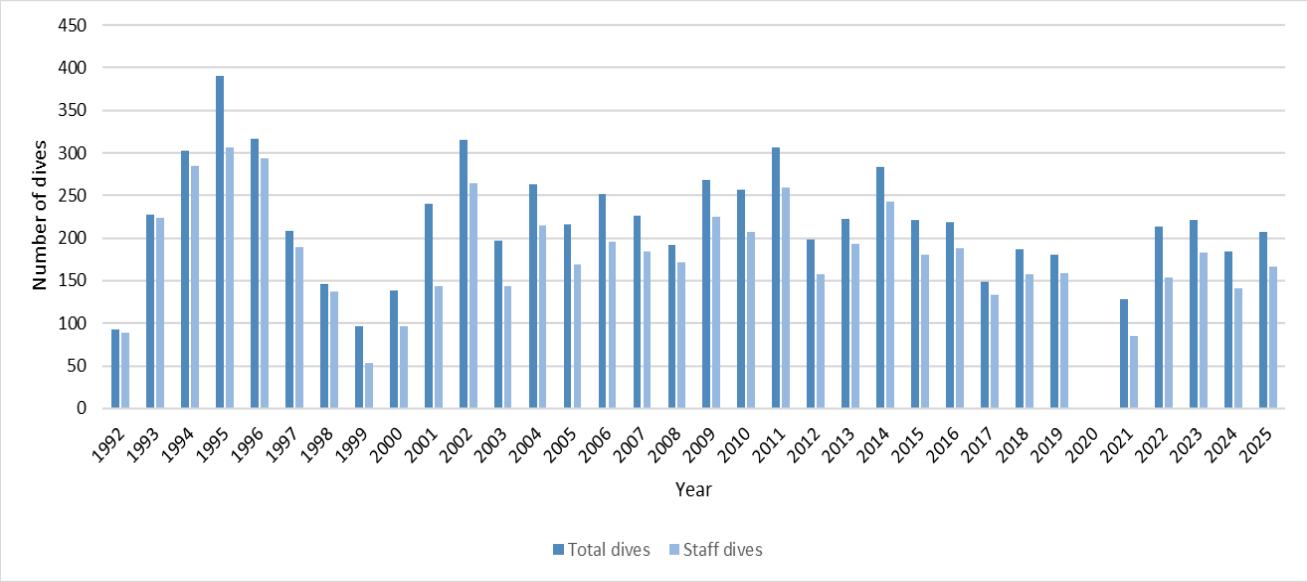
Dive information	MCZ staff	Volunteer/support divers	Total
Number of Dives	166	41	207
Dive time (mins)	5526	1940	7466
Dive time (hours)	92.1	32.3	124.4
Average dive time (mins)	33	47	36

Figure 3.6 Skomer MCZ Diving Operations 2025 (percentage of total dives)



A summary of Skomer MCZ diving activity from 1992 to 2025 is shown in Figure 3.7.

Figure 3.7 Summary of Skomer MCZ diving activity 1992 to 2025



4. Estate

4.1 Buildings

Skomer MCZ buildings include the office and exhibition centre at Fisherman's Cottage in Martins Haven and the industrial unit in Milford Haven, where larger and more robust items of equipment are stored. The NRW facilities team supports with routine building inspections and co-ordinates maintenance of the buildings.

All waste handling for buildings, use of consumables and energy are monitored in accordance with the BSI ISO14001 environmental standard.

Emergency preparedness and response plans for pollution incident response are in place for both Fisherman's Cottage and Unit 4, these were both tested in 2025.

4.2 Boats

A summary of boating activity from 2015 to 2025 is given in Table 4.1.

Table 4.1 Summary of Skomer MCZ Boating Activity 2015-25 (Survey year recorded from April to end March) Staff = Skomer MCZ staff, other NRW staff and volunteers, Staff days at sea = total number of person days at sea, Staff seatime = total number of person hours at sea.

a) Days at Sea

Days at sea	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Skalmey	73	69	49	79	65	None	62	60	44	30	56
RIB *Morlo*	32	34	36	40	33	None	25	34	47	46	41
Total	105	103	85	119	98	None	87	94	91	76	97

b) Staff days at sea

Staff days at sea	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Skalmey	243	256	175	314	256	None	225	229	177	117	217
RIB *Morlo*	88	108	97	115	83	None	46	87	125	130	113
Total	331	364	272	429	319	none	271	316	302	247	330

c) Staff sea time (hours)

Staff sea time	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Skalmey	893	973	563	847	805	None	887	843	691	424	654
RIB *Morlo*	277	337	275	403	280	None	164	319	367	365	313
Total	1170	1310	838	1250	1085	none	1052	1167	1058	789	967

d) Engine hours

Engine hours	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Skalmey	284	237	145	259	207	None	216	207	156	100	137
RIB *Morlo*	98	105	97	129	105	none	85	114	124	132	105
Total	382	342	242	388	312	none	301	321	280	232	242

Skalmey was back in action in 2025 and spent 56 days at sea between April 2025 to end March 2026, and logged 137 engine hours. *Skalmey* is moored at Martins Haven during the fieldwork season from April to October and is berthed at Neyland marina during the winter or during bad weather. *Skalmey* is used for all diving work and survey work needing deck space for large equipment and lifting operations.

Figure 4.1 Skalmey at its berth in Neyland marina.

Following break-down issues linked to the fuel injectors in both 2023 and 2024 it was decided to switch fuels from marine diesel to hydrogenated vegetable oil (HVO). The fuel tanks on Skalmey and the bowser were 'pressure cleaned' to enable the switch in fuels. All HVO fuelling is completed using the bowser at either Martins Haven or in Neyland.

During the winter work was completed on Skalmey. Additional work and modifications were needed to enable it to comply with the changes to Marine Coastguard Agency (MCA) workboat code. This included electrical survey, fire pump and alarm system and emergency battery supply system to comply with safety requirements.

Morlo the rigid hull inflatable boat spent 41 days at sea and logged 105 engine hours between April 2025 to end of March 2026 (Table 4.1). *Morlo* was used on weekend patrols, plankton and water sampling and for intertidal survey work. *Morlo* is moored at Martins Haven during the field work season from April to October and stored in the Milford Unit during the winter.

During the season on-going repairs were needed regularly as there were slow leaks with the inflatable tubes. The hull and tubes are now 22 years old and were in need of either a full-tubes rebuild or a replacement boat. A new replacement boat is planned and should be ready for the 2026 season.

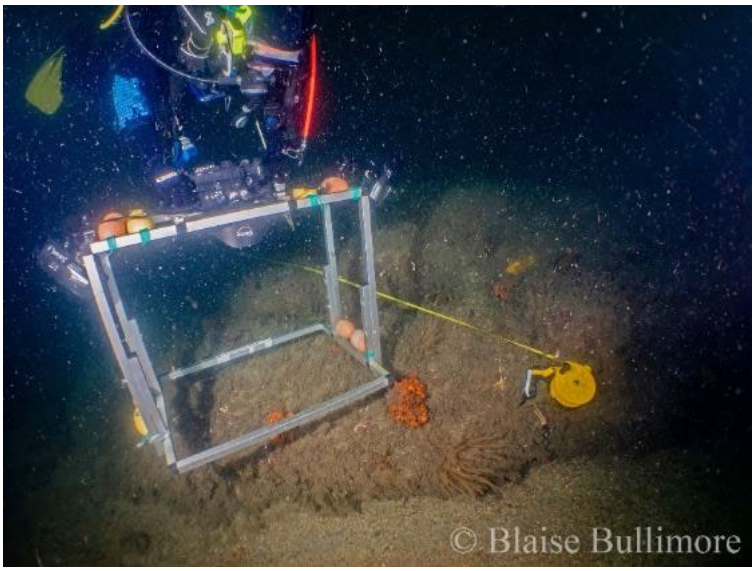
Suzimar the small inflatable tender, *Suzimar*, was, as ever, useful for our lagoon sampling effort, especially at Carew millpond.

4.3 Optical, photographic and scientific equipment

Photographic equipment continues to be serviced by a contractor on an annual basis with routine maintenance carried out by Skomer MCZ staff.

The primary camera set up for dive monitoring projects is a housed digital SLR and underwater lights fixed to a large framer as shown in Figure 4.3. A smaller framer is used for the close-up photo projects. A new set of underwater lights were bought to replace old kit.

Figure 4.3 Large underwater framer with camera and lights (photo credit: Blaise Bullimore).



A GoPro video camera and housing is used to complete RUVS (Remote Underwater Video System) surveys in North Haven eelgrass bed. A modified lobster pot was used to house the camera, (Figure 4.4) preventing it being damaged. To expand the capacity for RUV surveys a second camera and housing along with video lights has been purchased to use in the 2026 season.

Figure 4.4 GoPro fixed in modified lobster pot.

All scientific equipment is serviced and calibrated according to manufacturer recommendations with minor maintenance (battery replacement, etc.) carried out by Skomer MCZ staff.

The meteorological station was serviced in March 2026, this included repairing the rain gauge.

4.4 Vehicles

The Isuzu 4-wheel-drive pickup truck continues to be a ‘good workhorse’. The sliding tray installed in the boot makes loading and unloading much easier, although it is showing its age and needs constant maintenance. The RIB trailer and box trailer are serviced annually by a local contractor.

The fuel bowser with its powered pump has made fuelling *Skalmey* at Martins Haven much easier. As noted, in 2025, the tank was pressure cleaned to allow the fuel to be switched from diesel to HVO. The tank is double skinned to prevent spillages, and we carry absorbent materials should spillage occur. The bowser trailer is serviced and maintained by a NRW contractor.

4.5 Marine estate work

The moorings for Skomer MCZ boats in Martins Haven were maintained at the beginning of the season by staff who also completed routine mooring checks during the season.

Skomer MCZ staff continue to maintain visitor moorings in North Haven as part of the site’s management to protect the eelgrass bed in the bay. The moorings normally operate from Easter through to autumn at which point the buoys and riser ropes are replaced with temporary marker buoys advising “no mooring”. One visitor mooring buoy went missing in July 2025, the rope riser was found to have been cut, the buoy was replaced with a new one.

Figure 4.5 Boats using visitor moorings in North Haven

The North Haven “no-anchoring” buoys and wildlife signage buoy (see Section 5.2) were deployed at the beginning of the season. These are all fixed to the seabed using eco-anchors, two were used for each buoy for extra security. The eco- anchors are 1.2m in length and screw into the sediments like a giant corkscrew. The aim of the eco-anchors is to replace the use of large mooring blocks and chains which damage the eelgrass bed.

The underwater battery-powered drill was used for site marking. Unfortunately, when taking down to one of the deeper sites it failed and on return to the surface was found to be flooded. The internal mechanism is not repairable so a new drill will be sought.

5. Management

5.1 Wardening and patrol

Skomer MCZ staff carried out boat patrols on 19 Sundays and Bank Holiday weekend days between the end of April and September 2025. Two days over May Bank Holiday weekends were lost due to bad weather. Observations of visiting recreational and commercial users were also made during routine monitoring surveys throughout the season.

The patrols are not just for us to keep an eye on visitors, but also serve a valuable purpose in providing a point of contact for visiting vessels to obtain information about Skomer MCZ, and a way for staff to promulgate the byelaws and codes of conduct to visiting recreational users (see Section 5.2).

We are fortunate that the majority of recreational users and sightseeing commercial users are coming to the site to enjoy its wildlife and are therefore well disposed towards the aims of Skomer MCZ. However, our visible presence helps deter those whose activities may be illegal (under fishery or conservation byelaws) or at least contrary to the voluntary codes of conduct. See Section 6 for all data relating to visitors and use of Skomer MCZ.

In the interest of efficiency, mapping of fishing effort (see Section 6.1), sampling for water quality and plankton monitoring (see Sections 8.2.2, 8.2.4 and 8.1.5) are carried out during weekend patrols.

5.2 Information

The Skomer MCZ User Regulation leaflet has been welcomed, see Figure 5.1. The leaflets were distributed to boat visitors during weekend boat patrols and were available at Martins Haven from a dispenser positioned next to the zone map display panel.

Boat users, including groups of canoeists, were informed about changes to breeding protections zones for both the seals and seabirds, in particular the no entry area on the east side of North Haven. The information has been supported by a sign fixed to the no anchoring buoy located on the east side of the bay (installed in 2023), and a new signage buoy added in 2024. The signs requests that all water-based users keep 50m away from the sea bird cliffs. The signs have been made in collaboration with the South and West Wales Wildlife Trust and the Pembrokeshire Marine Code team at Pembrokeshire Coastal Forum, see Figure 5.2.

The Skomer MCZ booklet and seal watching guide continue to be dispensed via the exhibition room (see section 9.1).

Figure 5.1 Skomer MCZ User Regulation Zone Map, byelaws and codes of conduct (PDF available here)

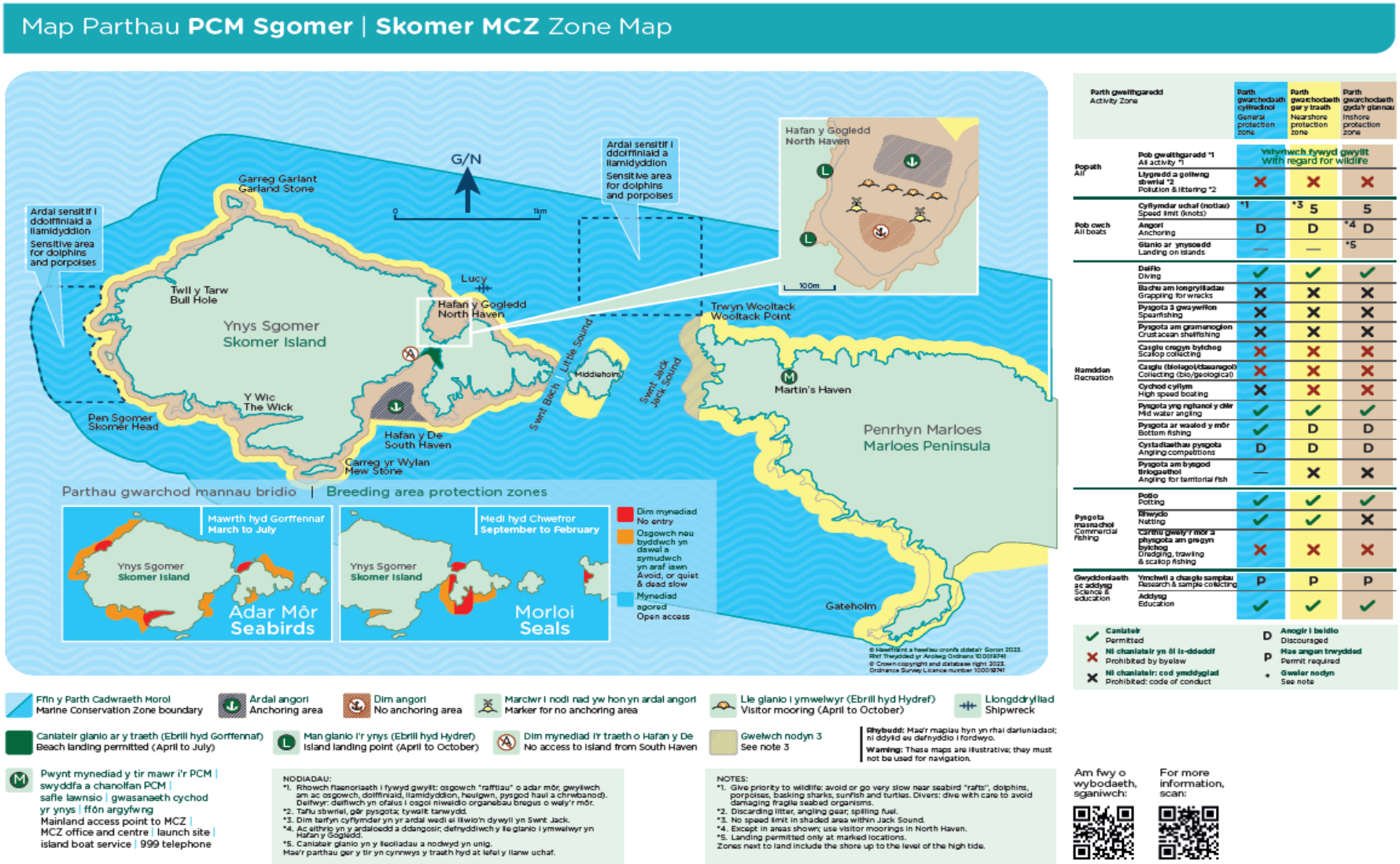
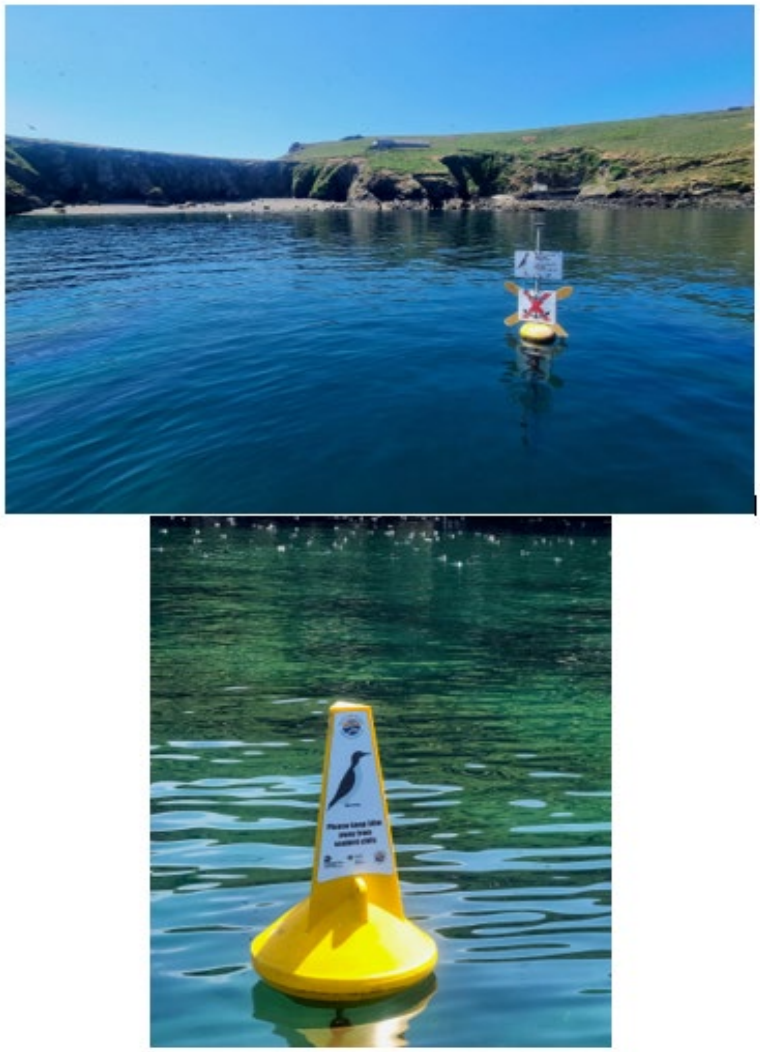


Figure 5.2 Seabird sign fixed to ‘no anchoring’ buoy and wildlife signage buoy.



5.3 Management issues

5.3.1 Dredging/beam trawling

No illegal dredging or beam trawling were recorded or reported in 2025.

5.3.2 Potting

Commercial fishing vessels operating in the Skomer MCZ are listed in Section 6.1 and fishing effort records are presented in Figures 6.1 and 6.2. See Section 5.3.8 for disturbances of cliff-nesting birds by fishing boats.

5.3.3 Tangle and gill netting

No tangle or gill netting were observed or reported in 2025.

5.3.4 Collection of shellfish by divers

No collection of shellfish by divers was observed or reported in 2025.

5.3.5 Collection of curios

No collection of curios was observed or reported in 2025.

5.3.6 Collection of specimens for education and research

NRW Skomer MCZ permits were issued to:

- Francis Bunker for seaweed collection for the purpose of education and research; he has submitted a species list for his 2024 and 2025 collections.
- Kathryn Davies, postgraduate student at Bangor University for sponge collection to support her research.

