



Llywodraeth Cymru
Welsh Government

Marine Protected Area Network Management Annual Report

2018–2019



Parc Cenedlaethol
Arfordir Penfro
Pembrokeshire Coast
National Park



CLILC • WLGA



Cyfoeth
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Resources
Wales

WELSH
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Dŵr Cymru
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JNCC
Joint Nature Conservation Committee

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Section 1

Introduction

This document is the first Marine Protected Area (MPA) Network Management Annual Report produced by the MPA Management Steering Group¹ (Steering Group), and its primary purpose is to provide a progress update on delivery of the actions included in the MPA Network Management Action Plan for 2018-2019².

The 2018-2019 Action Plan brought together, for the first time, priority network-level actions to improve MPA management and, therefore, improve or maintain condition of the network of MPAs in Wales. Each action supported at least one of the five management principles identified in the MPA Network Management Framework for Wales 2018-2023³ (Framework) (see Box 1).

The Framework sets the direction of travel for management of the MPA network in Wales and the 2018-2019 Action Plan is a key tool for Management Authorities to guide delivery of the long-term vision for the management of the network:

The Welsh MPA network is under effective and consistent management which safeguards the marine wildlife and habitats of sites, and leads to site features achieving or maintaining favourable condition. Network management supports resilient marine ecosystems which in turn help to achieve clean, safe, healthy, sustainable, productive and biologically diverse Welsh seas. MPAs are valued for the long-term benefits they provide to the people of Wales through the protection of their rich natural and cultural heritage.

This Annual Report includes information on both outputs and outcomes of management activities, reflecting on how actions are contributing to improving MPA management and, therefore, to improving or maintaining the condition of the MPA network in support of this vision. It also provides an opportunity for organisations to highlight network and local scale work that complement the actions in the 2018-2019 Action Plan under taken by Management Authorities⁴.

In preparing this Annual Report, the Steering Group has considered how it can better assess and critique the contribution the 2018-2019 Action Plan has made to the overall condition of the MPA network in Wales. The Steering Group has reflected this learning in its work to develop the 2019-2020 Action Plan⁵ and will use it to inform future iterations of both the Annual Report and Action Plan.

¹ Terms of reference for the MPA Management Steering Group:

gov.wales/docs/drah/publications/151118-marine-protected-areas-management-steering-group-terms-of-reference-en.pdf

² gov.wales/marine-protected-area-network-management-action-plan

³ gov.wales/marine-protected-area-network-management-framework-wales

⁴ A term used to refer collectively to organisations with statutory responsibilities in relation to any type of MPA, or who are significant seabed or coastal land owners. This includes relevant and competent authorities as defined by the Conservation of Habitats and Species Regulations (2017), the Conservation of Offshore Marine Habitats and Species Regulations (2017) and public authorities as defined by the Marine and Coastal Access Act (2009). Please see Annex 3 of the MPA Network Management Framework for a list of Management Authorities in Wales:

gov.wales/marine-protected-area-network-management-framework-wales

⁵ gov.wales/marine-protected-area-network-management-action-plan-2019-2020

Box 1: MPA Network Management Principles

- 1. Strategic Planning:** Management should be guided by strategic planning processes at both a sectoral and all-Wales level. It supports sustainable use of the MPA network in ways which conserve and enhance condition, support resilience of marine ecosystems, support wellbeing and deliver sustainable management of natural resources.
- 2. Regulation, development consenting and assessment processes:** Regulatory processes, consenting and activity enabling decision-making processes should be delivered consistently and proportionately across the network, and proactively consider and support the maintenance or enhancement (where possible/appropriate) of the condition of relevant sites and features across the network.
- 3. Management advice and guidance:** Decision-making and management operations should be supported by clear and consistent advice and guidance on MPAs including their conservation objectives.
- 4. Understanding the condition of, and pressures and threats on, sites and their features to inform management:** Management should be informed by, and consistently refer to, formal assessment and reporting on the health and condition of features, sites and the network as a whole. Assessment and reporting is informed by a prioritised monitoring programme that improves understanding of condition, change and impacts across aspects of the network where key pressures are identified.
- 5. Wider management:** Management operations on individual and multiple sites should be prioritised to ensure delivery of activity that has the potential for greatest improvement in the management of key pressures, and on condition across the network. Management activities may maintain or enhance feature condition, identify and address particular local issues and pressures, and raise awareness of MPAs through targeted interventions and engagement with members of the public.

Section 2

Report Structure

Management Authorities have provided an update on delivery progress for each of their actions within the 2018-2019 Action Plan. Table 1 summarises the outputs and outcomes for each, with further details presented in Annex A. As part of this process, the European Marine Site Relevant Authority Groups (RAGs)⁶ produced a report to the Steering Group to update on the local activities occurring within European Marine Sites. This information has been summarised within this Annual Report (Actions 15 and 20, and accompanying annexes) and the full report can be accessed via the Welsh Government website⁷.

Table 2 and its accompanying Annex B, provide progress on those management actions undertaken in addition to the prioritised actions identified by the Steering Group in 2018-2019. This has been collated following a call for information through the Wales Marine Advisory and Action Group (WMAAG). Contributions were received from:

- the Royal Commission on the Ancient and Historical Monuments of Wales;
- the Royal Society for the Protection of Birds;
- the Marine Conservation Society; and
- Dŵr Cymru Welsh Water.

The information received provides examples of wider MPA management activities taking place in Welsh seas which complement the actions delivered by Management Authorities through the Action Plan. The Steering Group support the recent the intention to establish a new stakeholder group under the WMAAG to provide a forum to facilitate more in-depth discussion around MPA management, amongst other marine areas, and enable wider engagement in the development of future Action Plans.

⁶ Pen Llŷn a'r Sarnau RAG; Cardigan Bay RAG; Pembrokeshire Marine RAG; Carmarthen Bay and Estuaries RAG; and Association of Severn Estuary RAG.

⁷ gov.wales/welsh-relevant-authority-groups-2018-19-update

Section 3

Progress and Highlights

The Steering Group prioritised 21 actions for delivery by Management Authorities in the 2018-2019 Action Plan. Each action supported at least one of the five management principles (see Box 1) and the prioritisation process was designed to focus effort on actions that improve management of the MPA network and, therefore, improve or maintain network condition.

The actions vary in nature, from network scale activities to specific interventions and local pilot projects. Many are ongoing in their nature, for example, those actions that are regulatory or assessment process based. Others are discrete tasks or projects with defined start and end dates, often spanning more than twelve months. Ongoing work and those projects and tasks with duration greater than a year have been carried over into the 2019-20 Action Plan⁸, alongside newly prioritised actions. A number of the ongoing actions, particularly those relating to planning and consenting, whilst not always visible to external audiences, continue to provide vital protection to the network and represent a considerable volume of management work.

In considering the outputs and outcomes of each of the actions, the Steering Group has been able to strategically review both individual and collective progress towards the Framework's vision and objectives. In summary, Management Authorities have this year delivered a significant breadth of activity relating to:

- strengthening decision making processes, strategy development and implementation;
- improving the evidence base; and
- increasing our understanding of pressures on MPA features and the wider marine environment.

Examples of work delivered from the 2018-2019 Action Plan highlighting both network and local level contributions to the Framework's five management principles include:

1. Started the process of bringing together and improving access to evidence, guidance and decision-making tools to support sustainable development of targeted sectors and achieve better outcomes for the marine environment, including the MPA Network (see Action 16);
2. Potential effects on MPAs have been considered by NRW in determining 55 marine licences and, where necessary, appropriate mitigatory measures have been included as a condition of marine licences. WG have issued 15 fisheries legislation exemptions for a variety of scientific research, 10 of which required a Habitat Regulation Assessment which confirmed that there would be no impact on protected species and habitats (see Action 2);
3. Delivery of guidance on seaweed harvesting to assist applicants in preparing information required for environment assessments and to improve management of MPAs and the wider marine environment (see Action 18);
4. Secured evidence base on distribution and relative intensity of bait digging and overlap with sensitive features as part of phase 2 of the unregulated activities project (see Action 12); and

⁸ gov.wales/marine-protected-area-network-management-action-plan-2019-2020

5. Projects to better understand water quality issues in the marine environment have been delivered at Pen Llyn a'r Sarnau (PLAS) and Pembrokeshire Marine Special Areas of Conservation (SAC) and recommendations for improving water quality have been developed (see Action 15 and Action 20). Water quality is of relevance to multiple sites and the learning from these projects can be applied across sites to help improve management and therefore condition of the network.

Future Action Plans will seek to build on this work, strengthening the links between network-level and site level delivery. The Steering Group will reflect on future developments within the wider policy context and how they may relate to Welsh MPA management.

Table 1

Summary of Progress: MPA Network Management Action Plan for Wales 2018-2019

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
1	<p>Develop an approach to undertaking improved and periodic MPA condition assessments.</p> <p>Further detail on progress in delivering this action is set out in Annex A1.</p> <p>This action contributes to Management Principle(s): 2,3,4,5.</p>	NRW	<p>Work has commenced to develop indicators and a process for reporting on condition of features protected within the network of MPAs in Wales.</p> <p>EMFF funding has been secured to deliver this work (project start date October 2018), some contracts have already been let to support the project.</p> <p>Carried over action, see 2019-2020 Action Plan, Action 1.</p>	<p>This project will streamline the condition assessment process for the MPA network to underpin management across the network e.g. reporting, HRA and prioritisation of management measures where required.</p>

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
2	<p>Deliver MPA management through regulatory consenting and assessment processes.</p> <p>Further detail on progress in delivering this action is set out in Annex A2.</p> <p>This action contributes to Management Principle(s): 1,2,4,5.</p>	All Management Authorities	<p>Management Authorities have delivered effective MPA management by taking account of potential impacts of MPAs through regulatory consenting (e.g. marine licensing; SSSI consents and assents; and species licensing) assessments processes (e.g. Habitats Regulation Assessment; Strategic Environment Assessment; and Environmental Impact Assessment) and activity enabling decision making processes.</p> <p>Ongoing action, see 2019-2020 Action Plan, Action 2.</p>	Regulatory consenting; assessment processes; and activity enabling decision making processes take account of impacts on MPAs and are intended to support maintenance (or enhancement where possible/appropriate) of condition of relevant sites and features across the network.
3	<p>Improve accessibility of marine monitoring data.</p> <p>Further detail on progress in delivering this action is set out in Annex A3.</p> <p>This action contributes to Management Principle(s): 4,5.</p>	NRW	<p>Monitoring data from 2015, 2016 and 2017 for subtidal SAC sediment features across Welsh waters has been collated, quality assured and entered into the Marine Recorder Database. The habitats covered are:</p> <ul style="list-style-type: none"> • 2015: 5 coastal lagoons, 3 estuaries, 1 bay. • 2016: 5 coastal lagoons, 6 sand banks, 8 bays, 1 bay investigation • 2017: 5 coastal lagoons, 8 bays, 1 sand bank <p>Carried over action, see 2019-2020 Action Plan, Action 18.</p>	<p>This data is now available via the Marine Recorder Database for use in environmental change analysis and reporting.</p> <p>It also enhances the overall evidence base used to inform assessments of MPAs (e.g. condition assessment reporting under the Habitats Directive) and linked processes (e.g. Habitat Regulations Assessments).</p>