5.3.7 Disturbance or entanglement of seals

Seal disturbance at Rye Rocks was recorded by Skomer Island staff: in June canoeists went too close to the rocks and in August two dive boats caused seals to enter the water.

Monofilament line and netting were the most visible pollutants affecting seals in 2025.

Seal watching leaflets, which include information on how to safely observe with minimal disturbance, were dispensed in the visitor exhibition room and by National Trust car park attendants. National Trust seal signs located at Martins Haven were also used to inform visitors on how to minimise disturbance.

5.3.8 Disturbance to cliff-nesting birds

In 2025 Skomer Island staff logged a recreational boat in the Wick but no significant disturbance was reported. In May a fishing boat was recorded with pots in the Wick for two weeks.

Three canoeists were spotted under the east cliffs in North Haven, they were provided with the User Regulations leaflet and were apologetic.

5.3.9 Spearfishing

In July 2025 a spear fisherman sent an email enquiry to clarify the Skomer MCZ boundary along the north Marloes peninsula and to ask if spearfishing was permitted. Information was provided regards the boundary area and the voluntary codes of conduct and he agreed to follow these: ‘Personally I will not spearfish in the MCZ as I do not want to cast

any bad light towards our small community of local spear fishermen and I'm pretty sure that the South West Wales Spearfishing group will also adhere to this'.

During the discussion he requested that it should be acknowledged that spear fishing is considerably more ethical in its fishing ethos (compared to other fishing methods) with its selective harvesting and very low environmental impact. It was added that as an example of the spearfishing community's commitment to the marine environment, they have collected multiple lead weights and fishing lines during their dives this year.

5.3.10 Angling

See Section 6.2 for records of visiting anglers.

Although numbers of anglers recorded in Skomer MCZ was low in 2025, especially shore anglers, sea bed angling litter still presents a problem where angling gear gets snagged on the seabed.

Neptune's Army of Rubbish Collectors (NARC) have continued to clear seabed litter, including lost angling tackle, from sites in the Skomer MCZ, (See Section 5.3.14). They have also provided information advising anglers how best to avoid snagging and losing tackle in the Martins Haven area, both on-line and in the form of paper leaflets. Leaflet dispensers are positioned next to the two 'angling bins' located at the entrance to the Deer Park and besides the coast path at Martins Haven beach.

The angling bins at Martins Haven continue to be used, they are designed specifically for anglers to safely dispose of broken hooks and line, although all sorts are put in them. The bins are emptied during the year by Skomer MCZ staff (Figure 5.3).

Figure 5.3 Angling waste bin located at Martins Haven with angling litter and rubbish emptied from bins.

5.3.11 Mooring and anchoring

All vessels appear to be complying well with the no-anchoring Code of Conduct, and there have been no reports of vessels anchoring other than in the permitted areas of North and South Haven.

The visitor moorings in North Haven continue to be popular with all visiting vessels. One visitor mooring buoy went missing in the summer, the rope riser was found to have been cut, the buoy was replaced with a new one. Subsequently the buoy was found on a beach near St Davids, it was recognised by one of our recreational diving volunteers in the area and was returned.

5.3.12 Wrecks

The Lucy wreck is marked with a surface buoy and continues to be a popular dive site.

5.3.13 Oil pollution

No oil pollution was recorded at Skomer MCZ during the 2025/26 season.

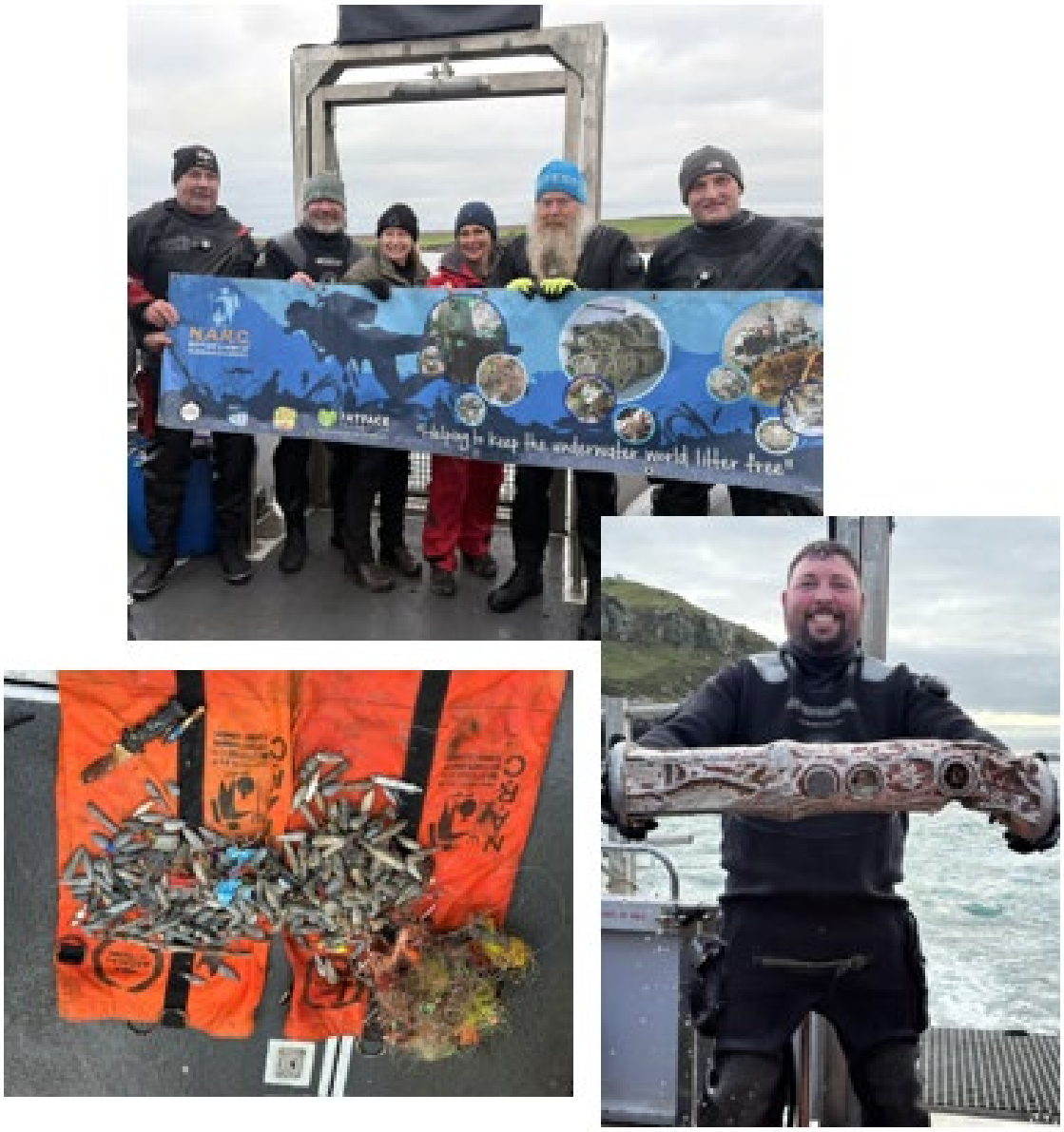
5.3.14 Litter

Neptunes Army of Rubbish Cleaners (NARC) have been busy recovering heavily encrusted lost fishing pots from sites around Skomer. Many of these are still actively ghost fishing, the crabs and fish found are released back to the sea and the pots cleaned of attached living animals.

NARC have also been clearing angling line and weights from sites on the North Marloes Peninsula. In one day, 250 angling weights along with monofilament line was cleared and several single-use vapes. On one dive off Wooltack Point they also found what has been identified as a Russian submarine tracking device.

NARC's commitment to cleaning a wide variety of litter from the seabed around Pembrokeshire, including annual clean-ups in the Skomer MCZ is incredible. We are so grateful to their teams of volunteer divers (Figure 5.4).

Figure 5.4 NARC volunteers, angling weights and submarine tracking device.



Litter has been picked up from Martins Haven beach and at sea throughout 2025. In our Milford unit we store: fishing net and ropes, plastic containers and broken buoys, collected from sites within the Skomer MCZ and also by the community from Marloes beach. In July we took a trailer load up to Sea Trust's Recyle Môr project in Fishguard to sort for re-use and recycling.

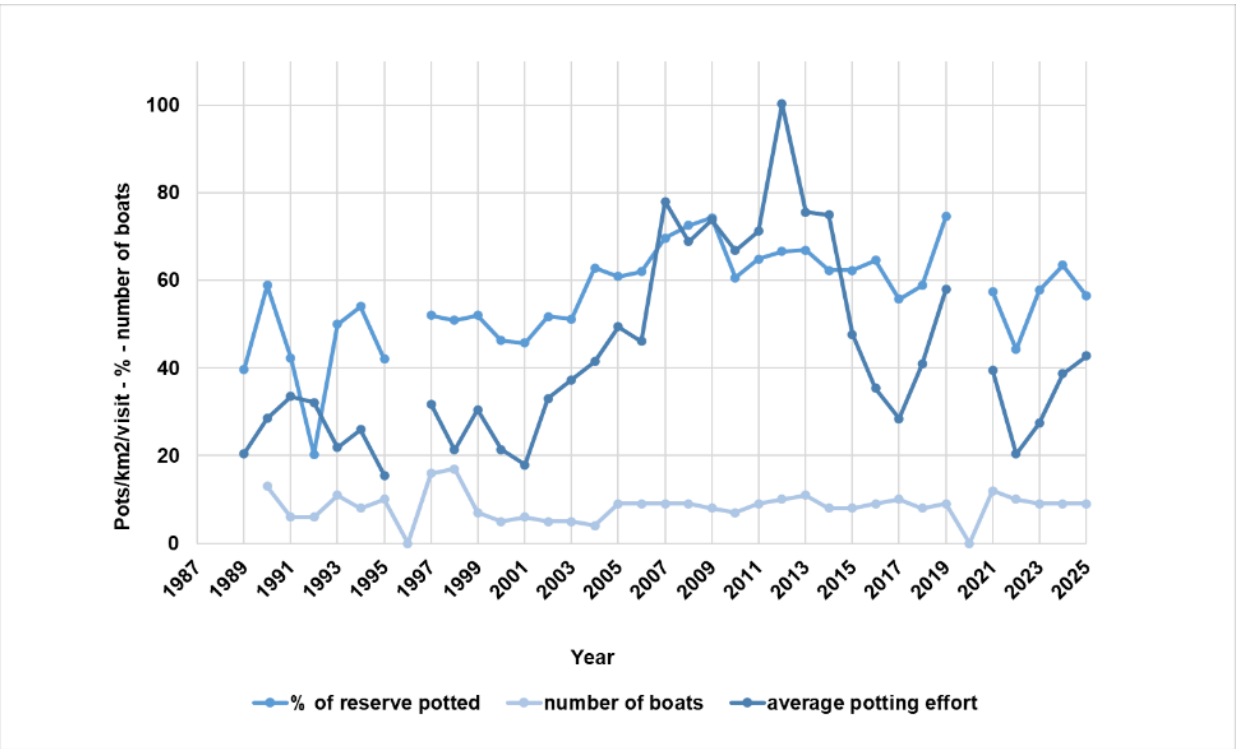
Sea Trust and NARC are collaborating with Pembrokeshire business *Willow and Waves* which is re-purposing salvaged fishing rope to make a large range of products and run local community craft workshops.

6. Visitors and use of the Skomer MCZ

6.1 Commercial use

Fishing vessels recorded (or whose gear was recorded) operating within Skomer MCZ during 2024 included: *Emma Jane* (M119), *Marie Louise* (M36), *Talisman* (M38), and *Wren & Rose* (M75).

Figure 6.1 Summary of fishing effort within Skomer MCZ 1989 to 2025



The number of commercial fishing vessels operating within Skomer MCZ has remained steady over the past 15 years. However, fishing effort has varied substantially. Effort reached a peak in 2012 and then declined until 2017. After 2017 there was a rapid increase up to 2019. No surveys were conducted in 2020. Both fishing effort and the proportion of the reserve that is fished decreased in 2022 but a slight increase was recorded in 2023 and again in 2024 and 2025 (Figure 6.1).

The distribution of fishing effort in 2025 is shown in Figure 6.2, and the potting intensity at the main Skomer MCZ survey areas from 1989 to 2025 is shown in Figure 6.3.

The highest density of fishing is taking place along the North Marloes Peninsula, Jack Sound, the north-east coast of Skomer and around the Garland Stone and Bull Hole on the north-west coast. The north Skomer areas cover a high proportion of the sea fan *Eunicella verrucosa* and ross coral *Pentapora foliacea* monitoring sites.

Figure 6.2 Pot fishing intensity map within Skomer MCZ 2029 (Density of pots per km^2)

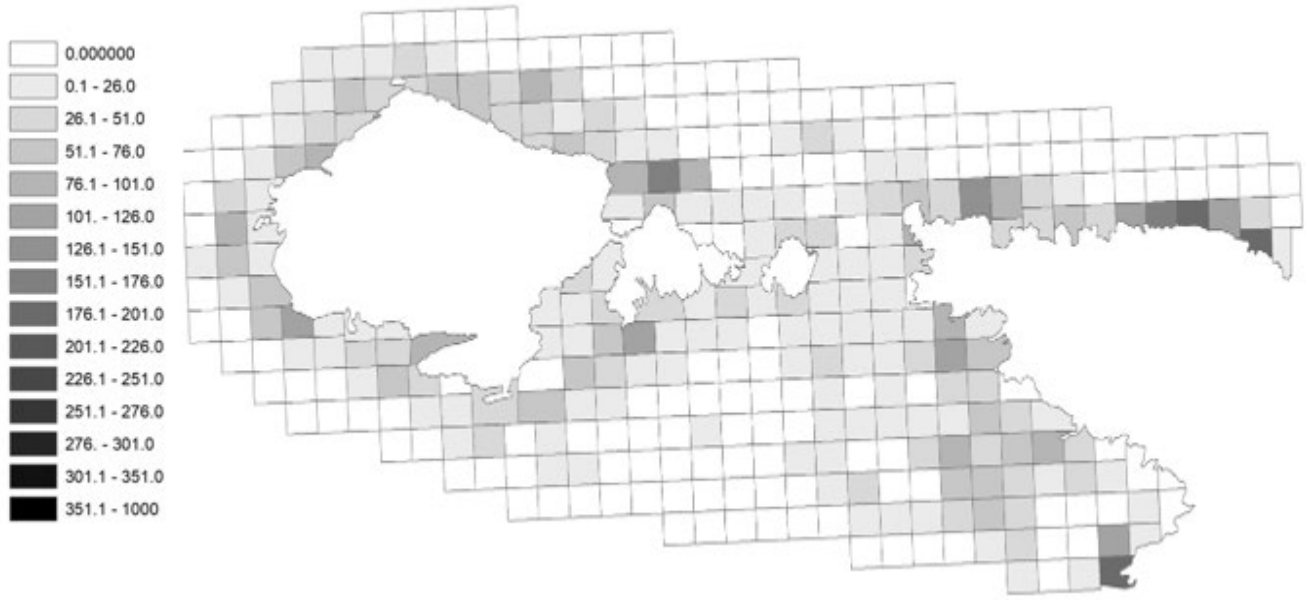
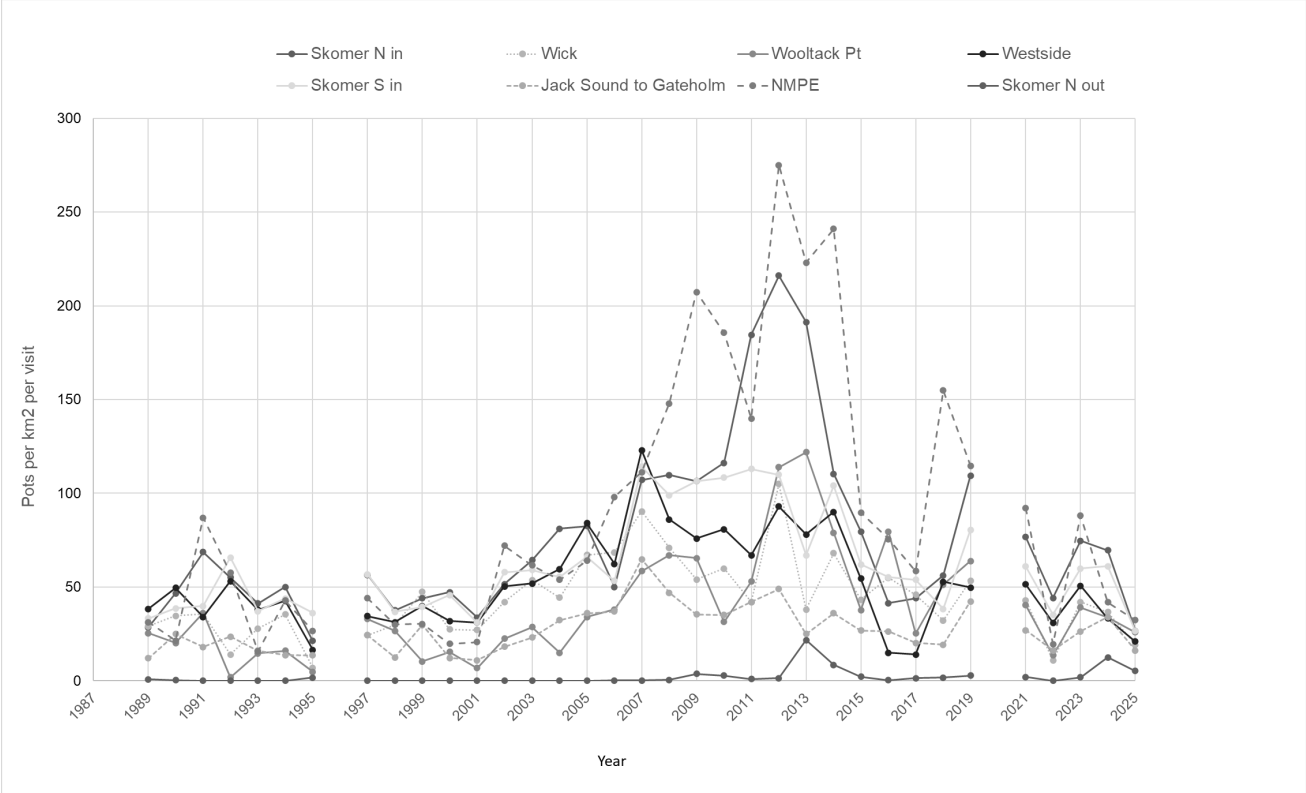


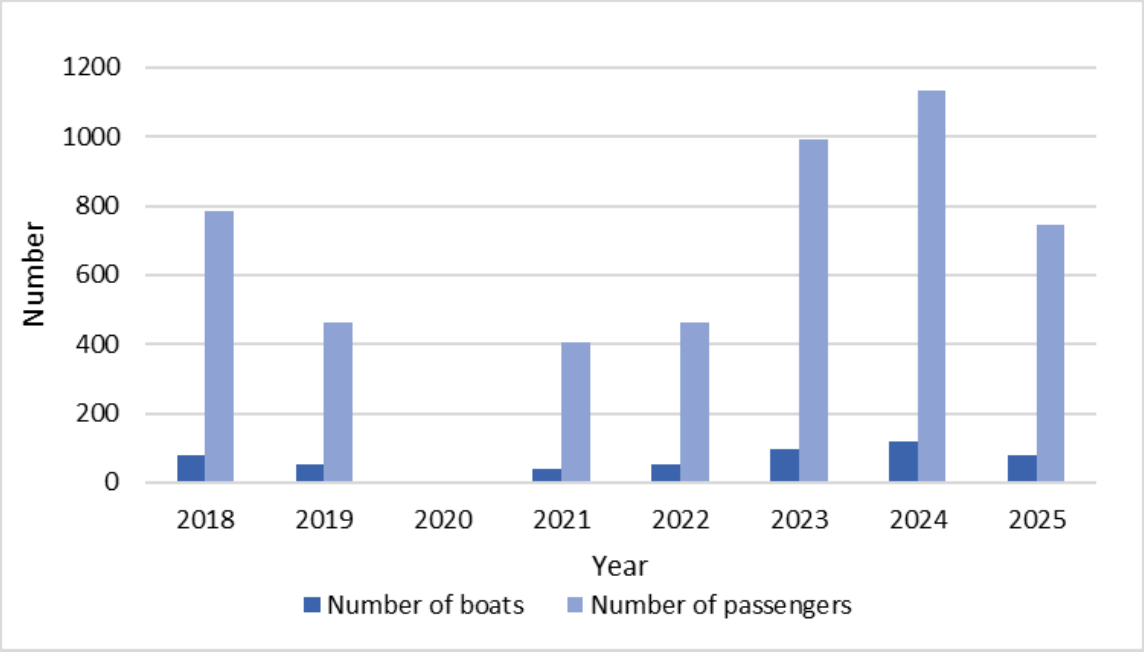
Figure 6.3 Potting intensity around Skomer MCZ split into the main monitoring areas 1989 to 2025



Another major commercial presence at Skomer MCZ is sightseeing vessels, these include operators from Martins Haven, Milford Haven and North Pembrokeshire (St Justinians) in addition to occasional cruise ship visitors. Pre-2018, the recorded total numbers of sightseeing boats fluctuated from year to year but were generally less than 15 boats per season. In 2018 a large increase in the number of boats (78 boats) was observed, so a decision was made to put more effort into recording these vessels due to their economic importance and possible impacts (Figure 6.4). In 2025, 81 boats with 746 passengers were recorded, this included three visiting cruise ship with a total of 19 inflatable boats in the water with sightseeing passengers.

These figures do not include the Dale Sailing operated ferry between Martins Haven and Skomer or their sightseeing 'round island' trips. It should be noted that in 2022 the *Dale Princess* (max 50 passengers) was replaced by the *Dale Queen,* a much bigger boat that can carry 95 passengers. In 2025 the Dale Prince joined the fleet, also with the capacity to carry 95 passengers, its role is the 'round island' trips. The numbers landed onto Skomer has not changed (maximum 250 people per day), but the numbers of sightseeing passengers on the 'round island' trips have significantly increased, on a busy May Bank Holiday there can be up to 800 passengers.

Figure 6.4 Sightseeing vessels (excluding Dale Sailing boats) and total people on board 2018 to 2025.



Commercial dive, snorkelling and angling charter boats also operate in Skomer MCZ and these records along with the sightseeing boats are included in the recreational boat use data (see Figures 6.6 to 6.9).

Tanker movements within St Brides Bay have been logged for many years by Skomer MCZ staff, and now automated methods (Automatic Identification System - AIS) are used to record use of this anchorage that lies within Pembrokeshire Marine SAC.

6.2 Recreational use

Recreational use of Skomer MCZ is presented in Figures 6.6 to 6.9, records are from April 2025 to March 2026. Recreational craft are recorded by both Skomer MCZ staff whilst out on the water and by Skomer island staff observations, from April to the end of October. Recreational use figures for divers and anglers remain low, as has been the case since 2019. There was a slight increase in both recreational boats and total people on board, this is influenced by the changes that have been seen in the different boat visitors; peak time for all activities is between May and August.

The numbers of recreational craft (combined dive, angling, yachts, motor boats and canoes) have fluctuated over the years, ranging between 928 (2018) and 406 (2007) with 716 recorded in 2025 (see Figure 6.7).

The greatest change has been seen in the number of canoes. From 1982 to 2003 less than 100 were recorded each year, this has gradually increased to the highest record of 330 in 2023, and in 2025, 211 canoes were recorded.

The total number of people on boats in 2025 was 1613 of which 46% were passengers on sightseeing vessels (see Section 6.1) NB these figures do not include the Dale Sailing operated ferry or their sightseeing 'round island' trips.

Diver numbers from 1987 to 2005 ranged between 2000 to 3500 divers per year, but since 2006 the numbers have decreased, ranging between 500 to 1600 divers per year. In 2025 1203 divers were recorded (including snorkel/free divers, see Figure 6.5) this is an increase from 2023 and 2024 as Celtic Deep who run eco-snorkelling groups contributed their full data for the season. For the 1203 divers recorded 483 (40%) were organised snorkellers on trips, 375 (31%) and 350 (29%) were independent divers. 115 (9.8%) were Martins Haven shore divers compared to 848 recorded in 1994 (see Figure 6.8). It should be noted that diving activities throughout the UK have seen significant reductions, there are fewer dive clubs and boats along with the infrastructure of dive shops and dive charter boats.

Figure 6.5 Organised snorkelling activities in South Haven

The numbers of anglers have fluctuated over the years, but the last 10 years have seen reductions. From 1987 to 2011 shore anglers ranged between 766 (1993) and 313 (2010), this has dropped to just 86 shore anglers in 2025 (see Figure 6.9). Angling boats have been more consistent over the years with 66 angling boats recorded in 2025. The highest numbers of boat anglers were recorded between May to July, whereas shore angler numbers were low but consistent through the season. It is expected that the actual number of shore anglers is higher as many come in the evenings and these are not recorded.

The changes of recreational craft users from 1989 to 2025 are shown in Figure 6.10. The numbers of dive boats visiting Skomer MCZ has dramatically decreased whilst the number of canoeists has increased, in contrast numbers of yachts, motor boats and angling boats have been relatively stable.

Figure 6.6 Recorded Recreational Use Skomer MCZ 1987 to 2025.

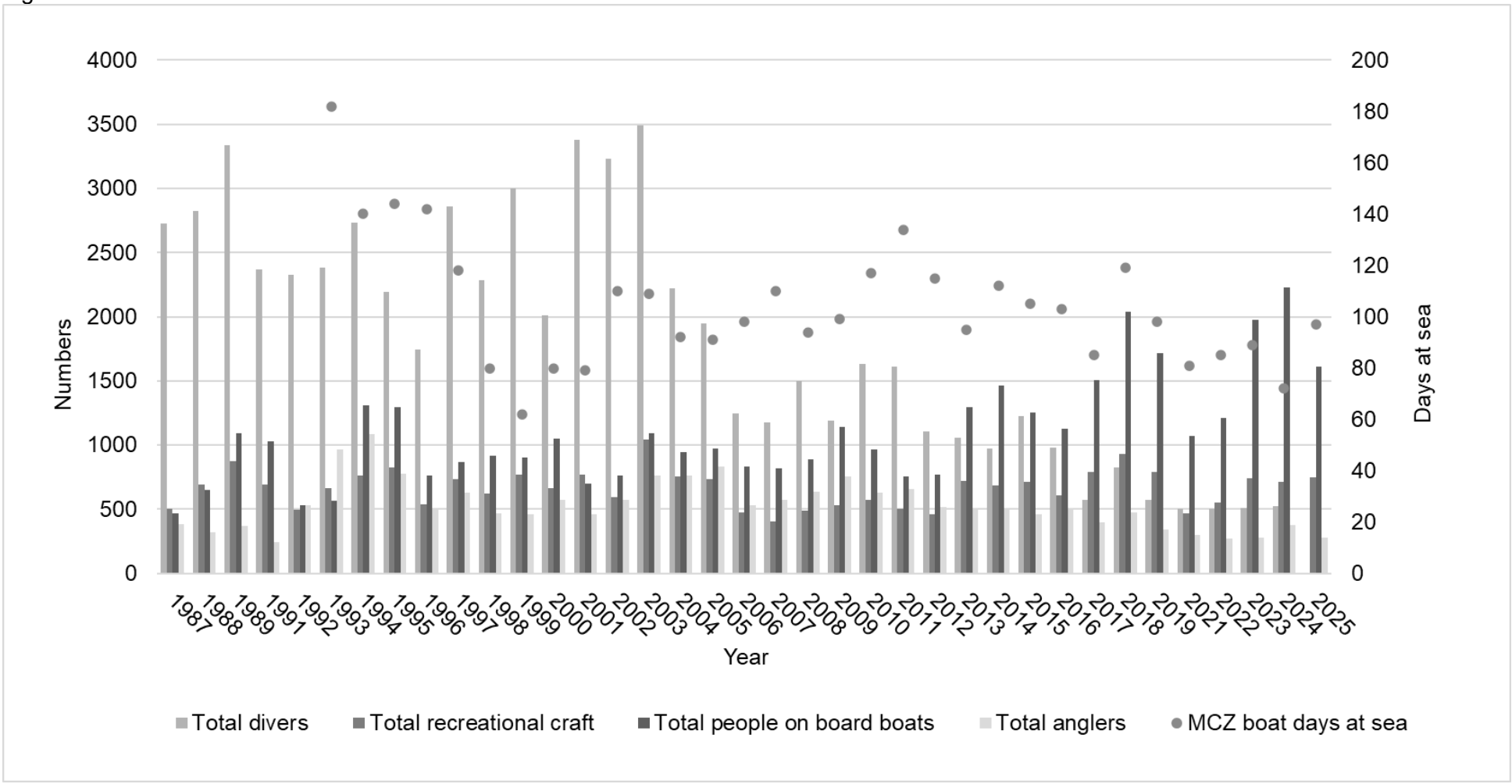


Figure 6.7 Skomer MCZ 2025/26 Recreational Craft

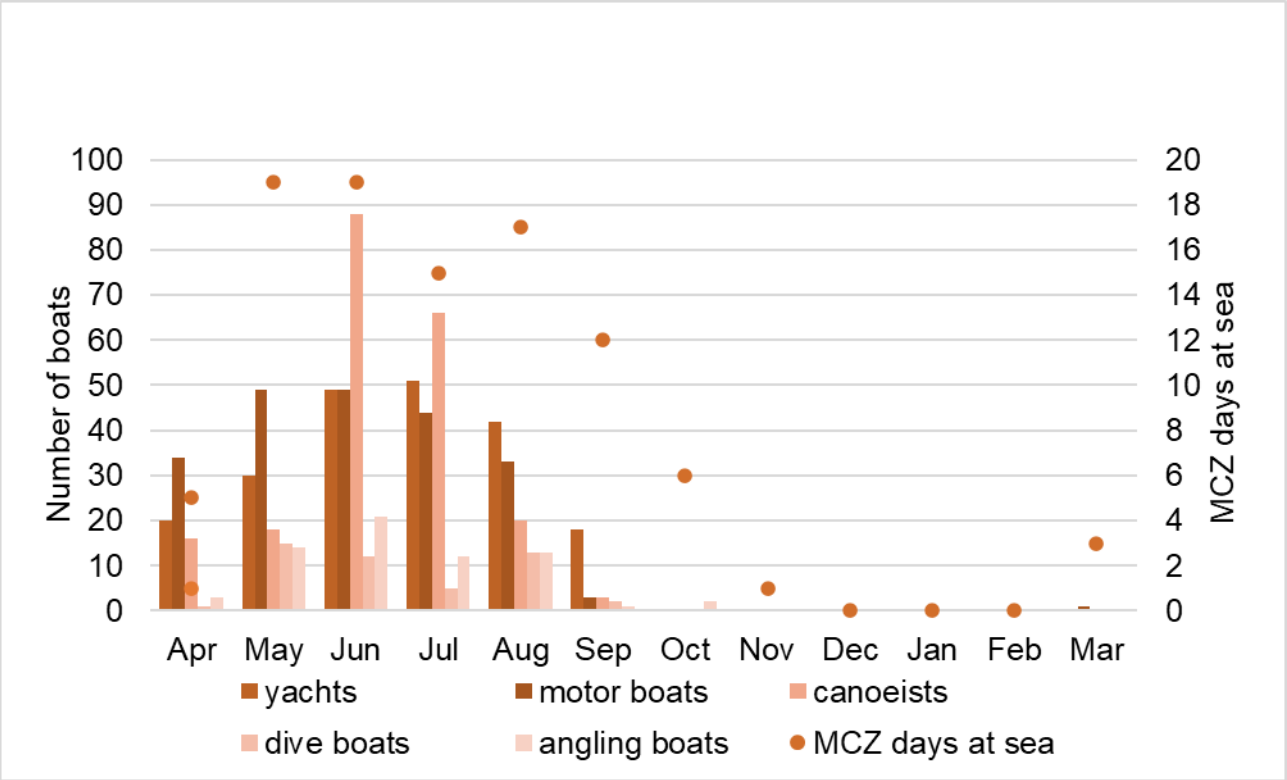


Figure 6.8 Skomer MCZ 2025/26 Divers

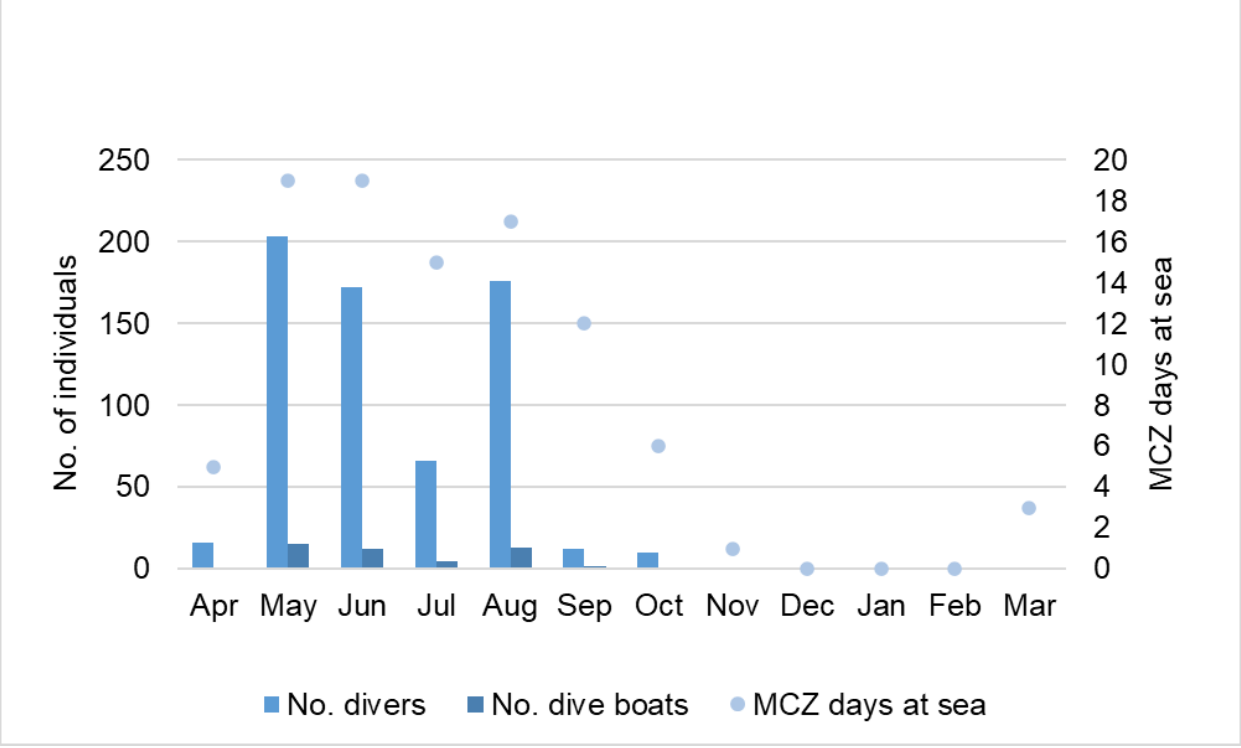


Figure 6.9 Skomer MCZ 2025/26 Anglers (NMPE = North Marloes Peninsula)

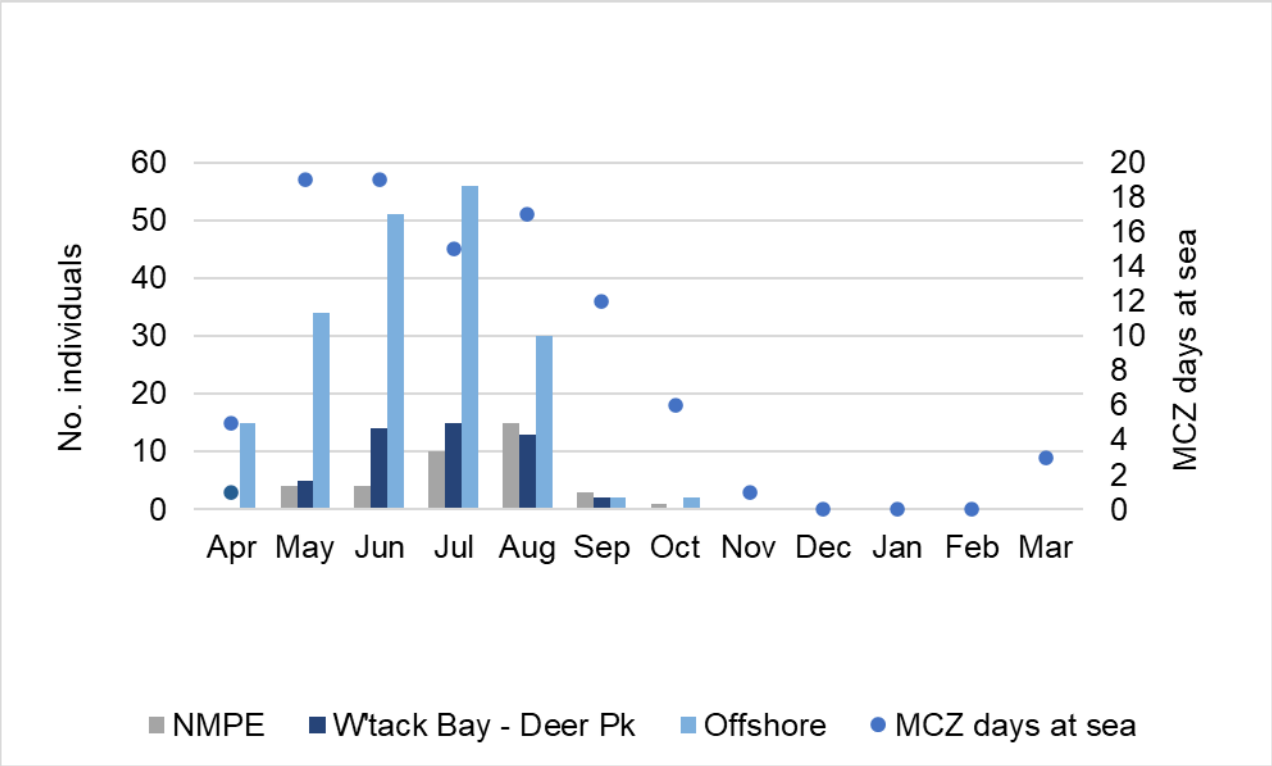
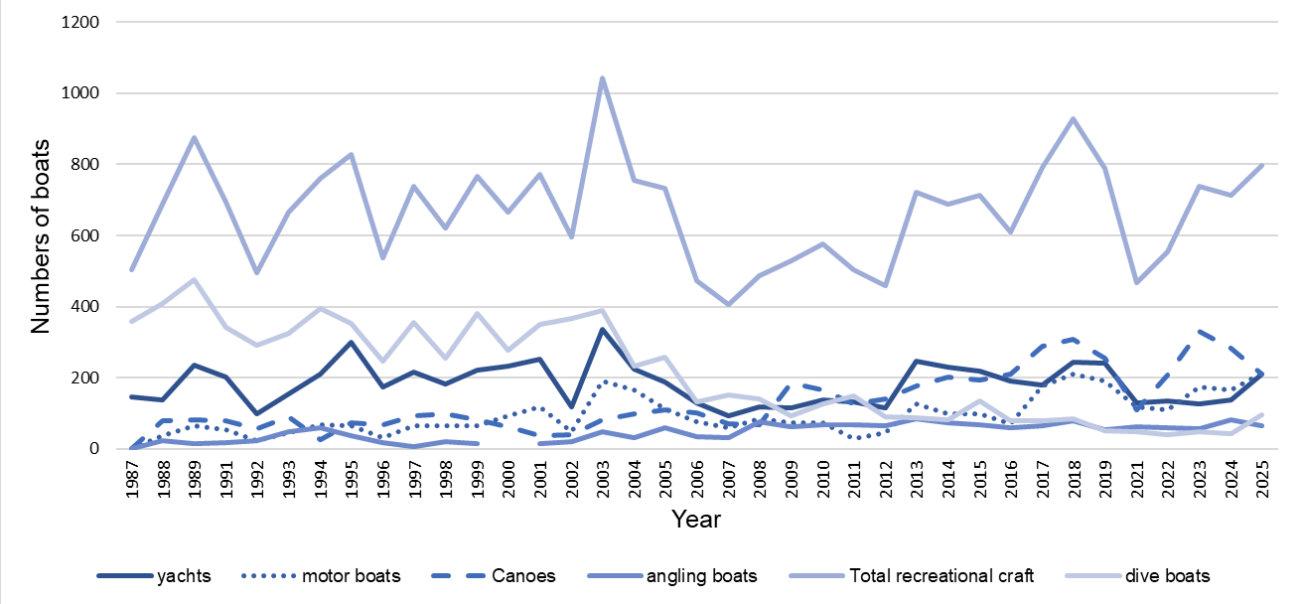