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
4	<p>Further develop and deliver a risk-based monitoring programme across the MPA network.</p> <p>Further detail on progress in delivering this action is set out in Annex A4.</p> <p>This action contributes to Management Principle(s): 3,4,5.</p>	NRW, JNCC & Welsh Government (WG)	<p>Options for UK-scale components of the programme have been completed.</p> <p>Those for Welsh inshore seabed habitats are being finalised.</p> <p>Carried over action, see 2019-2020 Action Plan, Action 3.</p>	<p>The risk-based approach being developed will ensure species and habitats at greatest risk from pressures and threats are prioritised.</p> <p>The monitoring programme will include elements of investigative monitoring, providing data to better understand pressures, impacts and inform management measures and effectiveness.</p>
5	<p>Develop an approach for refining conservation objectives for all MPAs in Wales while continuing to publish guidance for new sites as necessary.</p> <p>Further detail on progress in delivering this action is set out in Annex A5.</p> <p>This action contributes to Management Principle(s): 2,3,4.</p>	NRW & JNCC	<p>Conservation objectives for the Northern Cardigan Bay SPA and the three Welsh cross-border harbour porpoise SACs have been published.</p> <p>A review and comparison of NRW conservation objectives to that produced by other SNCBs has been completed, as has scenario testing of different approaches for conservation objectives in the HRA process.</p> <p>Carried over action, see 2019-2020 Action Plan, Action 4.</p>	<p>These new conservation objectives are now being used in site management.</p> <p>In the longer term, this work will lead to the development of improved and more consist conservation objectives and advice across the network that is easier to use in MPA management including regulatory and reporting processes.</p>
6	<p>Develop a UK Dolphin and Harbour Porpoise Conservation Strategy.</p> <p>Further detail on progress in delivering this action is set out in Annex A6.</p> <p>This action contributes to Management Principle(s): 3,4,5.</p>	JNCC, NRW and WG	<p>A pre-consultation stakeholder workshop was held in April 2018 to inform the drafting of the Strategy.</p> <p>Carried over action, see 2019-2020 Action Plan, Action 5.</p>	<p>A strategy which aims to maintain and/or achieve favourable conservation status of the UK's nine most commonly found cetaceans through effective management.</p>

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
7	<p>Undertake analysis of outstanding monitoring data samples to inform site condition assessments.</p> <p>Further detail on progress in delivering this action is set out in Annex A7.</p> <p>This action contributes to Management Principle(s): 4,5.</p>	NRW	<p>12 years of monitoring data for an area within Pen Llŷn a'r Sarnau SAC has been prepared, analysed and reported on.</p> <p>Analyses undertaken of outstanding monitoring data to reassess condition of the lagoon feature in Cemlyn Bay SAC.</p> <p>Carried over action, see 2019-2020 Action Plan, Action19.</p>	<p>This updated information is now available for use to inform site management, including regulatory and reporting processes.</p> <p>The coastal lagoon feature at Cemlyn Bay has changed from “unfavourable” to “favourable” condition with high confidence in the data. A revised indicative site condition report for Cemlyn Bay SAC⁹ has been published by NRW to reflect the change in status.</p>
8	<p>Assess and where necessary manage the impact of commercial fishing activities on MPAs.</p> <p>Further detail on progress in delivering this action is set out in Annex A8.</p> <p>This action contributes to Management Principle(s): 4,5.</p>	WG & NRW	<p>The 40 assessments for the highest risk habitat/gear interactions (the “purple” assessments) have been completed and published on the Welsh Government and NRW's website (www.naturalresources.wales/awfa?lang=en). Work has commenced on the next tranche of work (56 marine mammal assessments).</p> <p>Carried over action, see 2019-2020 Action Plan, Action 6.</p>	<p>This work will inform where commercial fisheries management may be needed to safeguard the network of MPAs, contribute to the sustainable exploitation of marine fish and strengthen the resilience of the marine environment.</p>

⁹ www.cdn.naturalresources.wales/media/687449/eng-evidence-report-309-cemlyn-sac-indicative-condition-assessment-nov-2018.pdf

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
9	<p>Operate a risk-based approach to fisheries enforcement.</p> <p>Further detail on progress in delivering this action is set out in Annex A9.</p> <p>This action contributes to Management Principle(s): 1,2.</p>	WG	<p>Of the 13 prosecutions that occurred during the period 1/4/2018 – 31/3/2019, 5 related to offences within MPAs, and included gear and spatial infringements. Two official warnings were issued during this period, one related to a scallop fishing offence in an MPA.</p> <p>Ongoing action, see 2019-202 Action Plan, Action 7.</p>	<p>Fisheries enforcement (which includes prosecution) within the Welsh zone and its MPAs, serves to act as a strong deterrent to help prevent unlawful fishing activities and contribute towards the continued protection of MPA features and the overall condition of the network.</p>
10	<p>MPA Network Condition Improvement Project.</p> <p>Further detail on progress in delivering this action is set out in Annex A10.</p> <p>This action contributes to Management Principle(s): 1,4,5.</p>	NRW	<p>Completed the collation and analysis of data on the pressures and threats to features protected in SSSIs that are part of the MPA network.</p> <p>“Agriculture and Land management” has been identified as an additional priority work area for this project.</p> <p>Priority actions have been developed and have been put forward as new management actions for screening and prioritisation for the 2019-2020 Action Plan).</p> <p>On-going support has been provided to individual projects within the 2018-9 Action Plan (12, 17 &19) that were previously developed under this programme of work.</p> <p>Ongoing action, see 2019-2020 Action Plan, Action 8.</p>	<p>Focus of effort on priority management challenges, will continue to help either to:</p> <ul style="list-style-type: none"> • develop and deliver actions with the greatest potential to improve (or maintain) the condition of features across the network; or • improve understanding of links between activities and feature condition.

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
11	<p>Improve maps of the extent and distribution of Annex 1 marine habitats.</p> <p>Further detail on progress in delivering this action is set out in Annex A11.</p> <p>This action contributes to Management Principle(s): 2,3,4.</p>	NRW	<p>Updates and revisions made to:</p> <ul style="list-style-type: none"> • The extent of subtidal reef and maerl in areas of Pembrokeshire Marine SAC; • The extent of Horse Mussel beds in Pen Llŷn a'r Sarnau SAC; • Sandbank boundaries within the Severn Estuary SAC; and • Saltmarsh extent datasets. <p>Ongoing action, see 2019-2020 Action Plan, Action 9.</p>	<p>Updated maps now available to support and inform MPA management including regulatory and reporting processes.</p>
12	<p>Phase 2 of the unregulated activities project, focussed on the priority activities.</p> <p>Further detail on progress in delivering this action is set out in Annex A12.</p> <p>This action contributes to Management Principle(s): 3,4,5.</p>	NRW	<p>Improved evidence base for the unregulated activities identified as of greatest concern at the network scale, including:</p> <ul style="list-style-type: none"> • Anchoring, mooring and launching (recreational) – distribution and relative intensity; • Recreational sea angling – understanding of impacts; • Bait digging/collection of living resources – distribution and relative intensity, and overlap with sensitive features; and • Foot access – sensitive areas for MPA bird features, and possible methodologies for estimating foot access intensity and behaviour. <p>For Phase 3, see 2019-2020 Action Plan, Action 21.</p>	<p>Evidence now available for use to explore possible management interventions, where required, to improve (or maintain) condition of MPA features.</p> <p>Phase 2 is also informing where further evidence is needed.</p>

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
13	<p>Deliver the priority actions within the Marine Litter Action Plan where they provide benefit to the network of MPAs in Wales.</p> <p>Further detail on progress in delivering this action is set out in Annex A13.</p> <p>This action contributes to Management Principle(s): 2,3,4,5.</p>	<p>The Clean Seas Partnership (CSP): WG, NRW, DCWW, MHPA, LAs and Relevant Authority Group (RAG) officers</p>	<p>EMFF grant funding has been secured to support delivery of a number of plan's actions. The project will be delivered by a consortium involving Keep Wales Tidy, Marine Conservation Society, local authorities and others, and will gather research into marine litter.</p> <p>Carried over action, see 2019-2020 Action Plan, Action 10.</p>	<p>Improve understanding of and, where appropriate, reduce impacts of litter on the marine environment and MPAs if such measures are taken.</p>
14	<p>Collate and analyse evidence to inform reporting requirements which meet national and international obligations, including under Section 124 of the Marine and Coastal Access Act (2009) and to OSPAR on effective management of MPAs.</p> <p>Further detail on progress in delivering this action is set out in Annex A14.</p> <p>This action contributes to Management Principle(s): 4.</p>	<p>WG, NRW & JNCC</p>	<p>The UK report on the assessment of management effectiveness was co-ordinated by the JNCC and submitted to the OSPAR commission on 28 September 2018.</p> <p>The report under Section 124 of the Marine and Coastal Access Act (2009) was laid before the National Assembly for Wales on 21 January 2019¹⁰.</p>	<p>Information on the state of our MPA network and on management effectiveness of Wales' OSPAR sites is now available in an easily accessible format.</p>

¹⁰ www.assembly.wales/laid%20documents/gen-ld12056/gen-ld12056-e.pdf

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
15	<p>Explore how outcomes from pilots projects on diffuse and atmospheric pollution at Pen Llŷn a'r Sarnau, Pembrokeshire Marine and Severn Estuary SACs can be applied across the network.</p> <p>Further detail on progress in delivering this action is set out in Annex A20.</p> <p>This action contributes to Management Principle(s): 4 & 5.</p> <p>A full report to the Steering Group on local activities within European Marine Sites can be accessed via the Welsh Government website¹¹.</p>	NRW & Relevant Authority Groups (RAGS)	<p>A number of the sites are piloting projects to better understand impacts of diffuse water pollution and atmospheric pollution on MPA features.</p> <p>Carried over action, see 2019-2020 Action Plan, Action 11.</p>	Learning from the projects will be applied to the network, where appropriate and possible.
16	<p>Sustainable Management of Marine Natural Resources Project.</p> <p>Further detail on progress in delivering this action is set out in Annex A16.</p> <p>This action contributes to Management Principle(s): 1.</p>	WG & NRW	<p>This first phase of this project delivered a quality assessed evidence database and a report identifying key evidence gaps.</p> <p>A review of the Wales Marine Planning Portal has been completed, and recommendations for improvements identified. The portal will be a key tool for accessing and interpreting evidence to support marine planning and management.</p> <p>Carried over action, see 2019-2020 Action Plan, Action 12.</p>	Improved access to relevant data and information, locational guidance and decision-making tools will help to achieve better outcomes for the marine environment, including MPAs, and contribute towards the sustainable development of these sectors.

¹¹ gov.wales/welsh-relevant-authority-groups-2018-19-update

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
17	<p>Develop a biosecurity plan for marine invasive non-native species (INNS), learning from existing projects.</p> <p>Further detail on progress in delivering this action is set out in Annex A17.</p> <p>This action contributes to Management Principle(s): 1,3,4,5.</p>	NRW & Pen Llŷn a'r Sarnau Relevant Authority Group officer	<p>Updated datasets for the following activities, which are known to act as pathways for the introduction and spread of INNS:</p> <ul style="list-style-type: none"> • Aquaculture; • Recreational vessels; and • Shipping. <p>EMFF funding secured to deliver pilot biosecurity plan for Pen Llŷn a'r Sarnau (project start date April 2019).</p> <p>Carried over action, see 2019-2020 Action Plan, Action 13.</p>	Longer term, effective biosecurity planning for the MPA network will help to manage potential impacts of marine invasive non-native species on the condition of protected features.
18	<p>Develop consistent and proportionate guidance to improve casework guidance and to support implementation of the Welsh National Marine Plan.</p> <p>Further detail on progress in delivering this action is set out in Annex A18.</p> <p>This action contributes to Management Principle(s): 2,3.</p>	NRW & JNCC	<p>Guidance developed includes:</p> <ul style="list-style-type: none"> • Guidance to assist applicants in preparing the information require for environmental assessments e.g. guidance on benthic datasets that NRW holds, benthic survey and seaweed harvesting; • Guidance on the application of the new regulations that govern Environmental Impact Assessments; and • Guidance which further clarifies the marine licensing application process. <p>JNCC has information on activities for each MPA published in its site information pages on its website.</p> <p>Ongoing action, see 2019-2020 Action Plan, Action 14.</p>	Consistent and proportionate guidance will support improved decision making which will help to improve the security of management and help to maintain and where appropriate, improve the condition the features of our MPAs.