Figure 6.10 Skomer MCZ Recreational craft use 1989 to 2025



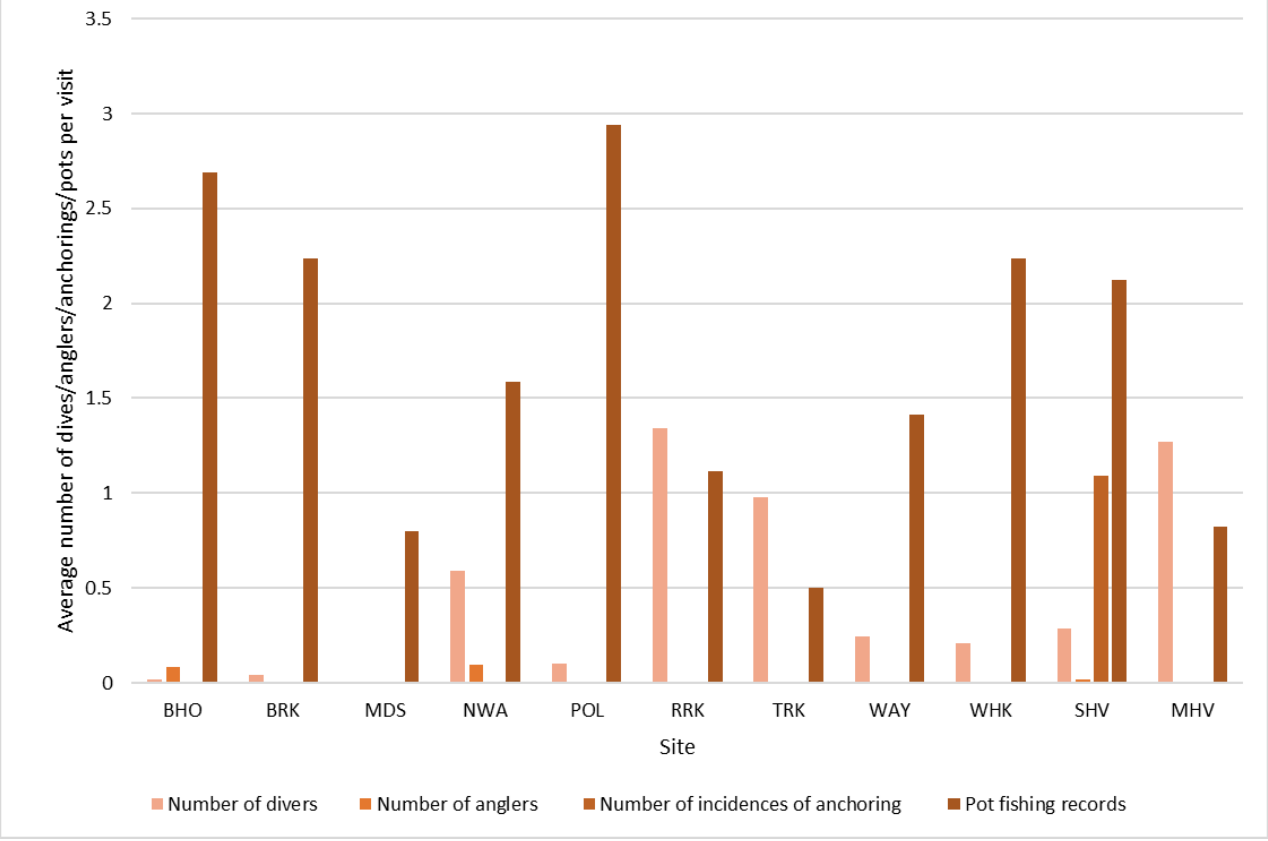
6.3 Seabed contact activities

All activities with the potential to contact the seabed in Skomer MCZ have been recorded at monitoring sites for fragile species (pink sea fan *Eunicella verrucosa*, ross coral *Pentapora foliacea* and erect sponge species), and are shown in Figure 6.11. Recorded activities include numbers of divers, anglers, incidences of anchoring and pot fishing.

The data presented is effort corrected for differences in the numbers of days on which data were collected for different activities, and at different sites, to allow comparisons to be made. Data for South Haven (SHV) and Martins Haven (MHV) have been included for context as South Haven is a highly popular (and permitted) anchorage and Martins Haven a popular shore diving site.

Diving numbers include both recorded recreational dives and Skomer MCZ monitoring dives. The activity most often recorded at all monitoring sites is lobster potting. It should be noted that all data are likely to be an underestimate of actual activity, but more so for commercial fishing effort, which is only usually recorded once per week between May and September.

Figure 6.11 Seabed activity recorded at Skomer MCZ monitoring sites for fragile species corrected for recording effort 2025.
(Sites: Bullhole BHO, Bernies Rock BRK, South Middleholm MDS, Northwall NWA, Pool POL, Rye Rocks RRK, Thorn Rock TRK, Waybench WAY, West Hook WHK, South Haven SHV, Martins Haven MHV)



7. Liaison and Advisory Committees

7.1 Advisory Committee

The Skomer MCZ Advisory Committee meeting was held on 29th April 2025 in Marloes village hall, chaired by Dr Madeleine Havard, twenty-four members attended. Members discussed a range of issues from presentations made by Skomer MCZ staff updating committee members on management and monitoring work.

Jenny Oates, NRW Lead Specialist Advisor, Marine & Costal Policy informed the Committee that there was no update regarding MCZs in Wales and the consultation has been delayed until after May 2026 (the next Senedd elections). The Skomer MCZ designation consultation will form part of a wider WG consultation in the new MCZ sites and there is no possibility of Skomer MCZ being consulted on earlier.

An update was given on seal survey work and proposed method changes for seal monitoring at breeding sites on Skomer Island. The Skomer MCZ Seal Management Plan has been reviewed and updated, monitoring will now be cliff top surveys only, tracking of pups will be done through age classification and pup condition monitoring. Emma Whatley, Swansea University placement student based with WTSWW provided a presentation on a reduced effort seal survey carried out on Skomer Island in 2024 with assistance from island staff.

Guest speaker Kaila Wheatley, Exeter University, gave an update on her PhD studentship to study factors effecting the distribution and genetics of the pink sea fan (*Eunicella verrucosa*). Members welcomed the research talk, agreeing that its inclusion in the meeting usefully brings management and science together.

7.2 Wildlife Trust South and West Wales

In 2025 Leighton Newman returned for his fifth year as Skomer warden with Ceri Aston again employed as assistant warden. Island staff and volunteers assisted with collecting data of recreational boat activities, disturbances to wildlife and cetacean sightings. This data is valuable and significantly boosts our records.

WTSWW secured Nature Networks funding for 3 years to complete the Skomer Island seals survey, this commenced in 2025 and will follow the modified methods in the Skomer MCZ Seal Management Plan see Section 8.1.1.

The assistance of the staff at the Wildlife Trust shop at Lockley Lodge with opening up the Skomer MCZ exhibition was very much appreciated again in 2025. This enabled us to maximise the number of days the exhibition was open, even when Skomer MCZ staff were off-site.

Skomer MCZ staff also liaised with the warden staff on Skokholm during MarClim intertidal surveys (see Section 8.1.4), and with the WTSWW Pembrokeshire Islands Manager Lisa Morgan, both locally and via the Advisory Committee.

7.3 Welsh Government Marine Enforcement

Skomer MCZ staff did not contact Marine Enforcement staff in 2025, which could be taken as a positive in that there were no observations of fishery byelaw infractions to report.

7.4 Pembrokeshire organisations

7.4.1 Pembrokeshire Coast National Park

Skomer MCZ staff continue to liaise with Pembrokeshire Coast National Park (PCNPA) staff locally and via the Advisory Committee.

78.4.2 National Trust

Liaison with National Trust staff continues through the Advisory Committee and also directly with Matt Thompson, local ranger, James Roden, lead ranger in North Pembrokeshire and Kate Mellor, welcomes manager.

7.4.3 Pembrokeshire Marine Special Area of Conservation

Skomer MCZ has continued to liaise and collaborate with Sue Burton, Pembrokeshire Marine SAC Officer who also works for the Marine Conservation Society coordinating the marine projects in Pembrokeshire for the Wales' flagship Green Recovery project led by NRW *Natur am Byth!*

7.4.4 Pembrokeshire Coastal Forum

Skomer MCZ continues to work with Pembrokeshire Coastal Forum and the Pembrokeshire Marine Code team. Kate worked with Alec Denny, Sustainable Recreation Coordinator, to assist with revisions of the Pembrokeshire Marine Code zone maps and Codes of Conduct.

7.4.5 Marloes Community Council

The local community has continued to be very supportive of the team, helping to protect the Skomer MCZ by reporting potential incidents, and by their active participation in the Advisory Committee.

7.4.6 Other organisations

Skomer MCZ staff have worked alongside others including the Neptune's Army of Rubbish Collectors (Section 5.3.10 and 5.3.14) and National Coastwatch Institution (NCI), who maintain watches at the former Coastguard Lookout on Wooltack Point.

7.5 Academia

A number of academic institutions and students have worked with Skomer MCZ staff during 2025.

In September 2022 Kaila Wheatley began a PhD titled "*Factors limiting marine connectivity at a species range edge – the case of the pink sea fan, Eunicella verrucosa"* supervised by Dr Jamie Stevens, Exeter University. Kaila undertook fieldwork at Skomer Marine Conservation Zone (MCZ), diving with the team to collect samples for genomic analyses. Results from the first subset of samples have already revealed higher-resolution connectivity between populations than previously available. Analysis of the second submission is currently underway and will address more detailed questions relating to population connectivity and health. In parallel, Kaila has been developing ocean physical models to simulate larval dispersal within ocean currents, providing insights into present-day connectivity patterns and how these may change under future climate scenarios.

Kaila has also been assessing the connectivity and ecological coherence of the Marine Protected Area (MPA) network in the UK and adjacent regions using the pink sea fan (*Eunicella verrucosa*) as a model species. This work combines validated ocean circulation and particle-tracking models to simulate larval dispersal, identify key sites that maintain connectivity across the network, and highlight potential gaps in protection, with Skomer identified as one of the crucial sites.

Kaila collaborated with the aquarist team at the Horniman Museum and Gardens in south London, where pink sea fans collected off the coast of Devon were photographed spawning for the first time in a UK institution. The larvae successfully settled and are now developing into juvenile sea fans, with growth and survival being closely monitored (Figure 7.1). Experimental work has provided critical information for conservation, including settlement timing, the effects of elevated water temperatures on settlement success and duration, and feeding trials. In 2025, a subset of the juveniles were transferred onto small tiles in preparation for reintroduction to the natural environment. In late July, juveniles, along with small clippings from adult colonies (collected in Devon), were transplanted into a selected experimental area at the Sandy Sea Fan Gully site (adhering to IUCN Guidelines for Reintroductions and other Conservation Translocations 2013-009.pdf). Colonies were secured to the rock using epoxy putty (Figure 7.2). Follow-up dives were carried out in early October to re-photograph the transplants, with further monitoring planned for spring 2026 to assess overwinter survival. This represents the first out-planting trial of pink sea fans in the UK and northern Europe and provides valuable insights into the species' restoration potential.

Figure 7.1 Pink sea fan juveniles (photo credit: Horniman Museum and Gardens)

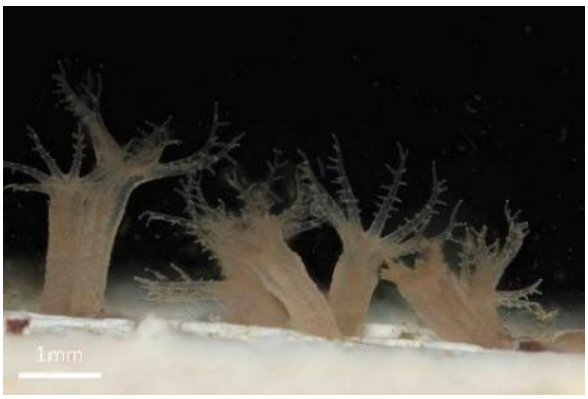


Figure 7.2 Student Kaila Wheatley with prepared tiles with juvenile sea fans and tiles located at the experimental site.

In August, Kathryn Davies, a first year PhD student at Bangor University joined the team for a day. Kathryn is studying sponge populations in the Menai Straits and is supported by NRW, as part of her studies she will be researching longevity of some erect sponge species. Samples of *Axinella dissimilis*, *Steligera stuposa* and *Raspalia ramosa* were collected for her research, these have been transferred to laboratory tanks for monitoring.

The sea fan and sponge communities research will be used by NRW to evaluate the current MPA network and suggest improvements that will maintain connectivity under

future conditions and safeguard sea fan and fragile sponge and anthozoan communities in the UK and beyond.

The second generation “Sea-Hives” supplied by David Francis from the Sea Hives project in 2018 continue to be deployed at the ocean monitoring site. These modular glass structures are intended to provide shelter to marine organisms and provide a foothold for natural habitats to re-establish in damaged seabed areas (Figure 7.3). We were asked to test the effectiveness of the sea hives; we can confirm that they have been successfully colonised by a variety of marine organisms. This project is one of a number we have carried out over the years where there is no impact on the Skomer MCZ and where a minimal amount of effort is required on our behalf to collaborate in innovative work.

Figure 7.3 Sea-Hives at OMS site (photo Blaise Bullimore)

Local naturalist and micro-photographer Julian Cremona has been supplied with monthly plankton samples from Skomer MCZ and photographs of the species found have been incorporated into his website: planktonmilfordhaven.org – in the “Skomer and St Brides Bay” section (Figure 7.4).

Figure 7.4 Plankton species from Skomer MCZ (photo Julian Cremona)

7.6 Visiting organisations and groups

In 2025 NRW colleagues from the Industry Waste and Regulation team and the Marine Mammals group visited to learn about the work that we do and enjoy a seal survey walk on the Marloes Peninsula.

We also hosted meetings for the Marine Monitoring and Assessment team with Micheal Gerrado (the new Head of Knowledge and Evidence group) and Ray Sherry (the new Head of Digital Data and Technology group). Both visited in the autumn so could enjoy seal survey walks.

8. Science

All science monitoring and recording projects completed in the 2025 season are reported in detail in the **Skomer MCZ Project Status Report 2025/26 (NRW Evidence Report number 957)**, which is available via the NRW website Natural Resources Wales / Marine and coastal evidence reports . Summaries of these projects are provided below.

8.1 Biology

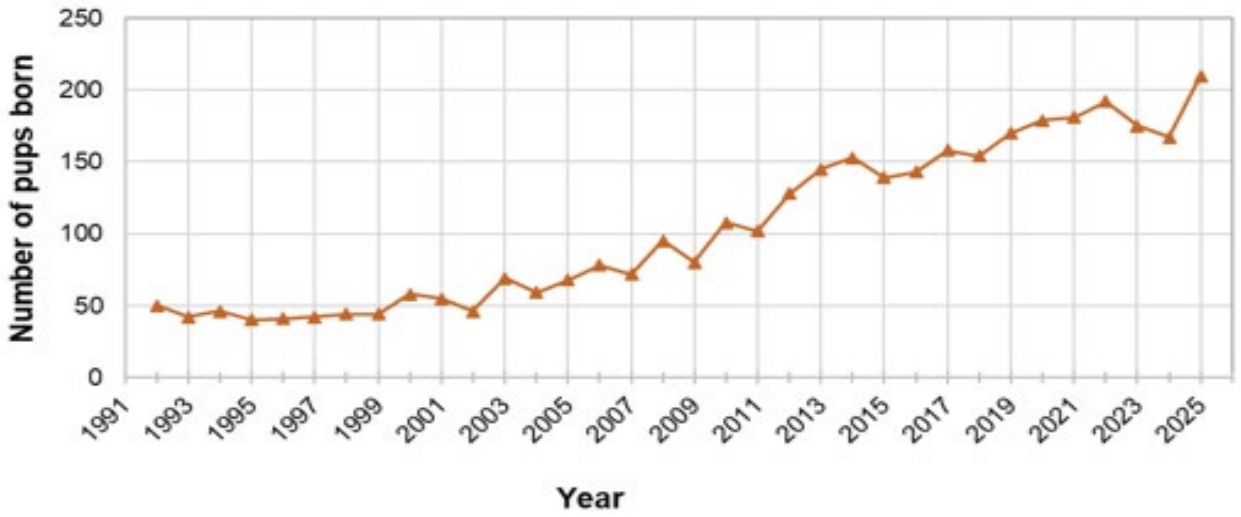
8.1.1 Monitoring seals

In 2025 the Skomer island seal survey work was carried out by WTSWW staff funded by Nature Networks from 2025 for 3 years. This is the first time the new revised methods in the Skomer MCZ Seal Management Plan (version 5) have been followed. Method changes were necessary due to insurance restrictions stopping beach and cave access. The methods were adapted to mirror the methods used on the mainland pupping beaches for pup production and pup survival and a subset of survey sites (11 of the original 16 sites) were identified to test using cliff top viewing recording only. Attendance at haul outs was monitored similarly to previous years. An interim report has been produced and a final report planned.

In 2025 129 new born pups were recorded from the 11 selected sites monitored between 31/7/25 and 15/11/25. This number must be treated with caution as cannot be compared to Skomer island data prior to 2024 due to the change in survey method, and it cannot be combined with the mainland results to provide a total for the Skomer MCZ. Once the final report is available a review will be completed to finalize the options for future seal monitoring work on Skomer.

Sites on the mainland continued to be monitored by the Skomer MCZ team. In 2025, 210 pups were recorded at Marloes Peninsula sites, this is an increase from that recorded in the last 5 years. Since 2009 there has been a steady increase in pup production at Marloes Peninsula sites as shown in Figure 8.1.

Figure 8.1 Seal pup production Marloes Peninsula 1992 to 2025



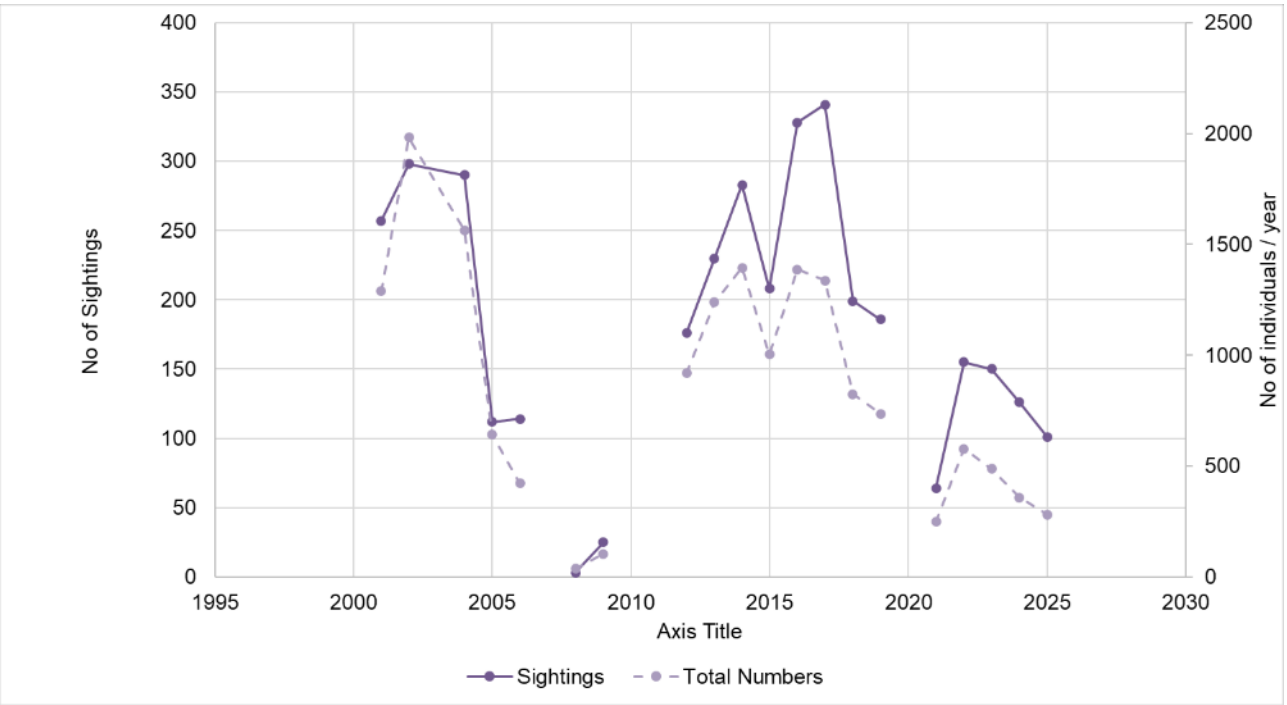
197 pups could be tracked from birth, of these 79% were recorded to become a healthy class 3 pup or to moult so assume survived, this is the same as the average pup survival recorded for the whole Skomer MCZ from 1992 to 2023.

8.1.2 Monitoring cetaceans

Skomer MCZ staff collate all sightings of cetaceans collected by Skomer Island staff, Skomer MCZ staff and Dale Sailing boat crews. The effort is variable not just between years but also during the season which makes the data difficult to effort correct. Very few records were received from Dale Sailing staff in 2017 or 2018, records were received in 2019, 2023, 2024, but none for 2020 – 2022 or 2025. As several cetaceans are frequently seen together during the same sighting, total numbers of cetaceans reported are higher than total sightings reported.

The total numbers of harbour porpoise (*Phocoena phocoena*) sightings between 2001 and 2025 is shown in Figure 8.2.

Figure 8.2 Harbour porpoise sightings Skomer MCZ 2001 – 2025. (No recording occurred in 2010, 2011 and 2020).



Common dolphin (*Delphinus delphis*) uses the area infrequently, but they can appear in large numbers. In 2025 sightings were made by Skomer Island staff, there being 87 sightings with 848 individuals recorded.

In 2025 there were no sightings of Bottlenose dolphin (*Tursiops truncatus*) but there were unusually high numbers of Risso's dolphins, there were 8 sightings with 28 individuals recorded. The first group was on the 11th July, a group of 6 including 3 calves outside of South Haven, an additional 3 groups of 4 individuals were spotted in July and a group of 3 off the Wick in August. The last sighting was a group of 3 off the Garland Stone on the 5th September.

8.1.3 General species recording

There are many species in the Skomer MCZ that do not have a dedicated monitoring project. However, it is important that species lists are maintained, particularly for phyla that are under-recorded or of particular conservation importance. Recording of species of principal importance as defined under Section 7 of the Environment (Wales) Act 2016 and 'Alien' invasive and non-native species (INNS) are just two examples. Records are entered into the JNCC-administered Marine Recorder database for access via the National Biodiversity Network Atlas on-line gateway. General recordings of unusual, rare, scarce or vagrant species are also maintained.

Two sunfish (*Mola mola*) were recorded in August 2025.

Crawfish (*Palinurus elephas*) is an Environment Act (Wales) 2016, Section 7 species of principal importance. From 2009 to 2025 it was recorded in low numbers in Skomer MCZ

by staff and volunteers. All data is submitted to Crawfish survey | iRecord. Crawfish are identified as a sensitive species, therefore site details cannot be reported but distribution data is available within 20 km^2 areas NBN Atlas - UK's largest collection of biodiversity information

The non-native wire weed *Sargassum muticum* is present on the east side of South Haven. In 2025 it was dived to assess the extent, an extensive area was found in the shallow areas with plants up to 2m length (Figure 8.3)

Figure 8.3 Wire weed *Sargassum muticum* in South Haven

In May an unusual find of a Slipper lobster *Scyllarus arctus* was recorded by NARC divers, attached to a lost pot they had removed from the seabed off Martins Haven. This is the fourth known record of this species in Wales, the 3 previous records were from a fisherman in 2019, one off Skomer and two at Hand Marks in St Brides Bay. This record is also notable as the slipper lobster found was carrying eggs, Figure 8.4.

Figure 8.4 Slipper lobster *Scyllarus arctus, Martins Haven (*photo credit Lloyd Rees-Jones)

8.1.4 Monitoring littoral habitats/communities

Littoral habitat and community surveys are undertaken in the Skomer MCZ using different methods at a range of sites as summarised in Table 8.1.

The MarClim project offers an opportunity to compare Skomer MCZ shores to the rest of the UK and contribute to the assessment of the effects of climate change on shore communities. Martins Haven, North Haven and South Haven were selected as suitable sites for the project

Viewpoint photos were also taken to provide long term records of shore condition.

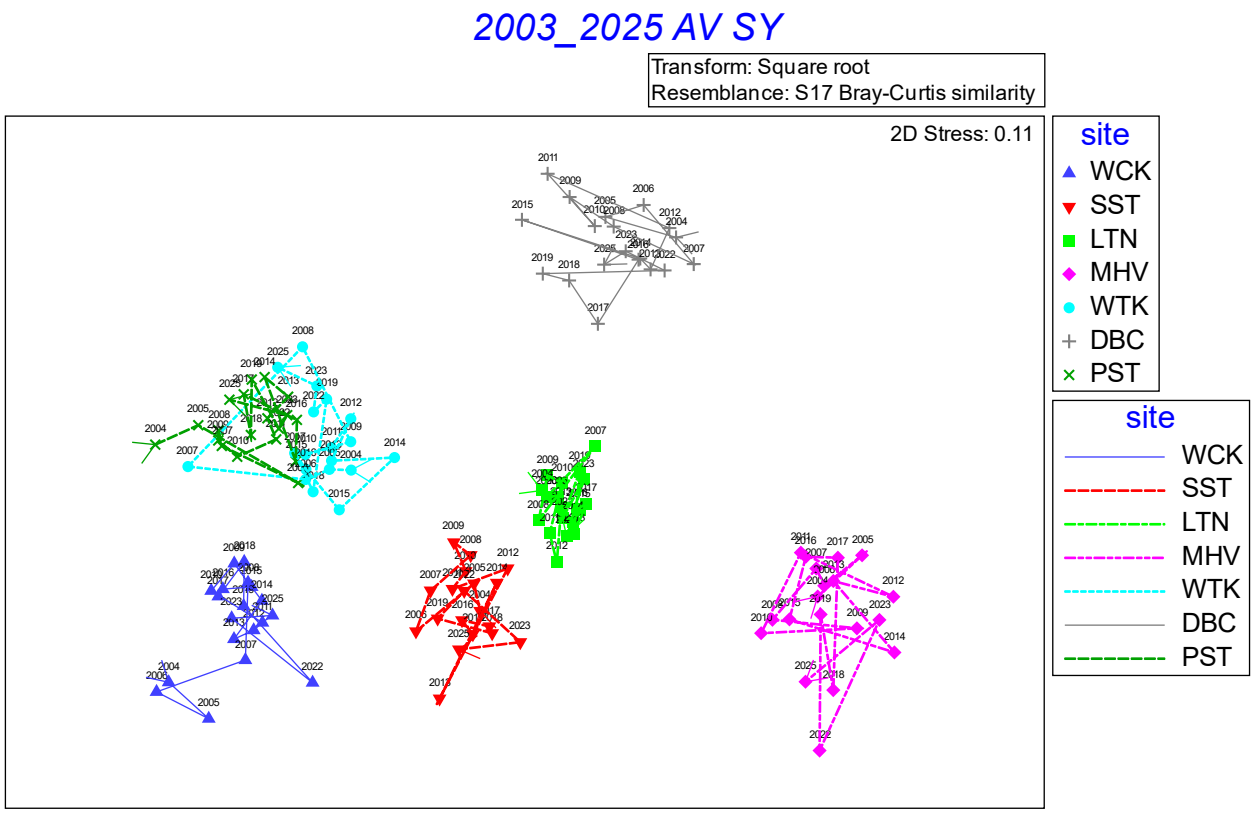
Table 8.1 Summary of methods completed at each littoral site in 2025.

Site	Permanent quadrats	Shore zone quadrats, limpets, barnacles	Lichen quadrats	MarClim	Shore clingfish
North Haven	No	No	No	Yes	Yes
South Haven	Yes	No	No	Yes	Yes
South Stream	Yes	Yes	Yes	No	No
The Lantern	Yes	Yes	Yes	No	No
The Wick	Yes	Yes	Yes	No	No
Double Cliff	Yes	Yes	No	No	No
Pig Stone	No	Yes	Yes	No	No
Wooltack	No	Yes	Yes	No	No
Martins Haven	No	Yes	Yes	Yes	Yes
Hopgang	No	No	Yes	No	No

All the shore zone quadrat data are entered into the PRIMER statistics software for community analysis. The results can be visualised as multi-dimensional scaling (MDS) plots, see Figure 8.5

Figure 8.5 PRIMER Multi-dimensional scaling (MDS) plot of all littoral community data 2004 – 2025 (Averaged to site and year with a trajectory line with time).

Site codes: Wick WCK, South Stream SST, Lantern LTN, Martins Haven MHV, Wooltack WTK, Double Cliff DBC, Pig Stone PST.



General summary:

- The sites neatly separate out and stay separate over the twenty-year period. This suggests community composition is consistent across the whole of the Skomer MCZ.
- Between the years there isn't a lot of variation within each site. The communities are stable over the time period.
- No one year consistently sticks out as an outlier, again, suggesting the communities are stable over the time period.

The communities on the shores have not shown any major changes during the monitoring period 2004 to 2025.

The MarClim project offers an opportunity to compare Skomer MCZ shores to the rest of the UK and contribute to the assessment of the effects of climate change on shore communities. Martins Haven, North Haven and South Haven were selected as suitable sites for the project. Community Temperature Index (CTI) is used to look for temperature related changes in communities. The CTI scores derived from MarClim data for the 3 shores surveyed at Skomer show no significant change over the period, averaging a CTI of 12°C which would match the ambient sea surface temperatures (from temperature

probes at Skomer MCZ) for the same period. This result shows there is no evidence of any shift in the community due to climate change.

The barnacle species counts have been completed at the 3 MarClim Sites: Martins Haven, North Haven and South Haven. In 2022 *Semibalanus balanoides* (northern species) abundance ratio declined by 60% in the middle shore and 80% in the lower shore and has continued to decline in 2023 and 2024 with a slight increase in 2025 but still well below what was seen pre-2022. The overall coverage of barnacles has not changed with the space being claimed by *Chthamalus spp* (southern species). This may be due to spring sea temperatures affecting spat survival. The minimum sea temperatures are recorded in March, and in 2022, 2023 and 2024 were the highest on record since 2007, with 8.2ºC recorded in 2025 compared to an average of 7.9 ºC for years 2000 to 2024. This may have affected the survival of the early settlement of *S. balanoides* spat. The summer maximum temperatures in 2022 and 2023 were some of the highest on record at 17.1ºC, and 17.5ºC recorded in 2024 and 2025, which may have improved the survival rate of *Chthamalus* spat.

8.1.5 Plankton recording

Zooplankton samples continued to be taken at Skomer MCZ in 2025 using methods recommended following a review by Plymouth Marine Laboratory in 2014. Zooplankton sampling was completed alongside the collection of phytoplankton samples using the Water Environment Regulations methodology. This also included the collection of nutrient and chlorophyll samples.

Zooplankton identification was conducted by the Marine Biological Association (MBA) and data entered into the DASSH Pelagic Lifeforms Tool. The results from Skomer samples show how variable the abundances are between years and between species.

Phytoplankton identification is currently being completed by CEFAS. The adoption of the WFD methodologies allows results to be compared with samples all across the UK.

8.1.6 Monitoring sponge assemblages

In 2025 quadrats at all sponge monitoring transects were photographed.

Improvement in image quality and resolution has meant that more sponge entities have been recorded from 2009 onwards than in previous years. However, in 2012 and 2014 there was a noticeable drop in the numbers of sponges across all transects. In 2019 all sites decreased in abundance, despite good image quality, this lower number was still present in 2021. In 2022 a new digital camera with increased pixel resolution was used; the number of sponges seen increased in 2022 and it was noted that small entities could be confidently identified in the new images. The 2025 images have been stored and will be analysed when time allows.

Statistical analysis of what types of sponge (based on their morphology) make up the communities at Skomer shows similar results to previous years. The sponge assemblage at Thorn Rock is a “hot spot” for sponges within the Skomer MCZ. The community at Thorn Rock is quite dynamic in terms of total number of sponges visible but the overall community structure appears stable.

The last full sponge species diversity survey was completed in 2023, details were reported [Skomer Marine Conservation Zone Sponge Diversity Survey 2023].

8.1.7 Monitoring Pink Sea Fan population

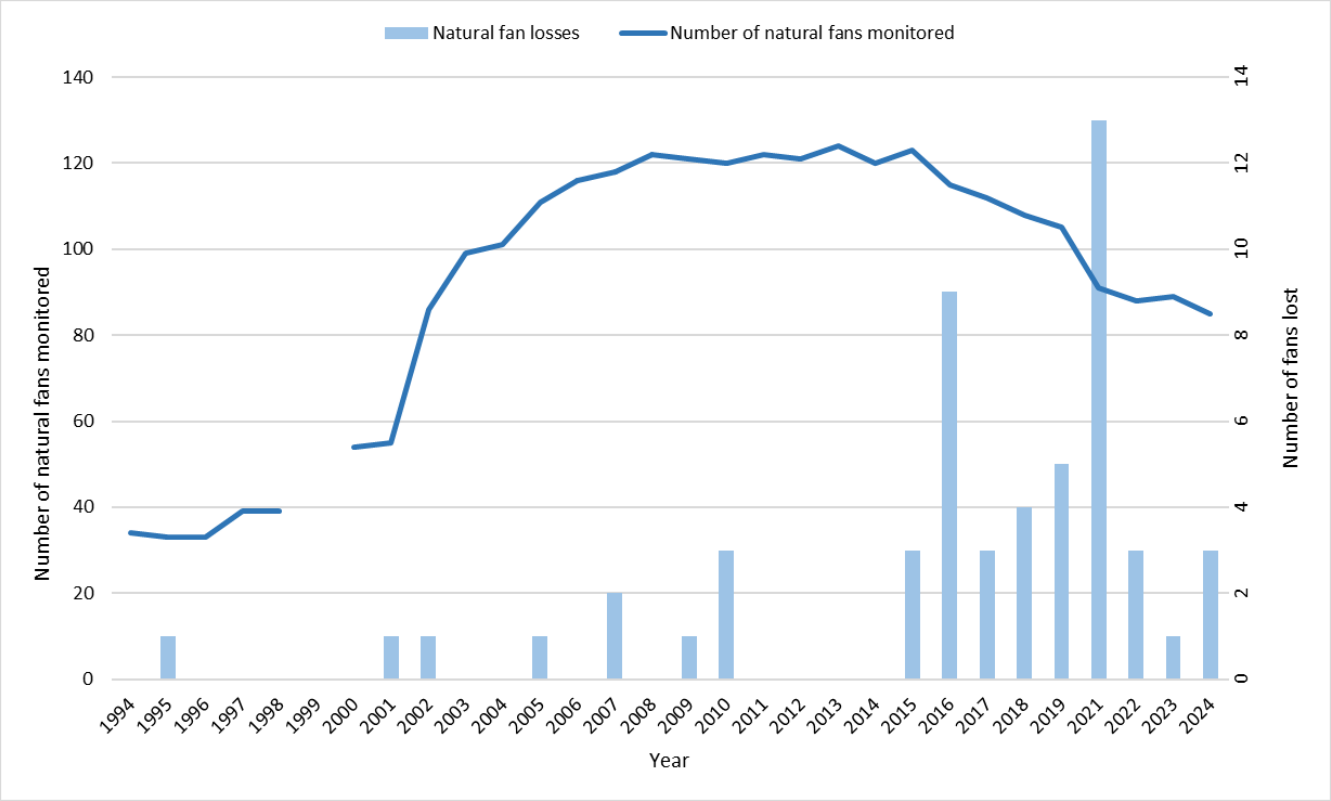
All sea fan monitoring sites were visited, except for South Middleholm, and individual colonies photographed in 2025.

In 2024 the South Middleholm sea fans MDS2, MDS4, MDS6, MDS7 were missing, but the site was not dived in 2025 so these fans will need to be re-checked in 2026.

In 2025 there were 3 confirmed losses of natural fans from Rye Rocks and a confirmed loss of attached fan at West Hook. There were 4 further natural fans and 1 attached fan not found for the first time, these will need to be re-checked in 2026.

From 1994 new sea fan sites were mapped until there were 10 monitoring sites established by 2005, some sites were expanded until there was a peak 124 sea fans in the programme in 2013. A total of 53 losses of natural sea fans has been recorded throughout the period of the project, with 43 of these since 2015 (Figure 8.6). There have also been 7 losses of artificially attached fans.

Figure 8.6. Total number of natural sea fans monitored 1994 to 2024 and number of losses each year. (2020 omitted as no survey completed, 2025 data to be included when losses are confirmed in 2026) Note: artificially attached sea fans not included in these data.



Sea fan condition assessment methods were reviewed in 2021, when the full data set was revisited, to track the condition of each individual sea fan and to assess the overall

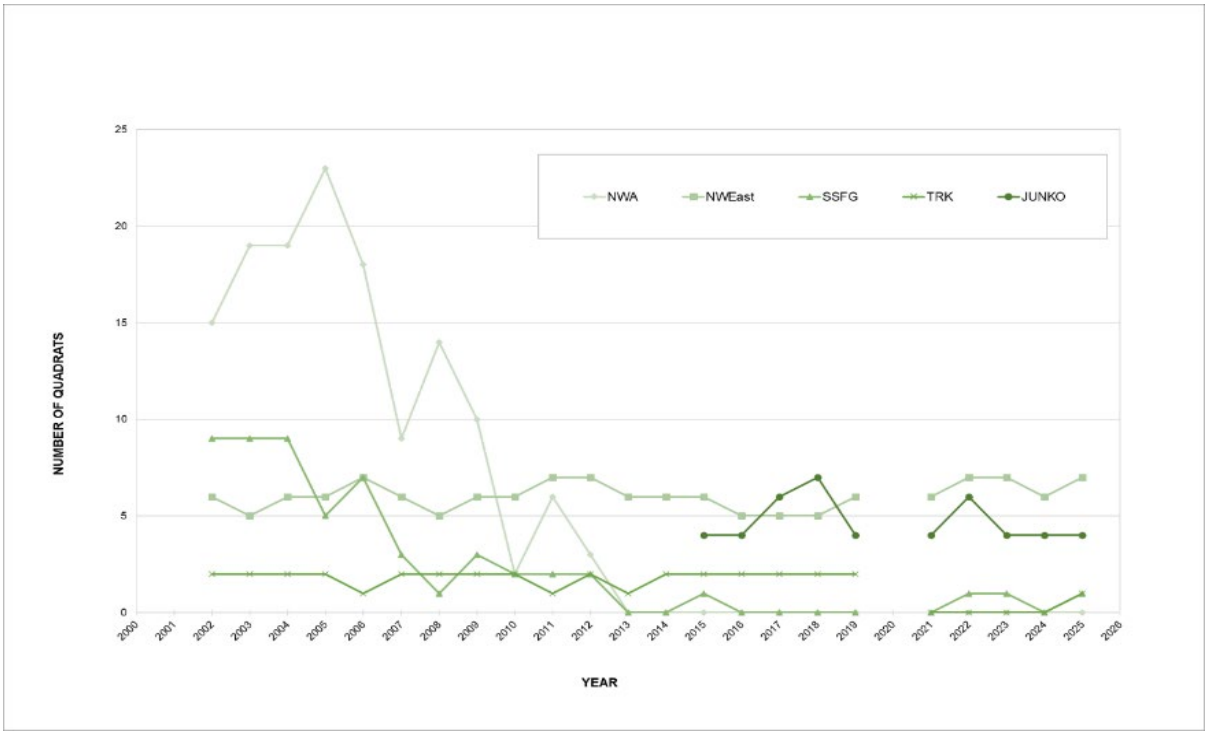
condition, looking at levels of necrosis, epiphytes, damage, branch loss and entanglement of catshark eggs. The condition assessment methods were applied to the 2025 photo data set and findings are detailed in the Skomer MCZ Project Status Report 2025/26.