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
19	<p>Address coastal squeeze impacts on MPAs.</p> <p>Further detail on progress in delivering this action is set out in Annex A19.</p> <p>This action contributes to Management Principle(s): 1,2,3,4,5.</p>	NRW & WG	<p>Evidence produced to understand nature and scale of coastal squeeze¹² on MPA coastal habitat features (outside of anticipated compensatory requirements from work associated with flood and coastal erosion risk management schemes) in Pen Llŷn a'r Sarnau SAC.</p> <p>Ongoing monitoring of coastal habitat that was created in 2014 (through the National Habitat Creation Programme, NHCP) at Carmarthen Bay and Estuaries SAC (Cwm Ivy, North Gower).</p> <p>Ongoing action, see 2019-2020 Action Plan, Action 15.</p>	<p>Evidence will help to underpin discussion on how to offset coastal squeeze losses outside of the NHCP to help maintain the integrity of the MPA network.</p> <p>Lessons learned from the Cwm Ivy habitat creation are informing ongoing delivery of habitat creation projects to provide compensatory coastal habitat for anticipated habitat loss from work associated with flood and coastal erosion risk management schemes.</p> <p>As the habitat develops, the area of saltmarsh within Wales is increasing, and in the longer term this new habitat could be considered for inclusion in the MPA network to help maintain coherence.</p>

¹² Coastal squeeze is the loss of natural habitats arising from man-made structures, or actions, preventing the landward movement of those habitats that would otherwise naturally occur in response to sea level rise (SLR), potentially in conjunction with other coastal processes. Coastal squeeze reduces habitat area on the seaward side of existing structures.

#	Action	Lead Management Authorities	Outputs * ongoing action: e.g. a continual process or activity, such as consenting. * carried over action: e.g. task or project with a defined completion delivery date.	Outcomes (actual and anticipated)
20	<p>Maintain links between the Network Action Plan and local agreed actions, where they exist, and support exploration of funding opportunities.</p> <p>Further detail on progress in delivering this action is set out in Annex A20.</p> <p>This action contributes to a number of the Management Principles, including principles 4 & 5.</p> <p>A full report to the Steering Group on local activities within European Marine Sites can be accessed via the Welsh Government website¹³.</p>	Relevant Authority Groups	<p>The Pen Llŷn a'r Sarnau SAC Officer sits on the Steering Group as the European Marine Site Officer (EMSO) advisor. They have attended meetings and liaised with other EMSOs to input into the Steering Group's work.</p> <p>Other members of the Steering Group have also undertaken local liaison through their roles as Relevant Authority Group (RAG) members.</p> <p>Ongoing action, see 2019-2020 Action Plan, Action 16.</p>	Ensured connections and liaison between network-level actions and local MPA management activity.

¹³ gov.wales/welsh-relevant-authority-groups-2018-19-update

Table 2

Additional actions outside of the 2018-2019 MPA Network Management Action Plan for Wales

The information in the following table has been collated following a call for information through the Wales Marine Advisory and Action Group. This table provides progress, as directly reported by the named lead organisations, on management actions undertaken during 2018-2019 in addition to the prioritised actions identified by the Steering Group. These actions have not been screened or prioritised by the Steering Group, however they are complementary and reflect the breadth of MPA management activities being undertaken by a range of organisations. Table 2 is supported by a more detailed overview of each action in Annex B.

Action	Lead Organisation	Outputs	Outcomes
<p>Gathering data about condition and biodiversity at 20 wreck sites around the Welsh coast with significant associations to the Great War.</p> <p>Further detail on progress in delivering this action is set out in Annex B1.</p>	Royal Commission on the Ancient and Historic Monuments of Wales	Ecological survey data shared on the iRecord website, which was developed on behalf of the National Biodiversity Network.	Strengthens evidence base to inform MPA management.
<p>Roseate Tern LIFE project. The project enhances existing management at The Skerries, within Anglesey Terns SPA, by addressing the threat of mammalian predators and initiating biosecurity measures to keep the islands secure. The project also provides additional staff, monitoring and habitat management.</p> <p>Further detail on progress in delivering this action is set out in Annex B2.</p>	Royal Society for the Protection of Birds (RSPB)	<p>During 2018 roseate terns successfully hatched chicks at the site for the first time since 2006.</p> <p>Numerous reports: www.roseatetern.org/reports.html</p>	Project is ongoing.

Action	Lead Organisation	Outputs	Outcomes
<p>Annual trip to free Gannets entangled in plastic on the island and awareness raising activities.</p> <p>Ongoing project to study foraging areas used by Gannets of Grassholm SPA, and a mark-recapture study used to estimate survival of gannets from one season to the next.</p> <p>Further detail on progress in delivering this action is set out in Annex B3.</p>	<p>RSPB University of Exeter – research</p>	<p>Data on gannet foraging and migration patterns.</p> <p>Evidence used to estimate survival of gannets from one season to the next.</p> <p>Research publications.</p>	<p>Project is ongoing,</p> <p>Annual trip to free birds trapped in plastic in October 2018 resulted in 18 birds being released. Since regular October visits began in 2005, 667 birds have been released.</p>
<p>Little tern LIFE project (focus at Gronant dunes in Wales). The project's aims are to enhance management and habitat restoration/creation, keep people informed of the conservation issues facing little terns, particularly in the local communities close to the current and potential sites, and to produce a UK little tern Species Recovery Plan.</p> <p>Further detail on progress in delivering this action is set out in Annex B4.</p>	<p>RSPB Gronant colony – Denbighshire County Council</p>	<p>UK little tern Species Recovery Plan.</p>	<p>The project started in 2013 and came to an end in 2018. During that time the mean number of breeding pairs of little terns at the Gronant dunes colony was 146, with 171 breeding pairs recorded in 2018. This represents an increase from 121 between 2009 and 2013.</p>
<p>Awareness raising and monitoring of disturbance from South Stack reserve.</p> <p>Further detail on progress in delivering this action is set out in Annex B5.</p>	<p>RSPB</p>	<p>Raising awareness to avoid disturbance; around the reserve there are 200 people a day coasteering and up to 19 pleasure boats in around the sea cliffs from April to September.</p>	<p>Project is ongoing.</p>

Action	Lead Organisation	Outputs	Outcomes
<p>Biosecurity for LIFE project. The project will work to ensure that the UK's important island seabird populations are provided with safe places to breed and build long-term resilience considering the other significant threats. It will also aim to ensure that island communities are engaged and central to the implementation of successful biosecurity measures. The project also has wider ambitions to improve access to information across Europe on best practice for island biosecurity.</p> <p>Further detail on progress in delivering this action is set out in Annex B6.</p>	RSPB	<p>The project started in 2018 and was officially launched in 2019. It will run until 2022. The expected outputs and outcomes are:</p> <ul style="list-style-type: none"> • An evaluation of the current biosecurity measures in operation on islands within the Project Area; • Training, advice and support to island communities, managers and other relevant practitioners to equip them with the skills required for writing biosecurity plans; • Development and delivery of training courses for the key island target audiences, including island managers, communities, businesses and authorities; • Recruitment and training of volunteers; • Oversight of the provision of biosecurity equipment and materials to meet biosecurity plan requirements (this will include the acquisition of a rodent detection dog); • Monitoring of seabird island SPAs for predator incursions, in line with the biosecurity plans; • Engagement with the wider community through running a UK wide biosecurity awareness raising campaign, creating demonstration trails on three island SPAs and working with school children; • Working with organisations across Europe to develop the EBIRAG and create a platform for cross organisational learning. 	<p>Project is ongoing and seeks to ensure that the UK's important island seabird populations are provided with safe places to breed and build long-term resilience considering the other significant threats.</p>

Action	Lead Organisation	Outputs	Outcomes
<p>SeaSearch citizen science surveys.</p> <p>Further detail on progress in delivering this action is set out in Annex B7.</p>	<p>Marine Conservation Society</p>	<p>Received a total of 118 Seasearch forms for dives in 2018. The data has all been entered into Marine Recorder, shared with NRW and is in the process of appearing on the NBN Atlas (with sensitive species records blurred). A summary report is will be available shortly on the Seasearch website.</p>	<p>Improved evidence and data demonstrating temporal trends for a number of species at dive sites across Wales.</p>
<p>Understanding the impact of activities on coastal waters. Dŵr Cymru's current (2015-2020) investment programme includes a major programme of investigations to improve the company's understanding of the impact that it and others are making on Welsh coastal waters, particularly on bathing waters and shellfisheries. The programme has been developed in close cooperation with NRW.</p>	<p>Dŵr Cymru Welsh Water</p>	<p>Data gathered through the programme will improve the evidence base relating to the relative impact that different sectors are making on coastal waters. Dŵr Cymru has shared the subsequent results with NRW.</p>	<p>Help to ensure that regulatory effort and investment on improvements are well targeted.</p>
<p>Plastics in the aquatic environment. At Dŵr Cymru's instigation, the UK water industry's research arm, UKWIR, is investigating a range of plastics-related issues relevant to the sector.</p> <p>Further detail on progress in delivering this action is set out in Annex B8.</p>	<p>Dŵr Cymru Welsh Water and UKWIR</p>	<p>The findings of the research will improve the understanding of the fate of microplastics and nanoplastics entering public sewers. Although not specifically focused on the marine environment, the research should make a useful contribution to the expanding body of knowledge on the source and extent of plastics in the aquatic environment as a whole.</p>	<p>Help to inform future decisions on the measures needed to reduce plastics in the aquatic environment, including the sea.</p>

Annex A

Further details on progress of individual actions within the 2018-2019 Action Plan

Annex A1

Project/Action title:	Develop an approach to undertaking improved and periodic MPA condition assessments (Action 1)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

This project aims to develop indicators and a process for reporting on condition of features protected within the network of MPAs in Wales. NRW has secured an EMFF grant to carry out the work.

This work will be completed in March 2022 and covers all MPAs in Wales, although the EMFF part of the project will focus on European site features, the approach will be applicable to all MPAs.

Outcome(s) (actual/anticipated):

Initial outputs (2018/2019):

- A review of all data available in Welsh waters that could be used for feature condition assessments (published on the NRW website);
- A review of the use of Water Framework Directive elements in feature condition assessments (report); and
- A successful EMFF grant has been awarded to NRW and the project officially started in October 2018.

Anticipated outcome:

Timely assessment and reporting on the condition of the features of our network which will better inform management and focus priorities.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	Yes	Being able to produce timely condition assessments at the site level will help both regulators and developers make better decisions during the regulatory process.
Management advice and guidance	Yes	The approach will be NRW's advice on how condition assessments should be carried out focussing on being a clear and consistent process.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Having a formal clear and timely approach to condition assessments is essential.
Wider management	Yes	Good, timely knowledge of the condition of features may help prioritise management action on the ground.

Annex A2

Project/Action title:	Deliver MPA management through regulatory consenting and assessment processes (Action 2)
Lead organisation:	All Management Authorities

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

Management Authorities is a term used to refer collectively to organisations with statutory responsibilities in relation to any type of MPA, or who are significant seabed or coastal land owners. This includes relevant and competent authorities as defined by the Conservation of Habitats and Species Regulations (2017), the Conservation of Offshore Marine Habitats and Species Regulations (2017) and public authorities as defined by the Marine and Coastal Access Act (2009).

Management Authorities principally manage MPAs through regulatory consenting as well as assessment processes and these processes constitute a significant element of work. This action relates to work to, where necessary, assessing effects of activities on MPAs before consents are issued, or other activity-enabling decision are made, to help prevent negative impacts, secure conservation objectives of MPAs and deliver wider benefits for the network.

This work is ongoing in nature and the sections below provide an overview of the key Management Authorities and the regulatory consenting and/or assessments processes they deliver.