8.1.8 Monitoring *Alcyonium glomeratum* population

The abundance of *A. glomeratum* continues to decline at all monitoring sites except for North Wall East (NWEast) and Junko's reef (JUNKO), which have sizable colonies and consistent numbers over the years they have been photographed. North Wall Main (NWA), Rye Rocks (RRK), Thorn Rock (TRK) and Sandy Sea Fan Gully(SSFG) now have no visible colonies as shown in Figure 8.7.

The reason for this decline is unknown. There is no evidence of disease or physical damage at the monitoring sites and changes in environmental conditions are not thought to be significant enough to cause colony loss.

Figure 8.7 Number of quadrats with *A. glomeratum* present at Skomer MCZ sites 2002 – 2025: NWA = North Wall main, NWEast = North Wall east, SSFG = Sandy Sea fan gully, TRK = Thorn rock and JUNKO = Junko's reef.



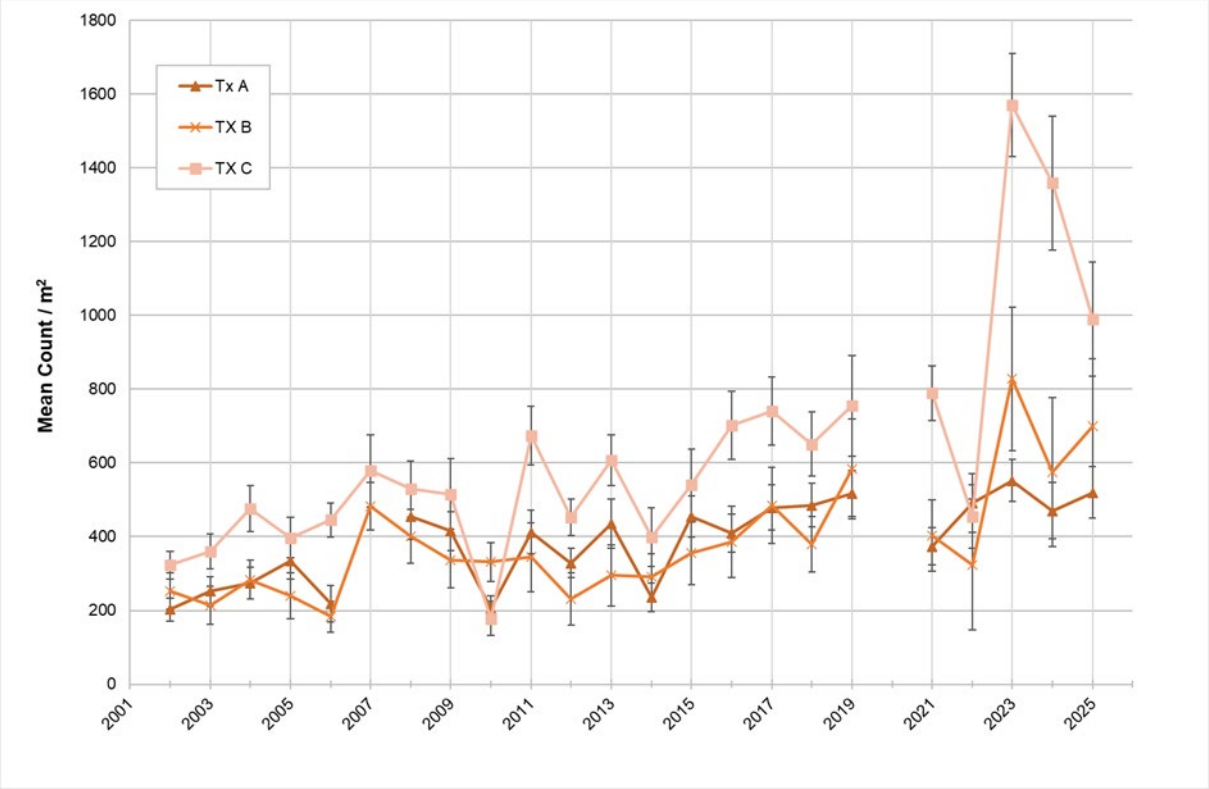
8.1.9 Monitoring Cup Coral populations

Quadrats were photographed for both Devonshire cup corals (*Caryophyllia smithii*) and the Lusitanian scarlet and gold cup coral (*Balanophyllia regia*).

The average number/m^2 of *B. regia* has fluctuated at the Wick transects A, B and C. The variability is most likely to be caused by variations in the covering of silt across the site from year to year. Deep silt can hide individual cup corals and occasionally cause very poor photographic conditions (e.g. 2010). In 2023 there was very little silt and the cup

corals were particularly visible, even very tiny ones could be seen, which might explain why counts were their highest for each of the transects. Transect C continued to have high density counts in 2025, as shown in Figure 8.8.

Figure 8.8 *Balanophyllia regia* abundance per metre^2 at Transects A, B and C at the Wick 2002 to 2025



At Thorn Rock five photo quadrats are taken in the Rock Mill and further photo quadrats are taken along two short transects. The average count /m^2 of *B. regia* has fluctuated at the Rock Mill, variability is most likely due to dense covering of algae obscuring the corals and thick coverings of silt at the site from time to time. Years with data missing are due to poor photographic conditions. An increase in numbers has been recorded over the last ten years when high photo quality was obtained with clear images of the corals. The average count /m^2 of *B. regia* at the transects is lower than that at Rock Mill. Further data is needed to monitor trends.

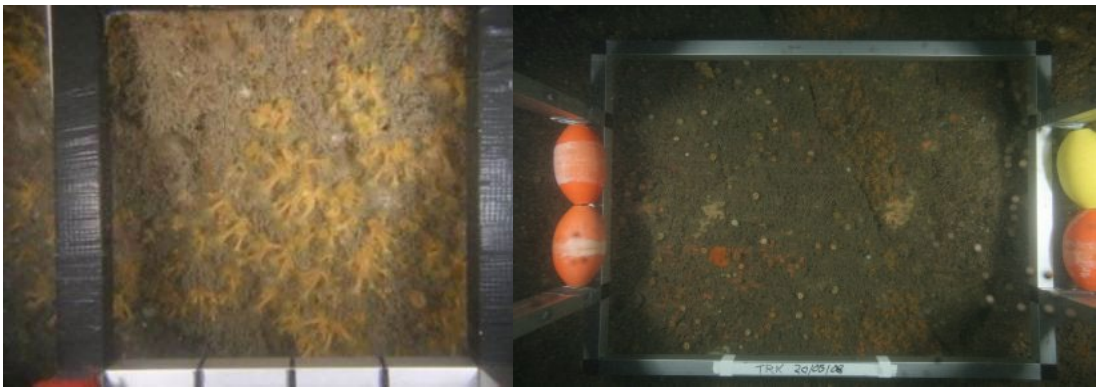
Caryophyllia smithii

The average number/m^2 of *C. smithii* has fluctuated at each of the Thorn Rock sites. This may be due to variable levels of surface sediment affecting the actual numbers visible during recording. The Windy Gully (WG) quadrats show significantly higher counts compared to the other sites. This is most likely due to it being the only vertical wall site where less surface sediment accumulates. The other three sites are all on horizontal rock.

8.1.10 Monitoring *Parazoanthus axinellae*

All monitoring sites were visited and all yellow trumpet anemone, *P. axinellae* colonies were still present. Photos are taken to assess both colony area and density as shown in Figure 8.9.

Figure 8.9 Density method: 20 x 20cm framer and Colony area method: 50 x 70cm framer



The colony area and the mean density of *P. axinellae* polyps (numbers of polyps /m^2) at all sites has shown fluctuations year to year, but overall are stable.

The frequency of *P. axinellae* at all sites has shown fluctuations year to year, but overall show a stable population. The mean frequency of *P.axinellae* at Thorn Rock and Sandy Seafan Gully transects showed an increase from 2023 to 2025 (Figure 8.10 and 8.11).

Figure 8.10 Mean frequency of *Parazoanthus axinellae* 2002 – 2025 at Thorn Rock (TRK) transects.

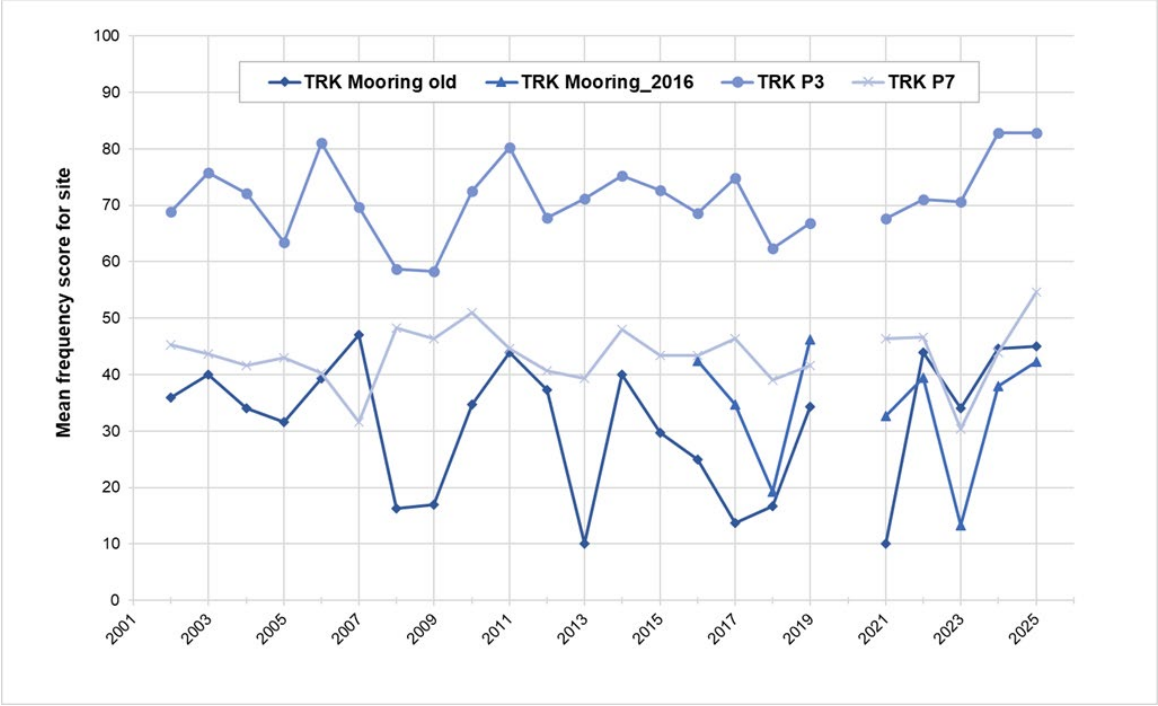
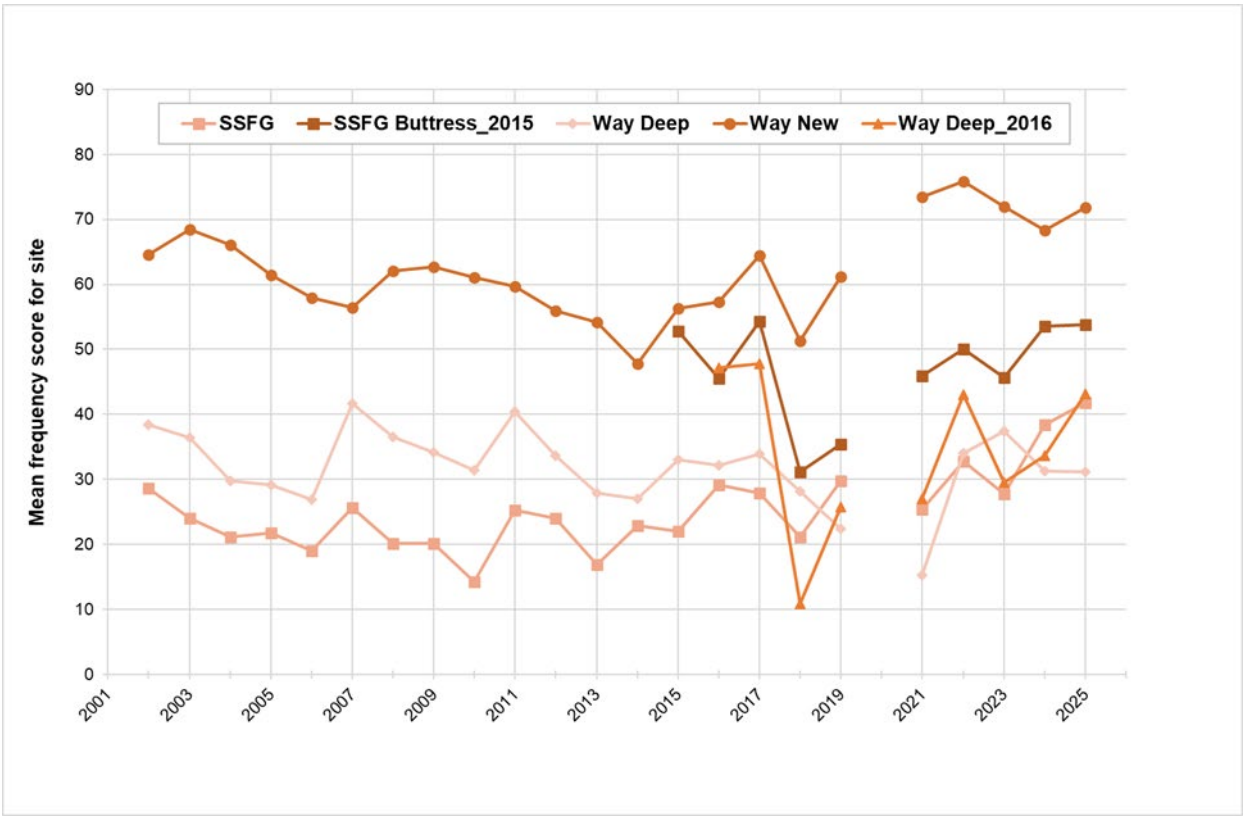


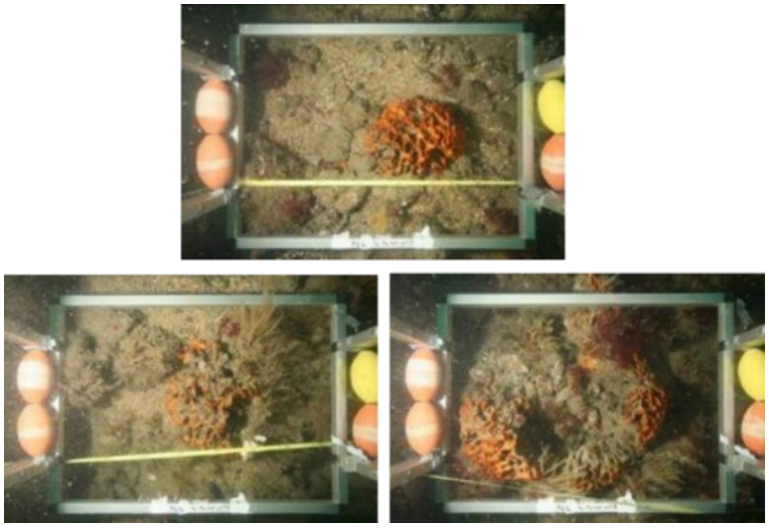
Figure 8.11 Mean frequency of *Parazoanthus axinellae* 2002 – 2025. Waybench (Way Deep, Way New) and Sandy Sea Fan Gully (SSFG, SSFG Buttress) transects.



8.1.11 Monitoring *Pentapora foliacea* population

In 2025 all *Pentapora* sites were visited and photographed. The classification system developed in 2006 and revised in 2010 has been used to characterise the population at Skomer, see Figure 8.12.

Figure 8.12. *Pentapora foliacea* - examples of Class 4 (above) and Class 5b colonies (below).

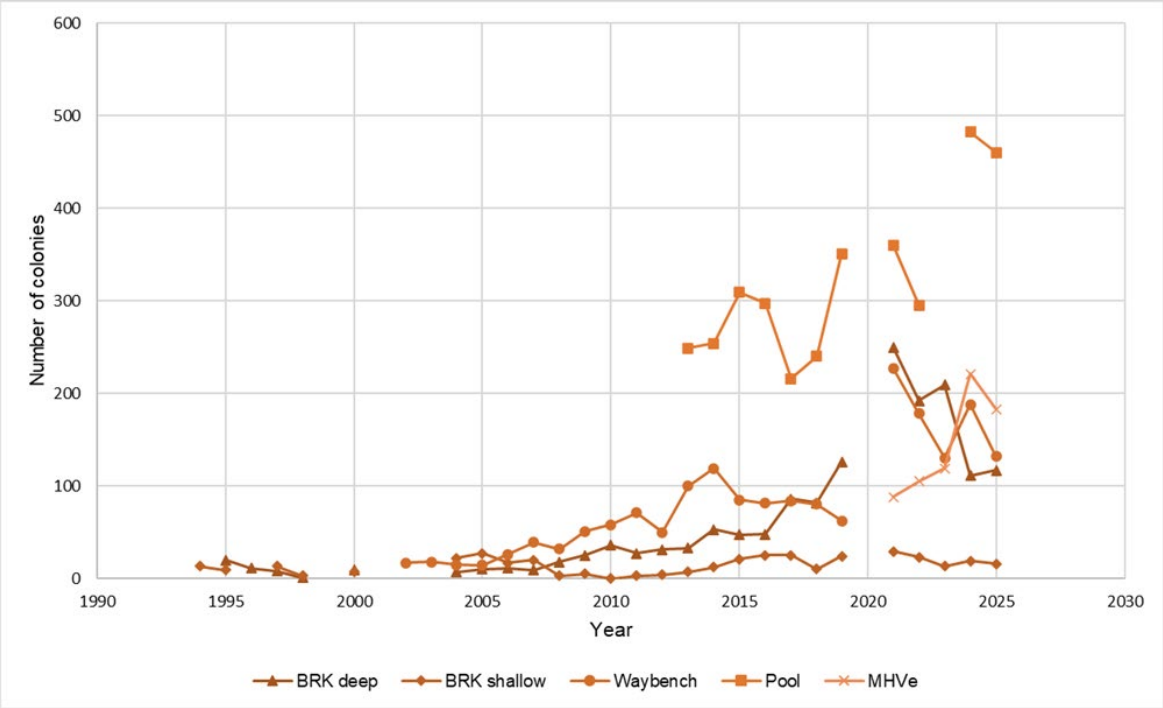


By comparing numbers of Class 2-4 colonies, which represent healthy growing colonies, with Class 5 colonies, which represent those with deterioration from either natural or anthropogenic factors, it can be demonstrated that there are more Class 2-4 colonies than

Class 5, which might indicate a population with more healthy growing colonies than degraded colonies. However, without comparing this ratio to a control area where there are no anthropogenic factors, no definite conclusion can be made.

Waybench, Pool and Bernies Rock are the largest sites surveyed, the total number of colonies (all classes) recorded in each survey year is shown in Figure 8.13. A record high number of colonies were recorded at the Pool site in 2024 with 482 colonies, 56% were the small 1 and 2 size classes showing good recruitment, in 2025 460 colonies were recorded of which 61% were class 1 and 2, and 28% class 3 and 4.