Welsh Government

- Fisheries management (commercial and recreational fisheries) in the inshore area (0-6 nautical miles), and the Welsh Zone (the area outside of 12 nautical miles from the shore).
- Regulatory (competent authority) role under Conservation of Habitats and Species Regulations 2017 (the 2017 Regulations), consulting with NRW as Statutory Nature Conservation Body through the Habitat Regulation Assessment (HRA) process.
- Granting of Regulatory Orders for NRW-run Burry Inlet and Dee Estuary Cockle Fisheries.
- Issuing of Several Orders to prevent damage to named species, or condition and restrictions on the order holder.
- Inputting into Marine Licences:
 - WG Fisheries Operation team are consulted in Marine Licence applications
 - WG carries out inspections of activities for issued Licences (NRW) to ensure compliance with Licence conditions and instigate enforcement activity if required.
- Offshore energy consenting for 1-350MW projects – Developments of National Significance.

Natural Resources Wales (NRW)

- Marine licensing – NRW is a key decision maker in the Marine area through its duties as Marine Licensing Authority, acting on behalf of Welsh Ministers. In determining Marine Licence applications, NRW consider a number of things including the need to protect the environment, and also undertakes a HRA to considers the potential impacts of a development on European Designated Sites.
- Management and regulation of cockle fisheries in accordance with the requirements of the 2017 Regulations in relation to both NRW regulatory (competent authority) and advisory (Statutory Nature Conservation Body) roles.

- Burry Inlet Cockle Fishery in line with The Burry Inlet Cockle Fishery Order 1965 Management Plan (published September 2013)
- Dee Estuary Cockle Fishery (with Environment Agency) in line with the Dee Cockle Fishery Several and Regulating Order Management Plan (published November 2015)
- Fisheries management for migratory and freshwater fish e.g. recreational angling.
- Coast protection works consenting.
- Activities requiring consents and asents within or adjacent to Sites of Special Scientific Interest (SSSI).
- Marine European Protected Species licensing.
- Water quality, including environmental permits for discharges and land drainage.
- Management of Wales Coast Path (along with National Park Authorities and Local Authorities).

Other Management Authorities:

- **Harbour Authorities** have management responsibilities for ports and coastal waters within their limits.
- **Local Authorities and National Park Authorities** have a range of responsibilities e.g. tourism including coastal recreation, public rights of way, land-use planning and development on coasts and estuaries down to mean low water.
- **Department for Transport** is responsible for policy on maritime safety and navigation. Responsible for policy relating to Reserved Trust Ports (e.g. Milford Haven).
- **Maritime and Coastguard Agency** is responsible for vessel safety consents, including certification of seafarers and equipment.
- **Oil and Gas Authority** is responsible for licensing for exploration and exploitation of oil and gas reserves.
- **Department for Business, Energy and Industrial Strategy (BEIS)** is responsible for oil and gas-related activities.
- **Planning Inspectorate** consent Nationally Significant Infrastructure Projects over 350MW requiring Development Consent Orders, under the Planning Act 2008.
- **The Crown Estate**, as owners and managers of the seabed, grants landowner rights to those wishing to undertake activities that interact with the seabed, the exercise of which is subject to all necessary consents being obtained. It also owns certain parts of the Welsh foreshore, and manages these areas between mean high and mean low water in the same manner.

Outcome(s) (actual/anticipated):

Discussion is underway on how best to summarise progress delivery by all Management Authorities against this action for future iterations of the Annual Report, but in the period 1 April 2018 – 31 March 2019 outcomes include:

- Welsh Government issued 15 fisheries legislation exemptions for a variety of scientific research. 10 of these exemptions required a HRA, which confirmed that the exemptions would have no impact on protected species and habitats;
- NRW determined 55 Marine Licences and the potential effects on MPAs have been considered within all of these decisions, and where necessary appropriate mitigatory measures included as a condition of the Marine Licences.

NRW will continue to ensure that regulatory decisions take account of the potential impacts an activity may have on the MPA network. Once the Welsh National Marine Plan has been adopted, compliance with Marine Plan policies will be considered in their marine licence decision making.

In addition, as a statutory consultee, NRW advises on the potential impact to the environment, including advice relating to HRA of strategic plans that promote marine industry development. In engaging with these plans, NRW is specifically seeking to ensure that project developments that subsequently emerge are developing in the right way and the right location in Welsh waters. Examples in 2018/19 include advice provided to The Crown Estate on plans for offshore wind development and aggregate extraction and advice to UK Government (BEIS) on the HRA of the 31st offshore oil and gas licensing round. Crown Estate plans for offshore wind have evolved significantly with the area of search now focused on areas that are less sensitive to development, at least in part due to the evidence advice provided by NRW via the HRA process.

Cockle Fisheries managed by NRW: both management plans and routine management proposals, including the annual opening of the fisheries and associated total allowable catch (TAC), are subject to HRAs in accordance with Regulation 63 of the 2017 Regulations. Such assessments consider implications for MPA features in view of their respective conservation objectives, and any such plans and proposals are only agreed to where it can be ascertained that they will not adversely affect the integrity of European sites. Any relevant SSSIs features are also considered and advised upon as part of this process.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	This management principle is concerned with strategic planning and sustainable use of the MPA network, regulatory consenting and assessment processes are very important for sustainable use of our MPAs in Wales.
Regulation, development consenting and assessment processes	Yes	This action is very consistent with this management principle as it is wholly concerned with the regulatory consenting and assessment processes.
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	A part of the regulatory process can involve the collection of information by developers and post consent reporting, this can be used to understand condition, but this is not the main purpose of this action.
Wider management	Yes	This action is not fully relevant to this management principle, however, many wider management actions need to go through regulatory consenting or assessment processes, which is important to make sure that these management actions do not negatively affect the features of our MPAs.

Annex A3

Project/Action title:	Improve accessibility of marine monitoring data (Action 3)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The work has involved the compilation and entry of marine monitoring data into the Marine Recorder database to increase accessibility of marine monitoring data. The project has focussed on all sediment monitoring data since 2014, all Water Framework Directive (WFD) sediment data since 2007 and all reef data since 2010.

This action will be completed by March 2020.

Outcome(s) (actual/anticipated):

The eventual outcome will inform assessments of MPAs and allows the information to be used by others in projects/research, improving the overall marine evidence base.

Actions completed to date:

Monitoring data from 2015, 2016 and 2017 for subtidal SAC sediment features across Welsh waters has been quality assured and entered on Marine Recorder. The data entered includes sediment fauna and sediment granulometry. Each biological sample has been assigned a biotope classification and this has also been entered. Habitats entered comprised:

2015: 5 coastal lagoons, 3 estuaries, 1 bay

2016: 5 coastal lagoons, 6 sand banks, 8 bays, 1 bay investigation

2017: 5 coastal lagoons, 8 bays, 1 sand bank

This data is now available for use in environmental change analysis and reporting.

Actions to complete:

Some further data entry is planned for the second half of 2019/20 with completion by 31 March 2020. This will cover WFD sediments and subtidal reef data.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Collection of data is important but it needs to be available to be of use for management.
Wider management	Yes	Good, timely knowledge of the condition of features may help prioritise management action on the ground.

Annex A4

Project/Action title:	Further develop and deliver a risk-based marine monitoring programme across the MPA network (Action 4)
Lead organisation:	NRW, JNCC, WG

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The Welsh Government is working with NRW, JNCC and other science and policy experts to develop an integrated, cost-effective programme of monitoring to fulfil our nature conservation obligations, provide the evidence to assess and detect trends in the health and biological diversity of our seas and underpin the sustainable management of our natural resources. This monitoring will cover the full spectrum of our marine ecosystems, both within and outside our MPAs, and will be coordinated across all four countries of the UK.

This is an ongoing action which is due for completion by the 2020-2021 financial year.

Outcome(s) (actual/anticipated):

Options for UK-scale components of the programme were completed last year and those for Welsh inshore seabed habitats are currently being finalised.

Site monitoring will form part of the monitoring programme and will follow a risk-based approach ensuring those species and habitats at greatest risk are prioritised.

The monitoring programme will include elements of investigative monitoring, providing data to help us better understand pressures, impacts and management effectiveness.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	Yes	The monitoring programme will provide the evidence to assess and detect trends in the health and biological diversity of our seas including at MPAs. This evidence will help inform advice on the status of conservation objectives.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	The monitoring programme will include elements of investigative monitoring, providing data to help us better understand pressures, impacts and management effectiveness.
Wider management	Yes	Monitoring sites across the network will form part of the monitoring programme and will follow a risk-based approach ensuring those species and habitats at greatest risk are prioritised.

Annex A5

Project/Action title:	Develop an approach for refining conservation objectives for all MPAs in Wales while continuing to publish guidance for new sites as necessary (Action 5)
Lead organisation:	NRW, JNCC

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

This action is to develop an approach to providing more targeted conservation advice for our MPA features in Welsh waters, while making sure that existing sites have published conservation objectives which will be integrated into the new approach when developed.

Publish conservation advice for sites as needed, this will be ongoing. Initial contract to develop the approach on targeted conservation objectives for inshore Welsh waters September 2018 – March 2019. Further work on developing the advice into full conservation advice packages will be needed.

Outcome(s) (actual/anticipated):

Actual outputs NRW:

- Publication of conservation objectives for the Northern Cardigan Bay SPA;
- A review and comparison of NRW conservation objectives in comparison to that produced by other SNCBs; and
- Scenario testing of different approaches for conservation objectives in the HRA process.

For marine mammals, JNCC & NRW have recently finalised the Conservation Objectives (COs) for the harbour porpoise sites and the advice packages are available on JNCC's Site Information Centres. The 3 Welsh sites of relevance are:

- West Wales Marine SAC www.jncc.defra.gov.uk/page-7343
- North Anglesey SAC www.jncc.defra.gov.uk/page-7244
- Bristol Channel Approaches SAC www.jncc.defra.gov.uk/page-7241

The Inter-Agency Marine Mammal Group is leading on the development of further guidance, primarily to assist with use of these COs for HRA. The group has almost finalised guidance around assessment of noise in SACs and NRW is leading on the development of guidance for "risk of mortality" (from collisions, for example). JNCC has been tasked with progressing guidance for habitat/prey considerations.

For birds, JNCC is in process of drafting updated Irish Sea Front CO's which will provide more detail than existing draft, and so will tie in with some of the management principles, in particular:

- Regulation, development consenting and assessment processes;
- Management advice and guidance; and
- Understanding the condition of, and pressures and threats on, sites and their features to inform management.

Anticipated outcome:

Decision-making and management will be supported by clear and consistent advice and guidance on MPAs including their conservation objectives.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	Yes	<p>Conservation objectives will help the regulation processes as activities need be assessed against the conservation objectives for the features of our Welsh MPAs.</p> <p>More targeted conservation objectives are needed to better assess activities and their potential impacts on the features of our MPAs.</p>
Management advice and guidance	Yes	Decision-making and management operations need to be supported by clear and consistent advice and guidance on MPAs including their conservation objectives.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	It is essential that we have clear, targeted conservation objectives to use to better assess condition against.
Wider management	No	

Annex A6

Project/Action title:	Develop a UK Dolphin and Harbour Porpoise Conservation Strategy (Action 6)
Lead organisation:	WG, NRW, JNCC

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The Strategy's objectives are to:

- Identify vulnerabilities and the relevant pressures on cetacean populations in UK waters;
- Assess current management measures and obligations and opportunities for improvement;
- Prioritise the management of key pressures that pose the greatest risk to achieving and or maintaining favourable conservation status;
- Initiate new actions, where necessary, to maintain or improve conservation status;
- Improve understanding of population status and trends;
- Raise public awareness and understanding of cetacean populations in UK waters; and
- Bring together organisations to implement the actions.

This is an ongoing action which covers the whole of UK waters. Production of the Strategy is being led by Marine Scotland, with input from the Welsh Government, DEFRA, DAERA, JNCC, NRW, Natural England and Scottish Natural Heritage.