Figure 8.13 Total number of *Pentapora foliacea* colonies (all classes) recorded for each year surveyed at Waybench, Pool, Martins Haven and Bernies Rock (BRK deep and BRK shallow).



8.1.12 Monitoring algae communities

In 2024 methods were tested to monitor kelp species abundance and distribution, and kelp associated fish, echinoderm and crustacean communities. The use of Remote Underwater Video System (RUVS) was also explored to capture visual records of algae communities condition.

The survey is completed in two zones, the kelp forest zone and kelp park zone, defined by the density cover of kelp plants.

- Kelp park zone, lower infralittoral, kelp plants < 5 % cover
- Kelp forest zone, upper infralittoral, kelp plants > 20% cover

Three survey methods were used:

Kelp habitat density and algae species recording.
Fish, echinoderms and crustaceans in kelp habitats.
Algae communities condition – visual records.

Figure 8.14 Diver preparing to lay transect tape in High Point kelp forest zone (credit Blaise Bullimore)

In 2024 diving survey was completed at 4 sites: North Wall, Junko's reef, Martins Haven west and High Point and in 2025 the data was analysed. The kelp habitat densities are summarised in Table 8.2.

The full results are available in Lock, K, Burton M, Massey, A & Jones, J. (2026) Skomer Marine Conservation Zone, Kelp Habitat Survey 2024. NRW Evidence Report 955.

Table 8.2. Density of adult and juvenile kelp plants and percentage cover of foliose algae per 1m^2 in kelp forest zone at each site.

Kelp forest	***Saccorhiza polyschides*** **Number/m^2**	***Laminaria hyperborea*** **Number/m^2**	**Juvenile kelp(<50cm length) Number/m^2**	**Foliose red and brown algae % cover/m^2**
Junkos reef	4.6.	0.8	3.4	23.5
Martins Haven	0.3	4.6	6.3	61.5
High point	2.6	3.8	3.7	67.5
North wall	3.4	2.6	9.4	54.5

Table 8.3 Density of adult and juvenile kelp plants and percentage cover of foliose algae per 1m^2 in kelp park zone at each site.

Kelp park	***Saccorhiza polyschides*** **Number/m^2**	***Laminaria hyperborea*** **Number/m^2**	**Juvenile kelp(<50cm length) Number/m^2**	**Foliose red and brown algae % cover/m^2**
Junkos reef	1.1	0.8	1.7	48
Martins Haven	1.0	2.6	2.0	77.5
High point	0.3	1.2	2.1	77.5
North wall	1.9	0.5	1.7	62.5

In addition to recording conspicuous algae species as part of the kelp density transects the survey also benefited from general algae species recording by algae identification specialist Francis Bunker. The full results are available in Lock, K, Burton M, Massey, A & Jones, J. (2026) Skomer Marine Conservation Zone, Kelp Habitat Survey 2024. NRW Evidence Report 955.

Visual recordings using RUVS was completed at 3 sites. The RUVS was a good method in gaining a visual condition of the algae communities at a selection of sites but has limitations as it only provides a visual record of the location that it lands on the seabed and it is not possible to target the kelp forest and kelp zones. It was also not particularly effective in recording presence of mobile animal species. These limitations could be overcome if, in addition, video records can be done by divers completing a 30m 'swim through' the kelp park and kelp forest zones at each site with a video camera.

8.1.13 Monitoring Echinoderm populations

In 2025 the survey was completed at the 10m and 15m depth zones at 8 sites of which 6 sites were repeats from previous surveys (RRK, NWA, TRK, MHV, CBY and LHPT). Two additional sites were completed The Pool (POL) on the north side of Skomer island and East Hook (EHK) on the north Marloes peninsula.

***Echinus esculentus* density**

The mean density for the Skomer MCZ for each survey year is shown in Table 8.4.

Table 8.4. Summary of density results for *Echinus esculentus* in each survey year

Year	2007	2011	2015	2019	2025
Transects completed	140	139	151	144	105
Area covered (m^2)	8400	8340	9060	8640	6290
Total number of Urchins	602	755	879	953	414
Mean density / 100 m^2	6.87	9.05	9.70	11.11	6.62

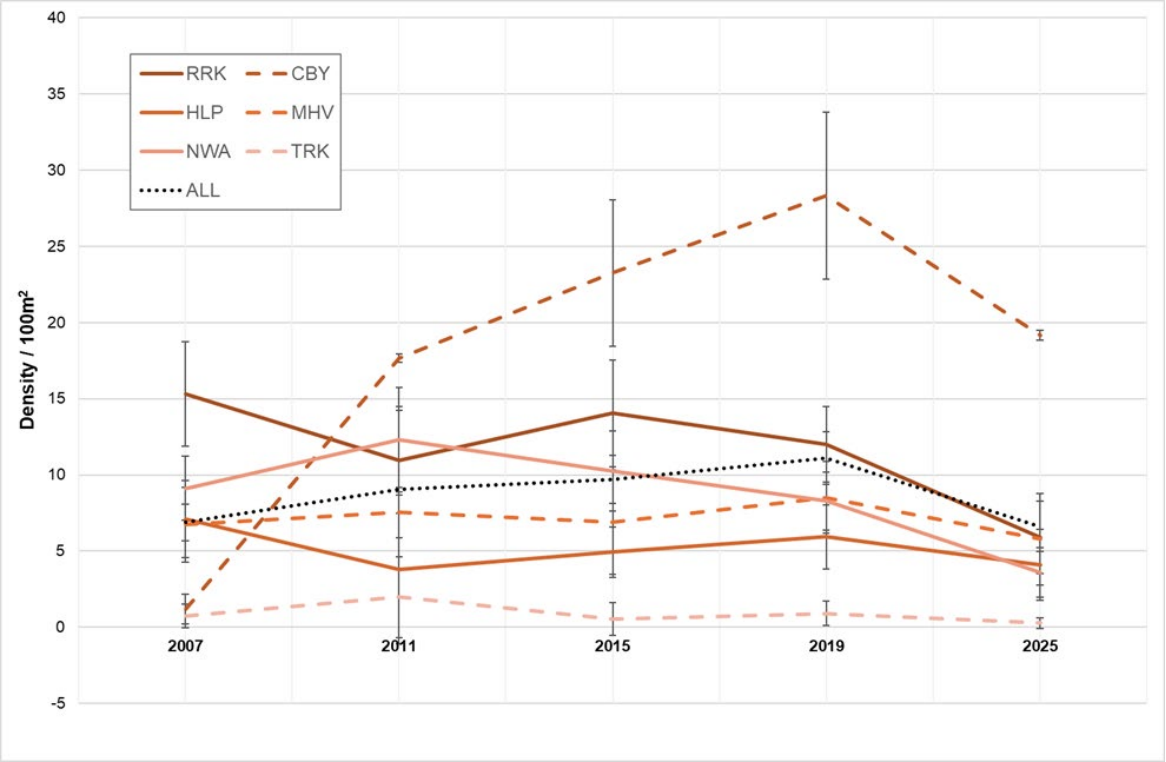
In 2025 the mean density of *E. esculentus* for all sites surveyed was 6.62/100m^2, similar to that recorded in 2007 and much lower than recorded on the last survey in 2019.

The highest mean density of 19.7 per 100m^2 was recorded at Castle Bay and the lowest was 0.28 per 100m^2 at Thorn Rock. Other sites ranged between 3.1 to 5.89 per 100m^2.

The 2025 results can be compared to the 2007, 2011, 2015 and 2019 surveys for the comparable sites, Figure 8.15. The density at all sites is lower in 2025, but overall the pattern of variation in density between the sites has not varied much between the years.

The highest *E. esculentus* density was recorded at Castle Bay in all surveys. This site is a rocky reef area made up of steep rock pinnacles and wide gullies, a habitat that is suitable for *E. esculentus* with lots of areas to shelter from wave action

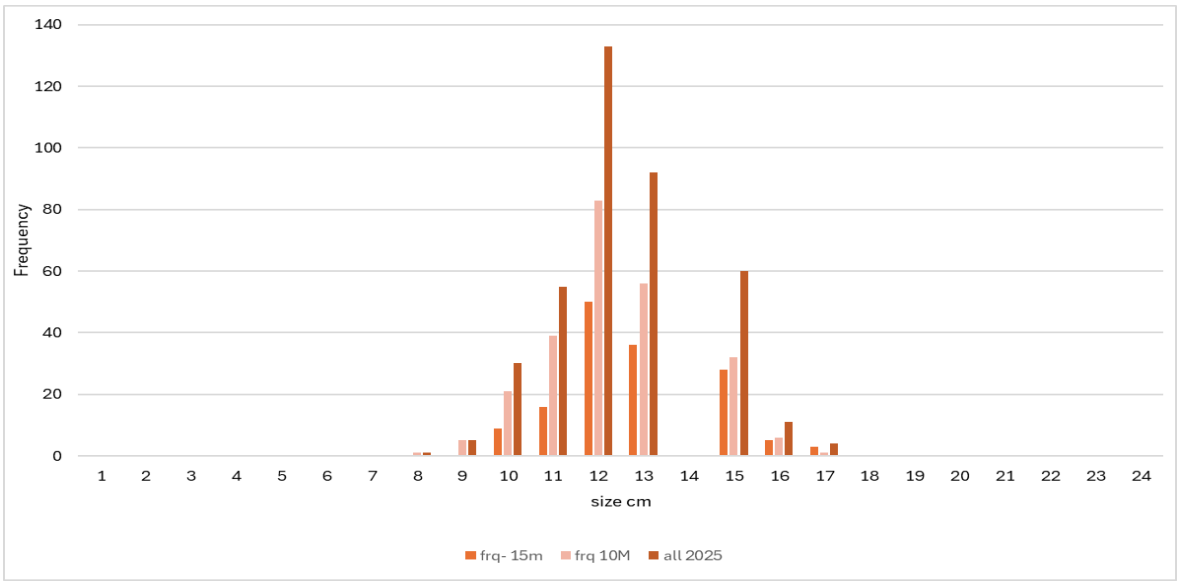
Figure 8.15 Mean *E. esculentus* density (per 100m^2) at each site for 2007, 2011, 2015, 2019 & 2025 with error bars (95% CI). Thorn Rock (TRK), North Wall (NWA), Rye Rocks (RRK), Martins Haven Point (MHV), High/Low Point (HLP) and Castle Bay area (CBY).



Echinus esculentus size

The *E. esculentus* size distribution is shown in Figure 8.16. The population of *E. esculentus* shows a normal size frequency distribution. Mean, maximum and minimum diameters were 13.1 cm, 24.3 cm and 8.1 cm respectively.

Figure 8.16 Size frequency distribution for whole MCZ population 2025.



In 2025 *Marthasterias glacialis* was the only starfish from the targeted list to be recorded, a total of 115 were recorded from all sites with a mean density of 1.74/100m^2. There were no records of either *Luidia ciliaris* or *Crossaster papposus. Crossaster papposus* has not been recorded on a survey since 2003. *Luidia ciliaris* was recorded in 2007, 2011 and 2015 but in very low numbers and mainly as juveniles.

8.1.14 Monitoring territorial fish populations

In 2025 the survey was completed at the 10m and 15m depth zones at 8 sites of which 6 sites were repeats from previous surveys Rye rocks (RRK), North wall (NWA), Pool (POL), Martins Haven west (MHV), East Hook (EHK) and High/Low point (LHPT). Two additional sites were completed both on the south side of Skomer island Thorn Rock (TRK) and Castle Bay (CBY).

Distribution of territorial fish species. The average number of fish species per 50m^2 recorded at each site is shown in Table 8.5. The highest numbers of fish were recorded at Rye Rocks where particularly high numbers of wrasse species were found, rock cook averaged 10.9/50m^2 and ballan wrasse averaged 4.8/50m^2. Numbers of tompot blenny and scorpion fish was low and no butterfish were recorded. The numbers of wrasse species varied between sites, the most frequently recorded were ballan wrasse, goldsinny and rock cook.

Table 8.5 Mean number of each fish species per 2025. (Sites: Rye Rocks (RRK) North Wall (NWA), Pool (POL), Martins Haven (MHV), Low and High Point (LHPT), East Hook (EHK), Thorn Rock (TRK) Castle Bay (CBY).

Site	Ballan wrasse	Cuckoo wrasse	Goldsinny wrasse	Corkwing wrasse	Rock Cook	Leopard spotted goby	Tompot blenny	Scorpion fish	Total all sites
CBY	1.1	1.3	1.0	0	0.9	0.3	0	0	**4.5**
EHK	2.7	0.5	4.2	1.2	0.4	0.1	0.1	0.1	**9.3**
LHPT	1.8	0.3	0.3	0.2	1.1	0.5	0.1	0	**4.3**
MHV	1.3	0	0.9	0.1	0.1	0	0	0	**2.4**
NWA	2.9	2.1	1.9	0.1	0	0.1	0.3	0.1	**8.5**
POL	1.4	2.4	1.8	1.5	0.4	1.3	0.1	0.1	**8.9**
RRK	4.8	1.6	2.3	2.6	10.9	0.4	0.1	0	**22.6**
TRK	0.9	0.1	0.1	0	0.3	0.4	0.1	0	**1.9**
Total all fish	**2.3**	**0.9**	**1.7**	**0.8**	**2.3**	**0.4**	**0.1**	**0**	**8.6**

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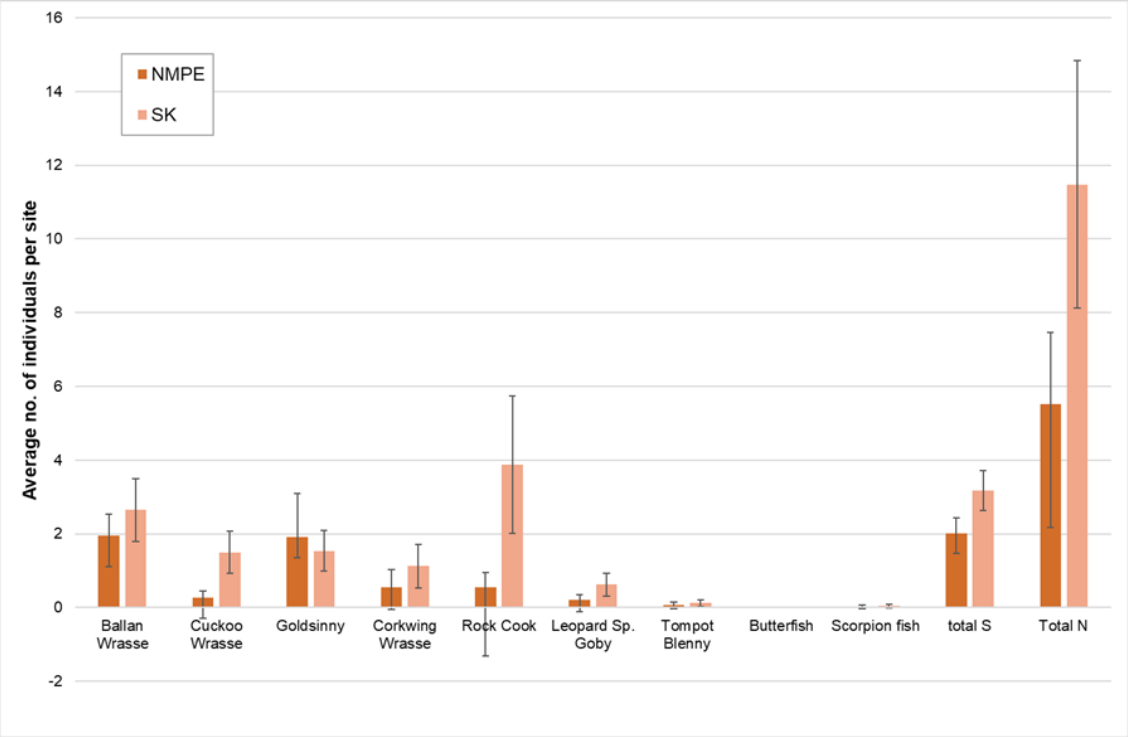
Differences between areas (Skomer & North Marloes Peninsula).
Skomer sites and all North Marloes Peninsula sites have been grouped to compare the two areas. Transects were averaged to area and the abundances of each species, the species richness (S) and the overall abundance of all fish (N) are compared as shown in Figure 8.17.

Figure 8.17 Average number of fish with 95% error bars for each species average at North Marloes Peninsula NMPE and Skomer SK sites 2025 (Species richness S, total abundance of fish N)

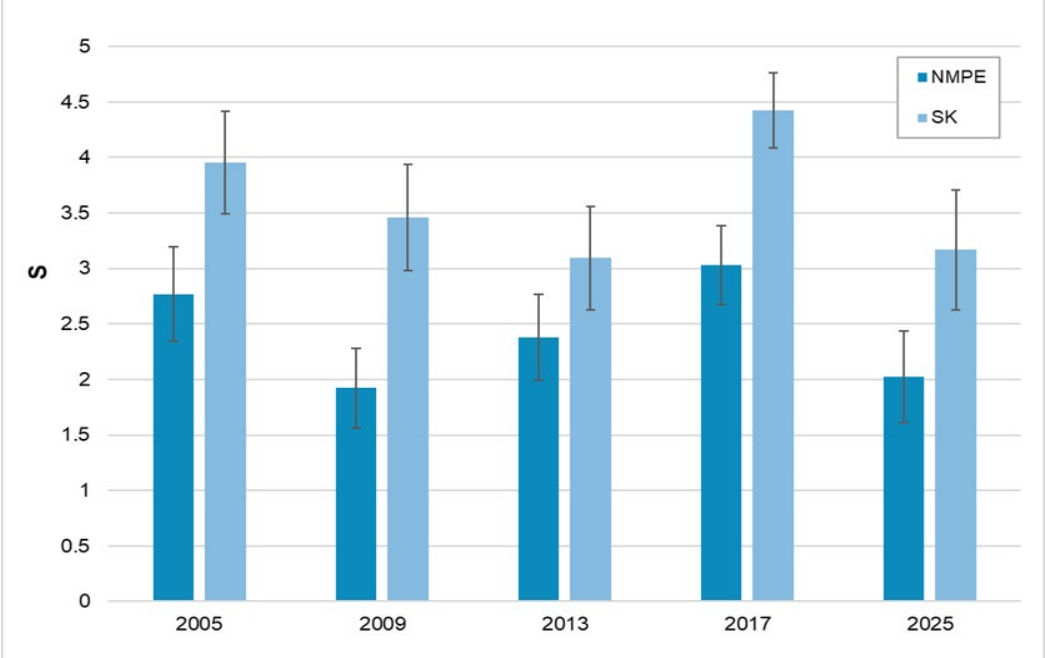


Cuckoo wrasse and rock cook wrasse had significantly higher abundances in the Skomer area. There were also significant differences in Species Richness (S) <1% and overall abundance (N) <1%. Both are higher in the Skomer area.

Difference between depth zones
The average number of each fish species has been grouped for the 10m and 15m depth zones. Most species closely matched in abundance at the two depth zones, ballan wrasse were slightly higher in the 10m zone whilst cuckoo wrasse and goldsinny wrasse higher in the 15m zone.

Comparison between years 2005 to 2025
Species richness averaged to area 2005 to 2025 is shown in Figure 8.18. The Skomer area has significantly higher numbers of fish compared to NMPE for all years.

Figure 8.18 Species richness (S) averaged to area (North Marloes Peninsula NMPE and Skomer SK) 2005 – 2025 with 95% error bars.



8.1.15 Monitoring sediment infauna

A sediment infauna survey was completed in 2024 with field work completed by the EA Coastal Vessel at the 12 established sampling stations in the Skomer MCZ. Sample analysis was contracted to a specialist laboratory and results were made available in 2025.

The average species richness, average number of individuals and average taxonomic diversity for Skomer MCZ for surveys completed from 1993 to 2024 is shown in Table 8.6.

Table 8.6. Average species richness, average number of individuals and average taxonomic diversity at Skomer MCZ.

Year	Species richness	Average no. of individuals	Average taxonomic diversity
1993	310	580.1	48.6
1996	246	175.7	47.4
1998	368	704.6	56
2003	382	773.4	57.3
2007	506	1304.2	70.4
2009	517	915.6	75.7
2013	491	784.4	73.5
2016	427	708.0	64.9
2020	532	1046.5	76.4
2024	510	967	85.1

Since 2007 there have consistently been 400+ species recorded in each survey, the 2024 survey had 510 species recorded.

8.2 Meteorology/Oceanography

8.2.1 Recording meteorological factors

Weather data at Skomer MCZ continues to be collected via an automatic weather station, which is compatible with other Environmental Change Network sites across Wales (Table 8.7).

Table 8.7 The highs and lows of temperature and wind recorded in 2025:

Maximum temperature (ºC)	26.9 (July)
Minimum temperature (ºC)	0.5 (January)
Annual maximum gust (knots)	81 mph (January)
Direction of maximum gust (degrees)	252 (Westerly)

8.2.2 Monitoring seawater turbidity/suspended sediment

Seawater turbidity was measured using a Secchi disc weekly between May to October at Thorn Rock (TRK) and Ocean Monitoring Site (OMS). Turbidity at Skomer MCZ in 2025 was average when compared with previous years. TRK and OMS follow a very similar trend over time suggesting that the waters on the north and south side of the island are well mixed. This rather dynamic picture can be simplified by calculating the mean Secchi disk value for each year as shown in figures 8.19 a & b.

Figure 8.19a Skomer MCZ summary of annual mean Secchi disc data (m) for Ocean monitoring site (OMS) with standard error bars 1992 – 2025.

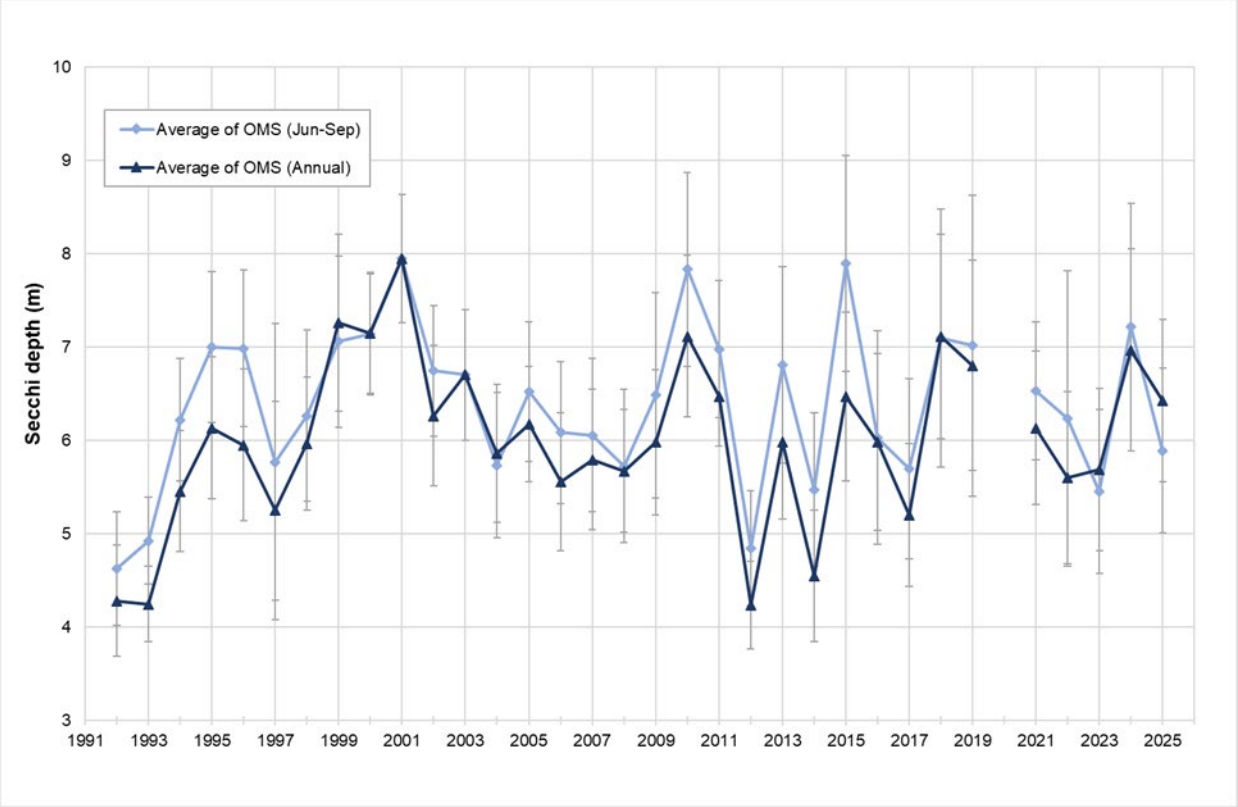
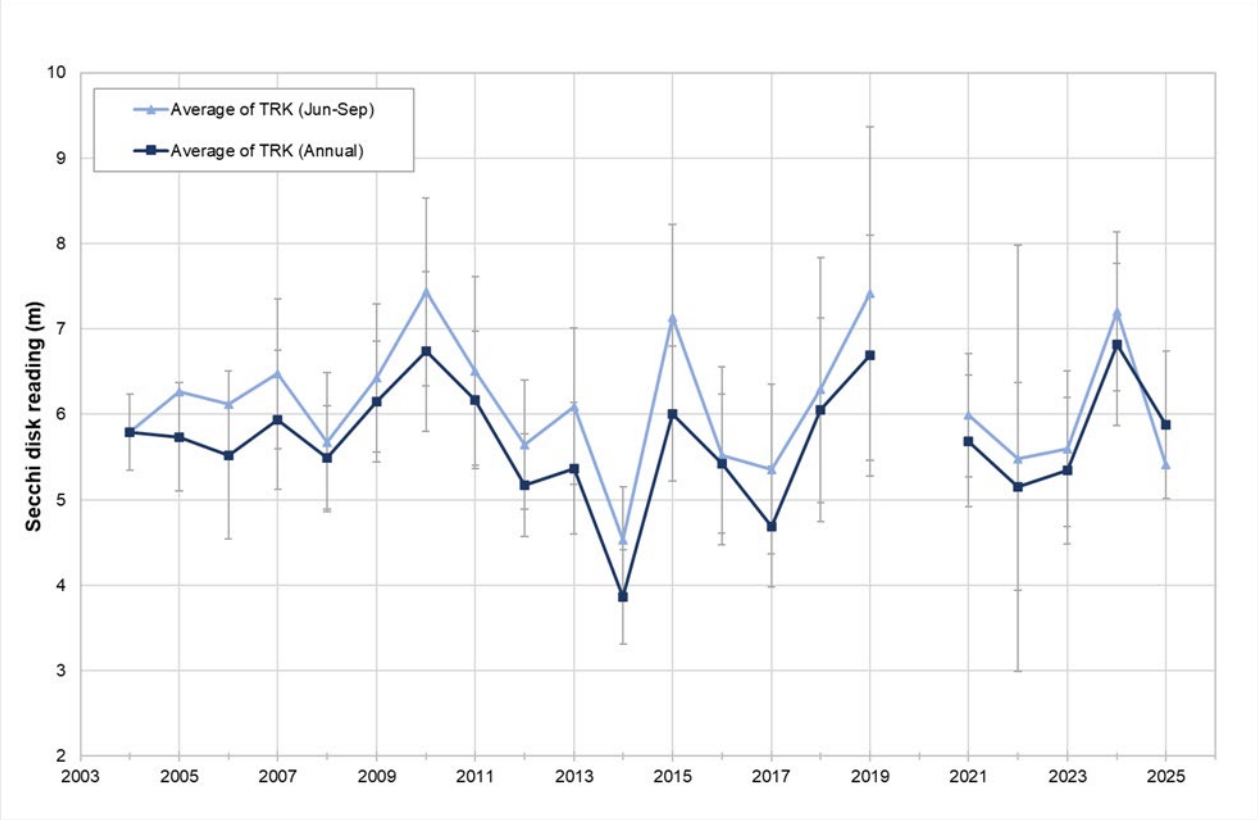


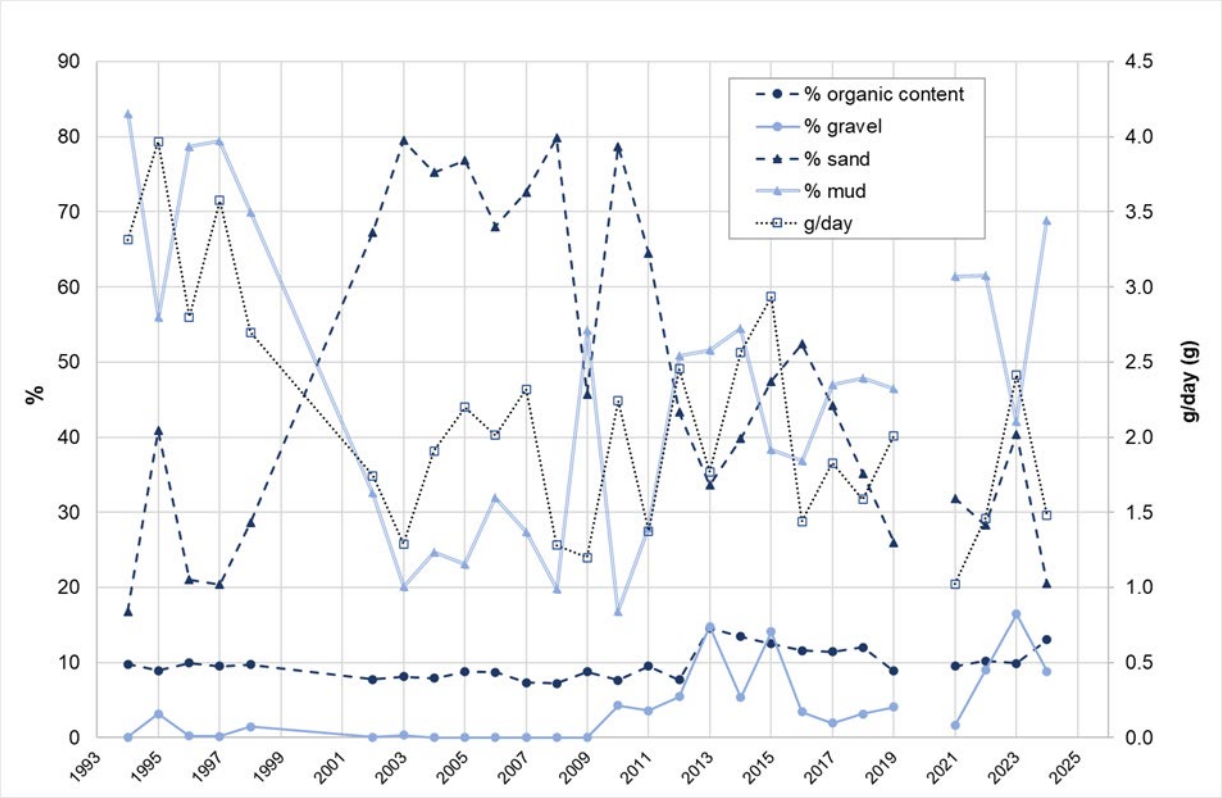
Figure 8.19b Skomer MCZ summary of annual mean Secchi disc data (m) for Thorn Rock site (TRK) site with standard error bars 2004 – 2025.



8.2.3 Monitoring seabed sedimentation

Seabed sedimentation samples were collected at the Ocean Monitoring Site (OMS) and Thorn Rock (TRK) sites using passive sediment traps. Analysis of the samples is carried out by NRW laboratories for dry weight, organic content, grainsize analysis and metal content (Figure 8.20). 2025 samples are being analysed by the NRW laboratory and this data will be available in 2026.

Figure 8.20 Skomer MCZ sediment trap sample total sediment, particle size analysis and organic content analysis at OMS and TRK sites combined 1994 to 2024



In general mud-sized particles have increased as a proportion of the total sediment since 2009, whereas the proportion of sand has reduced.

8.2.4 Recording seawater temperature

Seawater temperature data was collected from an automatic logger located at 19m below chart datum at the Ocean Monitoring Site (OMS) and from vertical temperature and salinity profiles carried out from surface to near seabed at the same time as plankton sampling.

A summary of the seabed temperatures for 1992 to October 2025 from the logger at 19 m below chart datum is shown in Figure 8.21. The rest of the 2025 data will be added to the dataset when the logger is retrieved for downloading in April 2026.

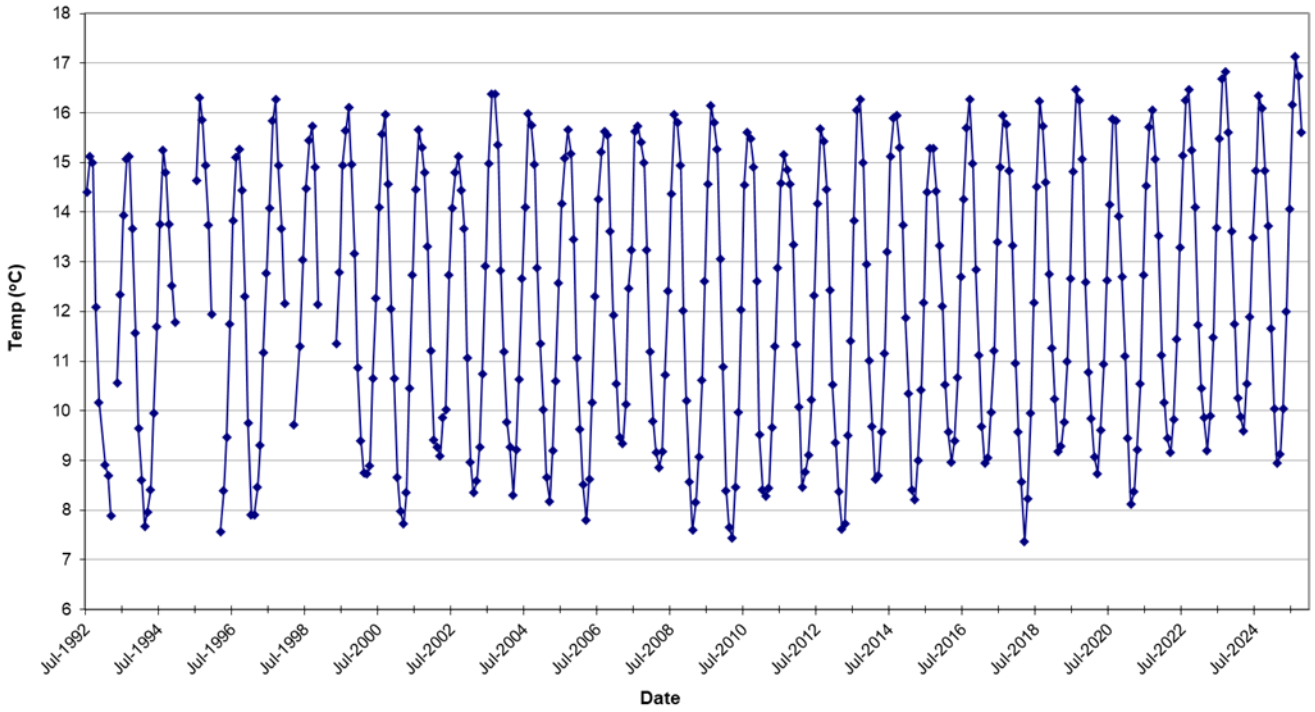
Seawater minimum temperatures are recorded in March, the minimum average for 2000 to 2025 is 7.9°C, ranging from the lowest of 6.6°C in 2016 to the highest of 9.1°C in March 2024 (1.2°C above the average). Mild winters were recorded for three consecutive years

from 2022 to 2024 with minimum temperatures between 8.7 to 9.1 ºC, in 2025 this dropped slightly to 8.2 ºC.

The maximum average seawater temperature for 2000 to 2025 is 16.5 ºC ranging from the lowest 15.6 ºC in 2002 and the highest of 17.5 ºC both 2023 and 2025.

Monthly means have been calculated from seabed temperature but substituted with the vertical profile seabed temperature data where logger data were absent.

Figure 8.21 Skomer MCZ summary of monthly mean seabed temperature July 1992 – July 2025.



8.3 Data handling developments

As a remote site with historically poor internet connection at Martins Haven, all our documents, data and images are stored on site, but with back-ups made regularly to portable hard drive for storage off-site. In November 2025 fibre arrived at Martins Haven allowing a faster internet connection. In due course our documents and data will be transferred to the NRW server but a system will need to be developed to allow our images to be efficiently stored whilst enabling easy access.

Skomer MCZ reports continue to be available via the NRW website, Natural Resources Wales / Marine and coastal evidence reports.

8.4 Other work

As team members of the Marine Monitoring, Assessment and Reporting team (MMART), Skomer MCZ staff continue to support the work of the NRW marine monitoring programme, especially where it is most efficient logistically for us to carry out the work or

where the Skomer MCZ staff have the necessary skills or equipment. In 2025 this included:

- WFD monthly water sampling at Skomer site and Pickleridge (Dale) lagoon site.
- Mark continued to service a number of temperature loggers around the Pembrokeshire coast, including shore and lagoon sites;
- Mark provided boat support for bird counting work at Stackpole to support NRW's Senior Reserve Manager, Paul Culyer.
- The whole team has continued to fulfil NRW's commitment to the UK-wide MarClim project, carrying out shore surveys throughout Pembrokeshire, including on Skokholm Island;
- Shore Dock survey was completed (Figure 8.22). Shore dock is a species conservation feature of Pembrokeshire Marine SAC and currently Watery Bay located on the south Marloes peninsula is the only site where it is found in Wales. A healthy crop of shore dock with flowering plants were recorded.

Figure 8.22 Shore Dock survey at Watery Bay

- In August Jen supported the Pembrokeshire Marine SAC diving survey.
- In September the whole team joined other NRW Marine Monitoring team members to completed the WFD fish survey in the Milford Haven waterway.
- In December and January the whole team completed all the SAC lagoon sampling at Pembrokeshire sites: Pickleridge (Dale), Neyland and Carew lagoons (Figure 8.23).

Figure 8.23 SAC Lagoon sampling at Carew.

9. Education and interpretation

9.1 Fisherman's Cottage Skomer MCZ exhibition

The Skomer MCZ exhibition room at Martins Haven was once again opened to the public in 2025. In addition to the permanent displays, temporary posters are displayed on the notice boards and the booklet and leaflet dispensers are kept full. The new edition of the Skomer MCZ booklet was popular with the public and the seal watching booklet was available during the seal pupping season.

Figure 9.1 Skomer MCZ booklet new edition

9.2 Talks and presentations

Mark provided a talk about the Skomer MCZ to the Summer Marine camp held at Dale Fort Field Centre. Kate and Mark additionally gave talks to visiting universities at Dale Fort including Gloucester, Reading and Cardiff universities.

The first Milford Haven Festival of the Sea was held in March 2025. Kate and Ali along with NRW marine colleagues hosted a stall with activities for public participation to raise awareness of our marine work. A series of talks were held in the Torch Theatre where Mark gave a presentation on our work.

Figure 9.2 NRW Marine staff at Milford Festival of the Sea

9.3 Media

Skomer MCZ team continue to work with the NRW's Communications Team. Staff posted various articles on NRW's internal social medium, "Yammer", and Ali has been regularly posting on the Skomer MCZ's Facebook page, including topics such as pink sea fan monitoring, kelp forest recording, long-term photo monitoring and visitor information on seal watching.

10. Acknowledgements

Skomer MCZ staff wish to thank all those who have supported our work or contributed directly to it over the past year.

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- All of our urchins, fish and crustacean survey diving volunteers and Pembrokeshire boat charter skippers
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- The Dale Sailing crews from *Dale Queen, Dale Princess, Wave Dancer* and *Helen Clare*
- Lockley Lodge WTSWW staff for regularly opening the MCZ visitor centre
- Neptune's Army of Rubbish Collectors for helping to keep the Skomer MCZ (and indeed the waters of Pembrokeshire) less full of rubbish

With apologies to anyone missing from the list above.

Data Archive Appendix

No data outputs were produced as part of this project.

To request the raw data, please email datadistribution@cyfoethnaturiolcymru.gov.uk.