A formal consultation on the Strategy is expected later in 2019, with publication and implementation from 2020.

Outcome(s) (actual/anticipated):

The Strategy aims to ensure effective management to achieve and/or maintain favourable conservation status for nine of the most commonly found cetacean species in UK waters.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	The draft strategy, which is still subject to consultation, includes actions designed to improve the evidence base which underpins the statutory consenting processes.
Regulation, development consenting and assessment processes	Yes	The draft strategy, which is still subject to consultation, includes actions designed to improve the evidence base which underpins the statutory consenting processes.
Management advice and guidance	Yes	The draft strategy, which is still subject to consultation, includes actions to improve the evidence base and will inform management and conservation advice.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	The draft strategy, which is still subject to consultation, includes actions to prioritise research requirements and improve the evidence base, and to develop and implement an effective monitoring plan on the conservation status of the nine most commonly found cetaceans in UK waters. Four of these species occur regularly in Welsh waters.
Wider management	Yes	The draft strategy, which is still subject to consultation, includes actions to manage key pressures on site and feature condition at a network scale.

Annex A7

Project/Action title:	Undertake analysis of outstanding monitoring data samples to inform site condition assessment (Action 7)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

This project aims to complete analysis of outstanding data samples to improve accuracy and confidence in condition assessments and inform management decisions. It involves the preparation, analysis and reporting of monitoring data. This project will complete by March 2020. Initially it has involved the Pen Llŷn a'r Sarnau SAC and Cemlyn Bay Lagoon but will include other sites in the coming year.

Outcome(s) (actual/anticipated):

Initial outputs:

Three contracts were let to prepare, analyse and report on 12 years of monitoring data from Tremadog Bay, part of the Pen Llŷn a'r Sarnau SAC. The draft report is currently under internal NRW review prior to publication in 2019/20.

An analysis of outstanding samples from Cemlyn Bay lagoon found evidence that a typical species used in the assessment of condition of the feature were present when previously thought to be absent. This has led to the reassessment of the feature from unfavourable to favourable and the publication of a new report now published on the NRW website.

Anticipated outputs:

To let further contracts to prepare, analyse and report on monitoring data for other large and complex Annex I Marine habitats. Publish reports by 31 March 2020 (both those contracted and those internally produced).

Anticipated outcome:

Good, timely knowledge of the condition of features which will help prioritise management action.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Collection of data is important but it needs to be analysed and interpreted to be of use for management.
Wider management	Yes	Good, timely knowledge of the condition of features may help prioritise management action on the ground.

Annex A8

Project/Action title:	Assess and where necessary manage the impact of commercial fishing activities on MPAs (Action 8)
Lead organisation:	Welsh Government, NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The aim of the Assessing Welsh Fishing Activities (AWFA) project is to provide evidence-based assessments to understand and where necessary manage the impacts of current and future commercial fishing activity interactions towards maintaining/achieving favourable condition of European Marine Site (EMS) (SACs and SPAs) features in Welsh waters. All assessments are due to be completed 2020.

The project is designed to, where necessary, improve the management of MPAs thereby improving condition of site features. It also makes a wider contribution to the health and resilience of our seas, and supports the aim of the UK Marine Strategy to achieve Good Environmental Status across UK seas.

Outcome(s) (actual/anticipated):

The purple assessments, which address the highest risk habitat/gear interactions, have been completed and published on both the Welsh Government and NRW websites. This work will inform where commercial fisheries management may be needed to safeguard the network of MPAs, contribute to the sustainable exploitation of marine fish and strengthen the resilience of the marine environment. They also support the conclusions of NRW's indicative site level feature condition reports which were published in January 2018.

The remaining NRW assessments are being progressed in batches with similar priority, features and gear types. The next 56 marine mammal assessments are ongoing; a further 30 potting activity assessments will be started next.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	Yes	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	The Welsh Government, in partnership with its statutory nature conservation advisors NRW, is undertaking a comprehensive and structured evaluation of all fishing activity interactions with features of Welsh EMSs. This evidence base is used to inform the management of sites and their features.
Wider management	Yes	The Welsh Government's management response will contribute to the achievement of favourable condition and status of the site features, as well as contributing to the favourable condition and status of the wider MPA network. The response will also help deliver wider marine goals such as achieving Good Environmental Status under the Marine Strategy Framework Directive.

Annex A9

Project/Action title:	Operate a risk-based approach to fisheries enforcement (Action 9)
Lead organisation:	Welsh Government

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

This is an ongoing action to implement and operate a risk-based and intelligence-led approach to marine enforcement, using technological improvements to maintain a focus on high-risk fisheries activities within the Welsh zone.

Outcome(s) (actual/anticipated):

Output:

Of the 13 prosecutions that occurred during the period 1/4/2018 – 31/3/2019, 5 related to offences within MPAs, and included gear and spatial infringements. 2 official warnings were issued during this period, one related to a scallop fishing offence in an MPA.

Outcome:

Fisheries enforcement (which includes prosecution) within the Welsh zone and its MPAs, serves to act as a strong deterrent to help prevent unlawful fishing activities and contribute towards the continued protection of MPA features and the overall condition of the network.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	Fisheries enforcement in Wales operates on a risk-based approach.
Regulation, development consenting and assessment processes	Yes	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	No	
Wider management	No	

Annex A10

Project/Action title:	MPA Network Condition Improvement Project (Action 10)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The overarching purpose of the programme of work is to focus effort on priority management challenges, based on identified pressures and threats, and develop and deliver actions (1) with the greatest potential to improve (or maintain) the condition of features across the network, or (2) will improve understanding of links between activities and feature condition.

This year, work was undertaken to expand the remit of the existing MPA Condition Improvement Project (CIP) to incorporate priority pressures and threats for SSSIs, in working toward prioritisation for the complete network of MPAs in Wales.

Priority actions developed through this programme are put forward as discrete actions for screening and prioritisation, and on-going support is provided to those projects that are included in Action Plans (this year and future iterations). This year (2018-2019) the programme has supported (amongst others):

- Action 12 – Phase 2 of the unregulated activities project;
- Action 17 – Biosecurity planning for Pen Llŷn a'r Sarnau SAC; and
- Action 19 – Address coastal squeeze impacts on MPAs.

The programme will continue to support these on-going actions through the 2019-2020 Action Plan. The programme will also support newly identified action to deliver a pilot project on saltmarsh grazing and water quality at Carmarthen Bay and Estuaries SAC (see Action 24, 2019-2020 Action Plan).

Next financial year, this programme of work will:

- consider the pressure and threats identified for recently designated sites (e.g. harbour porpoise SACs);
- develop and support work across the now 6 priority work areas (Agriculture and Land Management, identified as a priority for SSSIs in 2018-19);
- improve communication and ways of working across relevant policy areas; and
- develop actions and secure funding where required enable delivery.

Outcome(s) (actual/anticipated):

Output:

Collation and analysis of data on the pressures and threats to features protected in SSSIs that from part of the MPA network is now complete. Outputs show that the priority work areas identified earlier through this programme of work for the Wales-only European Marine Sites (based on the marine outputs of the LIFE N2K Programme for Wales) are also relevant for many of the SSSIs:

- Access and Recreation
- INNS
- Marine Fisheries
- Pollution and Waste
- Water Management Issues

“Agriculture and Land management” has been identified as an additional priority work area for this project. This work area is particularly important for SSSIs due to the coastal nature of the sites, as their condition can be adversely affected by land practices e.g. over/undergrazing, grazing on salt-marsh, scrub invasion and drainage.

Anticipated outcome:

The focus of the programme is on priority management challenges across the network, based on identified pressures and threats, and it is developing and delivering actions (1) with the greatest potential to improve (or maintain) the condition of features across the network, or (2) that will improve understanding of links between activities and feature condition to inform management.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	Strategic planning to prioritise action (time and resources) that have the greatest potential to improving or maintaining the condition of the MPA Network – taking account of the wider network (rather than the current focus on the European Marine Sites).
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Many of the actions prioritised through the MPA CIP are focussed on better understanding the pressure and threats on sites and their features to inform management interventions. Widening remit to the full MPA network increases the relevance of this action.
Wider management	Yes	MPA CIP is focused on prioritising actions that have the greatest potential to improve/maintain conditions – and security of management. The project will actively seek to address common management challenges across the network scale.

Annex A11

Project/Action title:	Improve maps of the extent and distribution of Annex I marine habitats (Action 11)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

Habitat maps are a key piece of evidence that support management of SACs (e.g. casework advice) and Article 17 assessments and reporting. This action involves collation of third party data (e.g. UKHO multibeam data) to update maps. NRW is continuing with a programme of work to update the Annex I feature maps for Wales. All maps were reviewed for the 2018/19 Article 17 assessment and reporting process, and updates were made where new data was available (this included records from survey data collected and/or collated by NRW).

NRW in partnership with Natural England have been trialling high frequency sonar cameras in the project 'Analysis of remote data for *Sabellaria* reef in the Severn Estuary'. The aim of the project is to explore the effectiveness of high frequency sonar cameras as a ground-truthing tool in zero visibility environments with an intention to update Annex I Sabellaria Reef feature maps for the Severn Estuary SAC.

This is an ongoing action with no fixed end point as new data will allow continual improvement to our mapping. This covers all MPAs.

Outcome(s) (actual/anticipated):

Outputs for 2018/19:

Updates to the Annex 1 feature layers were made in 2018 to support Article 17 reporting. Main updates were to the Annex 1 subtidal reef layer using multibeam data (obtained from the UKHO) combined with Object Based Image Analysis to more accurately define reef extents in parts of Pembrokeshire Marine SAC. Annex I definite reefs areas will be used to update JNCC's combined map (a UK wide map at EUNIS L3 of the habitat classification that combines modelled and survey data). This map is used UK wide in MPA network analyses.

Updates were also made to the spatial extent of the Horse Mussel beds in Pen Llŷn a'r Sarnau SAC and adjacent waters using up-to-date side-scan sonar data. A review of reef point data held in Marine Recorder was also undertaken (linked to Action 3, Annex A3); this dataset was subsequently revised with additional reef records being added from surveys that had taken place since 2012, including NRW surveys of reef locations for biogenic (*Sabellaria spinulosa* and *Modiolus modiolus*) and rocky reef off Anglesey. Sandbank boundaries in the Severn Estuary SAC were also updated based on the latest data interpretation methods (digital elevation models) by JNCC/NE. Saltmarsh extent datasets were revised using recent survey data where available. Maerl data for Milford Haven was also reviewed and the extent was remapped using latest data records.

In the 'Analysis of remote data for Sabellaria reef in the Severn Estuary' project, work is underway and updated maps should be available in summer 2019.

Outcome:

Improved maps will support management as well as assessment and reporting.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	Yes	Maps of the extent and distribution of Annex 1 marine habitats help the regulation processes as activities can be assessed against the best location information available.
Management advice and guidance	Yes	Maps of the extent and distribution of Annex I marine habitats help improve our advice including conservation objectives.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Maps of the extent and distribution of Annex I marine habitats help improve our management of activities as we look at co-location of sensitive features and activities/pressures.
Wider management	No	

Annex A12

Project/Action title:	Deliver phase 2 of the unregulated activities project (now non-licensable activities project), focussed on the priority activities (Action 12)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The overarching project aim focusses on the non-licenced activities of greatest concern at the network scale. It seeks to develop the evidence base on the spatial and temporal distribution, intensity and impacts of these activities on features protected in the network and will involve working with appropriate stakeholders to identify and implement feasible and effective management interventions (e.g. regulation, financial incentives, behavioural change, etc.), where required, to mitigate impacts.

Phase 2 of the Wales non-licensable activities project was focussed specifically on delivering work on the four activities which were highlighted as priorities for initial focus in May 2018. The actions for the priority activities were:

Anchoring, mooring and launching (recreational)

Develop the evidence base for the location and intensity of this activity.

Recreational Sea Angling

Increase NRW's level of understanding of the impacts of this activity and how it links to MPA features.

Bait digging/collection of living resources

Develop NRW's understanding of the location and intensity of this activity in Wales and the potential for this activity to interact with 'sensitive' habitats.

Foot Access

Develop our understanding of the methods which could be used to estimate foot access intensity and behaviour on the intertidal areas of Wales and also gather improved data on sensitive areas for certain features of the MPA network.

Work on these activities has been taking place from May 2018 to March 2019 and all are now complete. However, further work will be required to follow up many of the recommendations which have become apparent through this work, in order for further focused work and/or management interventions to be investigated.

The project covers all relevant marine SACs/SSSIs where the activities occur in Wales.

Outcome(s) (actual/anticipated):

Work has been completed in these four priority work areas which increases the evidence base available to NRW regarding the distribution, intensity and impacts of these activities. A summary of the work carried out is given below:

Anchoring, mooring and launching (recreational)

Contract completed which provides NRW with detailed locations (GIS format) of anchoring, mooring and launching around the Welsh coast with associated intensity values.

Recreational Sea Angling

A desk based, literature review conducted which highlighted the key impacts of Recreational Sea Angling relevant to Wales and what MPA features are potentially impacted.

Bait digging/collection of living resources

Work has been conducted in house to develop our understanding of where this activity currently occurs (in GIS format) and where the overlaps are with sensitive habitats occur in Wales using information gained from a previous contract let under this project.

Foot Access

A contract has been completed which provides NRW with an outline of the existing data and potential methodologies that could be used to estimate foot access intensity and behaviour on the intertidal. This contract has many other potential uses for other departments with NRW. A second contract has also been completed which provides NRW with the location of High-tide roosts for SPA/SSSI bird features (in GIS format), which provides valuable data on the sensitive areas for MPA bird features.

The work conducted in Phase 2 of the project has developed our evidence base for high priority activities and will provide steer on future focus for investigation and/or the prioritisation and implementation of future management if it is considered necessary.

The above work was delivered in March 2019 and was presented in a project workshop in early April 2019, where the future direction of the project was also discussed.

The reports produced as part of this project will be published on the NRW website.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	Yes	Ultimately will develop advice/guidance to underpin decision making and management operations.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Project will develop evidence on the relationship between pressures/threats and condition.
Wider management	Yes	Common management challenges to be taken forward at the network scale – these have already been prioritised to those considered to have the potential for greatest improvement in condition.

Annex A13

Project/Action title:	Deliver the priority actions within the Marine Litter Action Plan where they provide benefit to the network of MPA in Wales (Action 13)
Lead organisation:	The Clean Seas Partnership

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The Clean Seas Partnership Marine Litter Action Plan will help tackle marine litter and seeks an overall reduction in marine litter.

To support delivery of a number of plan's actions, an EMFF grant funded project involving Keep Wales Tidy, Marine Conservation Society, local authorities and others, to gather research into marine litter is underway.

A review of the plan's priority actions is underway to inform the next stage of plan delivery.

Outcome(s) (actual/anticipated):

Successful measures to reduce litter in the marine environment will bring significant benefits to Wales' network of MPAs.

Achieving an overall reduction in marine litter will contribute to achieving Good Environmental Status under the Marine Strategy Framework Directive.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	Yes	
Management advice and guidance	Yes	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	
Wider management	Yes	

Annex A14

Project/Action title:	Collate and analyse evidence to inform reporting requirements which meet national and international obligations, including under Section 124 of the Marine and Coastal Access Act (2009) and to OSPAR on effective management of MPAs (Action 14)
Lead organisation:	WG, NRW, JNCC

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

To update the 2016 OSPAR assessment on management effectiveness to include new information and feed Welsh-level information into the UK report.

To compile a report under Section 124 of the Marine and Coastal Access Act (2009) on the extent to which an ecologically coherent network of MPAs in Welsh waters has been achieved and is managed effectively.

The action is complete. The OSPAR assessment covered all SACs and SPAs submitted to the OSPAR Commission as OSPAR sites. The report under Section 124 of the Marine and Coastal Access Act (2009) covers all 139 MPAs in Welsh waters.

Outcome(s) (actual/anticipated):

The UK report on the assessment of management effectiveness was co-ordinated by the JNCC and submitted to the OSPAR commission on 28 September 2018.

The report under Section 124 of the Marine and Coastal Access Act (2009) was laid before the National Assembly for Wales on 21 January 2019. A copy is available via the following weblink: www.assembly.wales/laid%20documents/gen-ld12056/gen-ld12056-e.pdf

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Both reports have drawn on the indicative site conditions assessments prepared by NRW. They also provide a useful and up-to-date source of information for Management Authorities on the health and condition of features, which in turn informs management decisions at sites throughout Welsh waters.
Wider management	No	

Annex A15 (see Annex A20)

Annex A16

Project/Action title:	Sustainable management of marine natural resources (Action 16)
Lead organisation:	Welsh Government

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The Welsh Government has been awarded European Maritime and Fisheries Funding to deliver this project which will support the implementation of the first Welsh National Marine Plan. The project will consider all MPAs potentially affected by use of tidal stream, wave and aquaculture resources in the Welsh marine area. The work is due for completion in October 2020.

Outcome(s) (actual/anticipated):

Evidence including data, locational guidance and other tools which will assist developers, decision makers and other stakeholders in better understanding the environmental sensitivities within areas of potential future use for the wave energy, tidal stream energy, and aquaculture sectors leading to better outcomes for the environment and contributing towards the sustainable development of these sectors.

The first phase of the project was completed in 2018, delivering a quality assessed evidence database and a report identifying key evidence gaps. This initial data collation phase also provided a review of the Wales Marine Planning Portal, with recommendations for improvements. The portal will be a key means for accessing and interpreting evidence to support marine management.

The second phase of the project is being carried over into the 2019-2020 Action Plan (see Action 12). It will include data collection (summer 2019), contributing to constraints and opportunities mapping, as well as interpretation of existing evidence to map environmental constraints within resource areas. The final outputs will be evidence packages that will help to inform the planning, assessment and consenting of developments.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	Identification of constraints and opportunities in relation to resource use will inform implementation of Welsh National Marine Plan policies, supporting well-being goals and Sustainable Management of Natural Resources. In doing so the project will help to conserve and, where possible, enhance condition and support ecosystem resilience.
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	No	
Wider management	No	

Annex A17

Project/Action title:	Develop a biosecurity plan for marine invasive non-natives species (INNS) learning from existing projects (Action 17)
Lead organisation:	NRW, PLAS RAG

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

Pilot project at Pen Llŷn a'r Sarnau (PLAS) SAC to inform development and implementation of biosecurity planning across the MPA. It will:

- Work with stakeholders to address the main pathways of introduction and spread of marine INNS.
- Develop techniques to assess and predict the effects of INNS on habitats and species.
- Build capacity to protect marine biodiversity and minimise risks to protected features.
- Learn from The Rapid LIFE project particularly the pilot work done on the Severn.

Work for this action is ongoing – although the project was expected to start in April 2018 there was a delay in receiving the outcome of the funding application to EMFF, which was successfully awarded at the end of October 2018. The project start date was delayed to April 2019 and it will run until the end of March 2022 (3-year project).

The project will be delivered in 3 work packages which will

1. Gather evidence to underpin biosecurity planning for PLAS:
 - Assess and map the extent of INNS in the site
 - Assess potential impacts of INNS on features and fisheries
 - Investigate pathways of introduction and spread
 - Work with fishermen to review outputs from the evidence gathered.
2. Develop a biosecurity plan for PLAS to minimise new anthropogenic introductions and reduce the spread of existing marine INNS to include:
 - Action plans for high-risk pathways of introduction and spread
 - Species Action Plans
 - Monitoring, management and awareness raising actions.
3. Implement the biosecurity plan and monitor its effectiveness:
 - Workshops to promote the biosecurity plan
 - Work with Local Authorities to embed the plan through local planning policies and licences.
 - Lessons learnt exercise.

The Project Officer is now in post and Phase One of the project is underway.

Although the start date of the project was delayed some preparatory work for the project was commissioned in September 2018 through the MPA Management Steering Group and funded by the Welsh Government. This external contract was managed by the Pen Llŷn a'r Sarnau SAC officer.

Outcome(s) (actual/anticipated):

The main outcome of the project will be the protection of the features of the site by managing the key pathways by which marine INNS are introduced and spread at the site level by using good biosecurity. This EMFF project will develop a biosecurity plan for the PLAS SAC and inform the longer-term implementation of effective biosecurity planning for Wales' network of marine protected areas.

Work completed so far: The preparatory work commissioned in September 2018 involved updating and refining existing data for Wales on activities known to act as pathways for the introduction and spread of INNS, for example; aquaculture, recreational vessels and shipping. The data collected will be used to map hotspots for INNS introduction and spread in Wales during Phase 1 of the project.

The work also involved producing/updating a GIS (mapping) layer on marine INNS distribution in Wales which will also help with mapping hotspots of introduction and spread. The layer was produced using data from NBN Atlas so it may be that other datasets need to be included to bring the layer fully up to date. The outputs from this contract have been delivered and reviewed.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	Partially consistent as there will be some sector specific elements.
Regulation, development consenting and assessment processes	No	This action is not relevant to this management principle.
Management advice and guidance	Yes	Project will develop some guidance on operations e.g. to prevent introductions and spread of marine non-natives.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Will develop evidence to improve understanding of the relationship between pressures and threats from INNS and condition.
Wider management	Yes	Will focus on developing management focussed on activities of greatest concerns, and will bring about positive changes in ways of working for the wider network through application of the learning at the network scale.

Annex A18

Project/Action title:	Develop consistent and proportionate guidance to: a) improve casework advice, and b) to support implementation of the Welsh National Marine Plan (Action 18)
Lead organisation:	NRW, JNCC

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

To support a consistent and proportionate assessment of the impacts of regulated activities on the protected features of MPAs in the Welsh marine area. Guidance to support implementation of Welsh National Marine Plan policies in decision making e.g. marine licencing and policy specific guidance.

This is an ongoing action as there is no end point for the initial raft of advice and there will be an ongoing need to update advice. It covers all MPAs.

Outcome(s) (actual/anticipated):

Initial outputs:

NRW has developed guidance to assist applicants in preparing the information require for environmental assessments, these include guidance on: benthic datasets that NRW holds; benthic survey; and seaweed harvesting.

In addition, NRW has produced guidance on the application of the new regulations that govern Environmental Impact Assessment and guidance further clarifying the marine licensing application process.

JNCC has different information on activities for each MPA in its site information pages on its website.

Anticipated outcome:

Consistent and proportionate guidance will support improved decision making which will help to improve the security of management and help to maintain the condition, and where appropriate, improve the features of our MPAs.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	Yes	<p>This action will improve NRW's advice on how the WNMP should be used in regulatory and consenting processes for MPAs in Wales.</p> <p>Improvements in the guidance that NRW produces will mean that developments in the marine environment can be carried out in a more structured and consistent way improving consenting decisions.</p>
Management advice and guidance	Yes	<p>This action will improve NRW's advice on how the WNMP should be used in regulatory and consenting processes for MPAs in Wales.</p> <p>This action will make sure that decision-making and management operations are supported by clear and consistent advice and guidance improving current ways of working.</p>
Understanding the condition of, and pressures and threats on, sites and their features to inform management	No	
Wider management	No	

Annex A19

Project/Action title:	Addressing coastal squeeze impacts on MPAs (Action 19)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

There are two key elements to this action:

1. a review to understand the nature and scale of coastal squeeze on MPA coastal habitat features; and
2. continue to progress habitat creation projects to provide compensatory coastal habitat for anticipated habitat loss arising from work associated with flood and coastal erosion risk management schemes.

Part 1

The review to understand the nature and scale of coastal squeeze on MPA coastal habitat features has been taken forward via an R&D project titled: Advice on the Scale of Deterioration of Natura 2000 Sites in Wales due to Coastal Squeeze Losses, Pen Llŷn a'r Sarnau SAC. ABP Mer were commissioned by NRW to undertake this project in November 2018 and the final report was delivered in Spring 2019.

The Habitats Regulations Assessments (HRA) of the Shoreline Management Plans (SMP) already identify the likely habitat losses due to coastal squeeze which may arise from locations where the management policy is to continue to hold the line. The SMP HRA does not consider any coastal squeeze impacts associated with no active intervention (NAI) or managed realignment (MR) policies, and yet there are numerous locations with these policies where defence structures exist and may continue to exist for a long period of time, causing additional coastal squeeze losses. These impacts are unlikely to be considered as projects under Article 6(3) of the Habitats Directive and are more likely to be deterioration effects which fall under Article 6(2).

The aim of the project was to try to understand the scale of these potential additional losses by looking at the nature and condition of any defence structures within NAI and MR policy units, the likelihood of ad hoc repair which would prolong the life of the structures, and whether there is justification for further investment despite the preferred policy.

Due to project complexity, time, data and budget constraints, it was decided to focus on the Pen Llŷn a'r Sarnau SAC in the first instance to develop and test the methodology for this assessment. The outputs will be shared with WG once available to inform discussion around how to address these deterioration effects.

Part 2

The second part of this action is to continue to progress habitat creation projects to provide compensatory coastal habitat for anticipated habitat loss arising from work associated with flood and coastal erosion risk management (FCERM) schemes. NRW delivers the National Habitat Creation Programme (NHCP) on behalf of WG. This is a strategic programme to deliver compensatory habitat to offset the coastal squeeze impacts of Risk Management Authority (Local Authority and NRW) plans and projects. It does not provide compensatory habitat for third parties, although mechanisms for partnership working with third parties in certain circumstances have recently been agreed.

The NHCP has taken forward a habitat creation scheme at Cwm Ivy, north Gower. The defence failed in 2014, following the winter 2013/14 storms, and the site is developing well¹⁴. Nearby, a small compensatory scheme at Crofty was also completed to offset coastal squeeze losses for the Penclawdd FRM scheme.

To date no other sites have yet been taken forward to implementation under NHCP but several sites across Wales, of varying scales and complexity, are either at early project stage or are under detailed consideration. It is expected that the NHCP will be ongoing and that it will take several years to bring sites forward to the delivery stage.

The work to progress these habitat creation projects is also aligned with the priorities identified in the Natural Resources Policy and the emerging theme of 'nature-based solutions and adaptation in the coastal zone' identified for the Marine Area Statement. Therefore, any projects will be taken forward in the context of NRW's work on Area Statements.

Outcome(s) (actual/anticipated):

Actual output:

Ongoing development of habitat at Cwm Ivy, Gower.

Anticipated output:

Increased knowledge of what the coastal squeeze impacts may be to inform planning for habitat delivery.

Anticipated outcomes:

Further compensation for loss of some coastal habitats due to climate change.

¹⁴ www.nationaltrust.org.uk/whiteford-and-north-gower/features/cwm-ivy-where-the-sea-comes-in

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	This is a strategic process that is relevant to this management principle in that it supports the sustainable use of the marine environment recognising that big threats like Climate Change need to have a process in place to compensate for future loss of MPA features.
Regulation, development consenting and assessment processes	Yes	This action is relevant to this management principle in that it recognises the need to have a process in place to compensate for future loss of MPA features as it relates to our regulatory and consenting regime.
Management advice and guidance	Yes	This action will improve NRW's advice on coastal squeeze issues.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	This action will help us understand impacts outside the current system and whether another system is needed to address this issue.
Wider management	Yes	This is a common management challenge that needs to be taken forward at the network scale and will focus action where condition of features is most at threat.

Annex A20

Project/Action title:	Maintain links between the Network Action Plan and local agreed actions, where they exist, and support exploration of funding opportunities (Action 20)
Lead organisation:	Relevant Authority Groups

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The Pen Llŷn a'r Sarnau SAC Officer sits on the MPA Steering Group as the European Marine Site Officer (EMSO) advisor. The advisor has attended meetings and liaised with other EMSOs to input into the Steering Group's work. Other members of the Steering Group have also undertaken local liaison through their roles as Relevant Authority Group (RAG) members.

The work that EMSOs do at the site level is varied and a fuller account of the work they do can be found in a report to the Steering Group on their progress for the year 2018/19¹⁵.

A number of site level projects have been implemented in 218/19. These projects aim to either:

- reduce impacts on site features helping to work towards favourable condition;
- maintain feature condition;
- investigate impacts; or
- focus on education and awareness.

Examples of work undertaken this year and the outputs are described can be seen in the outputs section below. Please note that the hours worked by site officers is directly linked to the funding received and that is reflected in the number of projects carried out at each site.

In addition to project work, all site officers carry out general site management and liaison work including but not limited to:

- Maintaining the RAG and Liaison Groups;
- Stakeholder engagement;
- Raising awareness and education (including organising events and school visits);
- Sourcing and securing funding including project development;
- MPA contact point;
- Providing advice and information;
- Promoting local marine codes;
- Liaison and partnership working;
- Working with other site officers to ensure consistency across the network; and
- Sitting on various groups to ensure MPAs are represented and promote joint working e.g. MPA Management Steering Group, Marine Planning Stakeholder Reference Group etc.

¹⁵ gov.wales/welsh-relevant-authority-groups-2018-19-update

Outcome(s) (actual/anticipated):

Examples of initial outputs for 2018/19 (detail and complete project list in full report):

- Landscape scale projects: Pen Llŷn a'r Sarnau (PLAS) SAC has secured funding for two large landscape scale projects across the SAC.
- Water quality projects: PLAS SAC has carried out a project looking at pollution sources in the catchment of the River Darron. The project includes recommendations on improving water quality, funding has been secured to implement these over the next two years. Pembrokeshire Marine SAC ran a citizen science-based project called SWEPT (Surveying the Waterway Environment for Pollution Threats) looking at land run off and nitrate levels at a large number of sites, the final report will be available in autumn 2019.
- Litter projects: a number of litter projects were carried out at the site level e.g. the "last straw" a PLAS project encouraging local businesses to stop using plastic straws and a Cardigan Bay SAC competition for Ceredigion school children to design logos for an accreditation scheme to be rolled out in 2019.
- Year of the Sea activities: Awareness raising activities linked to the Year of the Sea were carried out across sites which were attended by thousands of visitors and local communities giving them more information about the marine environment.
- Porthdinllaen Seagrass project: This year PLAS SAC installed two helical anchors in the inner harbour in Porthdinllaen as a trial; these anchors have a smaller footprint and hopefully in future will replace other more damaging anchors.
- Dolphin Watch monitoring programme: Cardigan Bay SAC continued to recruit and train people to record dolphin activity in Cardigan Bay, they also provided extra training to include monitoring of harbour porpoise and chough this year.
- Marine education pack: Pembrokeshire Marine and PLAS SACs have both drafted bilingual education packs. Both SACs have worked together to ensure best use of resources.
- Activity carrying capacity: Pembrokeshire Marine SAC worked with Pembrokeshire Coastal forum on an activity carrying capacity project in which conflicts between recreational activity and MPA features are being 'heat mapped' as a tool to help inform management.
- Review of recreational activity: Data is currently being collected on the intensity, frequency and location of activities within and adjacent to the Severn Estuary EMS.
- Invasive species: The RAPID LIFE biosecurity training package was trailed and tested at the Severn Estuary EMS in May 2018.

Outcome:

Aids connections and liaison between network level actions and local MPA management activity. Allows learning between projects and promotes work carried out at the site level.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Some aspects of the site level projects increase our understanding of MPA pressures e.g. the water quality projects aim to gather evidence on diffuse water pollution and the input sources for Pembrokeshire Marine & PLAS SACs.
Wider management	Yes	A wide range of activities at the site level contribute to this management principle.

Annex A21

Project/Action title:	Integrate sustainable management of the MPA network with the Area Statement Process. (Action 21)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

NRW are developing 7 Area Statements under the Environment (Wales) Act 2016. The marine Area Statement area encompasses the whole Welsh inshore marine area (out to 12 nautical miles) and joins up with all six terrestrial areas along the coast. The purpose of Area Statements is to facilitate the implementation of the Welsh Government's Natural Resources Policy (NRP), taking a place-based approach. The marine Area Statement is being guided by a Task and Finish Group which includes Operations and EPP staff who meet monthly.

Emerging Themes have been developed for each area and focus in on the key NRP priorities and challenges within each place. The threemarine Emerging Themes are:

- Nature based solutions and adaptation in the coastal zone
- Supporting Implementation of marine planning
- Building the resilience of the marine environment.

Building the resilience of ecosystems is a key objective of the Environment Act and is reflected in the NRP. As a result, there will be consideration of opportunities to build ecosystem resilience across all themes explored within the Area Statement process. This theme will explore what needs to happen to achieve Good Environmental Status for Welsh Seas, addressing the NRP priority around developing ecologically resilient networks.

Outcome(s) (actual/anticipated):

Actual outputs:

The Emerging Themes are fully embedded into NRW's Marine Place and Service Plan. The next steps will be to use these themes as a focus for further discussion with stakeholders, and we are currently developing a series of national and place-based stakeholder engagement plans to support this work.

The marine Area Statement will be available from March 2020.

Anticipated Outcome:

Integration of marine planning and management processes and additional support for MPA network management delivery.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	Area statements are a form of strategic planning.
Regulation, development consenting and assessment processes	No	
Management advice and guidance	Yes	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	
Wider management	No	

Annex B

Further details on progress of actions outside the 2018-2019 Action Plan

This annex accompanies Table 2 providing greater detail. The information provided by other organisations is included here verbatim.

Annex B1

Project/Action title:	Commemorating the Forgotten U-Boat War around the Welsh Coast 1914-18 (U-Boat Project 1914-18 ¹⁶)
Lead organisation:	NRW

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The project is a collaboration between the Royal Commission on the Ancient and Historical Monuments of Wales, Bangor University and the Nautical Archaeology Society to gather data about the present condition and biodiversity of 20 wrecks sites around the Welsh coast with significant associations to the Great War. The 20 sites include British and German submarines and minor warships, plus large merchant vessels sunk by torpedo or mines¹⁷. The sites fall within the Liverpool Bay and Skomer, Skokholm and the Seas off Pembrokeshire SPAs, and the North Anglesey Marine and Bristol Channel and Approaches SACs. The project is working with the Marine Conservation Society's Seasearch initiative to engage volunteers in marine identification activities utilising imagery captured by sports divers and a professional underwater photographer. In advance of the ecological surveys, multibeam echosounder data has been gathered by Bangor University's RV Prince Madog. The wreck sites selected for marine ecological survey are as follows – CARTAGENA, APAPA, DERBENT, DRINA, SAINT JACQUES, HURST and U61. Researchers from the School of Ocean Sciences, Bangor University, are co-ordinating the marine ecological work programme, which part of a wider Project involving maritime museums and community groups in commemoration of the Welsh experience of the first World War at sea.

Outcome(s) (actual/anticipated):

Underwater photography of the marine life and ecological survey data will be shared via the I Record website¹⁸ developed on behalf of the National Biodiversity Network. The datasets will continue to be use in research, outreach and teaching activities for the three partner organisations after the project ends in December 2019.

¹⁶ www.uboaatproject.wales/

¹⁷ www.uboaatproject.wales/ships/

¹⁸ www.brc.ac.uk/irecord/join/yn-coffur-rhyfel-ar-y-mr--commemorating-the-war-at-sea

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	Yes	Wreck sites act as man-made reefs providing shelter and a variety of substrates to support a wide variety of species. The project is helping to improve knowledge of our seas to inform sustainable use and enable effective marine planning.
Regulation, development consenting and assessment processes	Yes	The surveys are essentially heritage asset condition surveys helping to establish baseline from which to monitor rates of deterioration, the impacts of climate change on biodiversity and by providing improved access to the sites.
Management advice and guidance	Yes	The results of the multi-beam and ecological studies will assist Cadw, in collaboration with Natural Resources Wales to set conservation objects (e.g. statutory protection, frequency of repeat surveys, potential for the site data to inform other conservation objectives within the MPA).
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	The identified pressures on and threats to individual sites are applicable to other wrecks of this type and period (over 150 sites known around the Welsh coast).
Wider management	Yes	The project is helping to raise awareness of the presence of these heritage assets and promote holistic management of both the archaeological heritage and the important habitats they provide.

Annex B2

Project/Action title:	Management within the Anglesey Terns SPA
Lead organisation:	RSPB Cymru

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

The RSPB employ four seasonal tern wardens to protect two tern colonies within the Anglesey Terns SPA, including the Skerries which is the largest colony of arctic terns in the UK.

The wardens patrol the colony to protect the nests and chicks from predators, and accidental disturbance by people. They also put out shelters to protect young chicks from the worst of the weather, and maintain some of the vegetation so that it is not too long for terns to nest in.

Another important task is to monitor the numbers and breeding success of all the important breeding birds. Protection of the colonies and the MPA are also underpinned by research into the foraging habits and adult survival rates of arctic tern.

The tern wardens are supported by full-time staff on Anglesey, who also promote the colonies through planning and talks. In addition, information regarding the SPA is fed into casework considerations such as developments including wind turbines, undersea turbines etc. A national roseate tern LIFE Project¹⁹ is currently funding work at the colonies.

Outcome(s) (actual/anticipated):

The two colonies support approximately 5500 pairs of seabirds: 4000 arctic terns, 450 common terns, 380 puffins, 800 herring gulls, 190 lesser black-backed gulls and 26 greater black-backed gulls.

They are both former roseate tern colonies – the UK's rarest seabird. One of the SPA priorities is to maintain the colonies in suitable condition for their possible return. In 2018, two roseate tern chicks were born at The Skerries– with one chick having successfully flown the nest for the first time since 2006.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	Yes	Casework staff feed in information about the sites into proposals that may affect the SPA.
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Monitoring takes place including population size and breeding success.
Wider management	Yes	On the ground conservation as well as public awareness activities.

¹⁹ www.roseatetern.org/index.html

Annex B3

Project/Action title:	Grassholm SPA
Lead organisation:	RSPB Cymru on reserve

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

Ongoing management

RSPB Grassholm lies 8 miles off the coast of Pembrokeshire and is one of the most westerly points in Wales. This remote volcanic island, comprised of layers of basalt, is home to the 3rd largest northern gannet colony in the world. 36,000 pairs are crammed onto this tiny, 9ha rock in the Irish sea which represents the only gannet colony in Wales. The colony has increased rapidly following the arrival of the first few pairs in the mid 1800's. The SPA extends into the surrounding waters. Gannet *Morus bassanus* is the only feature of the SPA (and MPA element).

The island is managed by RSPB staff on nearby Ramsey Island and, along with aerial population surveys undertaken every 5 years, core work focusses on a long running project with Exeter University to study the foraging and overwintering areas of this species to assess conflict with fisheries both at home and overseas.

12 years of continuous monitoring using GPS tracking devices and other 'bio-logging' technology has built up a picture of the Grassholm gannets foraging and migration strategies previously unavailable to scientists. Despite the apparently healthy population figures there are cause for concern, particularly at the birds wintering grounds off the coast of west Africa where there is evidence they are coming into increasing conflict with unregulated fisheries in this region.

Every October, at the end of the breeding season, RSPB Cymru head out to the reserve to cut free birds (mainly fledglings) that have become entangled in marine debris during the year. Previous studies have shown there are an estimated 18 tonnes of plastic on the island. Gannet nests on Grassholm contain, on average, 469.9g of plastic, mostly rope made from synthetic fibres, usually leading to the entanglement of at least 33-109 birds each year. Removing it is impossible; even if a way could be found it would result in the destruction of most nests in the colony and given gannets have a complex social structure could possibly lead to site desertion by large numbers. Policy intervention is needed to prevent the pollution getting into the MPA at source.

The bulk of the plastic is discarded rope and fishing line, followed by packaging tape found in regular commercial use plus an element of household plastic debris. Birds spending many months sat on a nest dome can become entangled and 'tethered' to their nest site. Without intervention they would eventually starve.

A few highlights from 2018:

- Launch of Ramsey island gin, produced by our partners at St David's Kitchen. Donations to RSPB from sales of the gin will help to fund management of Grassholm.
- Ongoing research trips to locate birds marked with individually identifiable rings, as part of mark-recapture study. With our research partners from University of Exeter we have fitted 517 gannets with rings since 2010 and it is these birds that we make every effort to re-sight each year. This mark-recapture study allows us to estimate the survival of adult gannets from one season to the next. Early indications are that adult survival on Grassholm is lower than we would expect, especially in females and this study is invaluable in trying to address these concerns. The ring sighting data will allow Exeter's research scientists to make more accurate estimates and begin to investigate the causes of adult mortality.

- Regular media coverage of Grassholm, particularly in relation to marine plastics.
- Annual trip to free birds trapped in plastic in October 2018 resulted in 18 birds being released (the second lowest total on record). Since regular October visits began in 2005, 667 birds have been released.

Outcome(s) (actual/anticipated):

Ongoing management of feature takes place, including monitoring;

Published scientific research informing management and policy needs;

Reduced mortality of feature through active intervention (plastic entanglement);

Increased profile of seabird conservation and marine plastics.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	See detail on monitoring and ongoing research studies.
Wider management	Yes	Management seeks to enhance feature condition, identify and address particular local and global issues and pressures on feature in its range, and raise awareness of MPAs through engagement including media.

Annex B4

Project/Action title:	Liverpool Bay SPA; Dee Estuary SPA
Lead organisation:	(RSPB Cymru additional support on reserve)
Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):	
<p>RSPB contribute to the management of the SPA features primarily through our work on the Dee Estuary reserve, particularly at the Point of Ayr and via the LIFE little tern project (focusing on the Gronant colony in Wales).</p> <p>We warden a high tide wader roost through the winter, to limit disturbance to the roosting birds from recreational activities (dog walkers etc.). We also run a handful of engagement events there too, such as guided walks and litter picks, raising awareness of the SPAs.</p> <p>The RSPB has coordinated a national Life funded project with the aim of setting the foundations for the recovery of the little tern <i>Sternula albifrons</i> in the UK. In Wales the RSPB has worked closely with staff of Denbighshire County Council to 'step-up' protection and conservation management at the little tern colony situated at Gronant Beach. This is the only remaining little tern colony in Wales excepting a satellite further north of one pair nesting annually at Point of Ayr since 2015.</p> <p>The Dee Estuary SPA is in favourable condition for little tern population. The current threats are coastal change which may reduce the suitable open, unvegetated habitat above high tides for nesting and predation of chicks by kestrel. Currently the threats of disturbance and fox predation are mitigated by fencing, signage and public engagement.</p>	
Outcome(s) (actual/anticipated):	
<p>The Gronant colony saw annual mean breeding population of 121 pairs and productivity of 0.88 in the period 2009-2013. Whilst the five year mean under the Life Project was 146 pairs and productivity of 1.01. The Life Project results therefore suggest an improvement in productivity and a slowing of the population decline at Life project sites but no upturn in breeding pairs at this stage.</p> <p>Gronant is fairly unique in that it is a success story with an increasing trend in productivity and breeding numbers; in 2018 the total number of breeding pairs was 171! The total UK population is estimated at 1,600 pairs in 40-50 colonies so the Gronant site holds over 10% of the UK breeding population and swells to many more birds post breeding.</p> <p>Through the Life project we have come to understand the importance of this north Wales colony as a post-breeding staging post and important feeding area. A coded-colour ringing programme under the Life project and those schemes operated by Republic of Ireland, Isle of Man and Cumbria ringers have shown that birds from the Irish Sea metapopulation use Gronant post breeding. In 2018 birds that had failed at breeding on Isle of Man re-laid and bred successfully at Gronant.</p> <p>The North Wales Little Tern Group set up by Denbighshire CC has been a model in engaging public support. It now totals nearly 200 paid up volunteer members and provides key support to the Gronant colony and to public engagement and education.</p>	

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Ongoing monitoring of feature.
Wider management	Yes	Working to enhance feature condition, address local issues and raise awareness.

Annex B5

Project/Action title:	North Anglesey Marine/Gogledd Môn Forol SAC marine code
Lead organisation:	(RSPB Cymru additional support on reserve)

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

RSPB South Stack is located within the North Anglesey Marine/Gogledd Môn Forol MPA.

On the reserve, we have 200 people a day coastering and up to 19 pleasure boats in around the sea cliffs from April to September. We record disturbance and sightings of sea mammals and provide education and advice to the general public.

We have been involved in creating a marine code to help raise awareness of how best to avoid having a negative impact on the marine environment.

Outcome(s) (actual/anticipated):

Increased profile of marine conservation and reduced disturbance.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	No	
Wider management	Yes	Engagement with members of the public.

Annex B6

Project/Action title:	Biosecurity for LIFE
Lead organisation:	RSPB, The National Trust and National Trust for Scotland

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

Biosecurity for LIFE is a partnership between RSPB, The National Trust and National Trust for Scotland. The Project is funded by EU LIFE Environmental Governance and Information [LIFE17 GIE/UK/000572], Scottish Natural Heritage, Natural England and the Northern Ireland Department for Agriculture, Environment and Rural Affairs.

Background

Many UK seabird species have undergone drastic population declines in recent decades. Species found in globally important numbers around the UK coast, such as puffin and kittiwake, have recently been identified as being at 'high risk of global extinction.'

Invasive non-native species (INNS), particularly rodents, are a major threat to seabird islands worldwide. INNS are a major driver of biodiversity loss, and islands are particularly vulnerable. Seabird ultimately have two essential requirements: a safe place to breed and safe places to feed. With the threats of climate change and other activities threatening seabirds foraging activities, INNS directly threaten their ability to successfully breed.

The natural heritage of many of the UK's islands, including uninhabited islands carries significant cultural value for island communities, with the nature, culture and economy of these special places often intricately entwined.

Project Area

Biosecurity for LIFE is a UK wide project operating in England, Northern Ireland, Scotland and Wales. In Wales the island SPAs we are engaging with are:

- Grassholm
- Glannau Aberdaron ac Ynys Enlli/Aberdaron Coast and Bardsey Island
- Skomer, Skokholm and the Seas off Pembrokeshire
- Anglesey Terns
- Ynys Seiriol/Puffin Island.

The RSPB has assessed that most of the UKs 41 seabird island Special Protection Areas (SPA), do not have biosecurity plans or adequate measures in place. The Biosecurity for LIFE will operate on these 41 island SPAs. Island SPAs across the UK are home to some of our rarest seabirds. They hold 100% of both the UK population of Manx shearwaters and Leach's petrels and 83% of puffins for example.

The projects partners and funders have been involved in many successful INNS eradications on seabird islands over the years, however eradication is just one part of tackling the issue. The implementation of biosecurity measures in the Project Area will significantly reduce the risk of new INNS incursions happening, and will also prevent INNS from establishing on an island if an incursion does happen.

Inadequate biosecurity is not just an environmental issue but can have negative effects on island economies, by threatening both farming and crofting practices and the eco-tourism value of islands.

Biosecurity for LIFE will work to ensure that the UK's important island seabird populations are provided with safe places to breed and build long-term resilience considering the other significant threats. It will also aim to ensure that island communities are engaged and central to the implementation of successful biosecurity measures. The project also has wider ambitions to improve access to information across Europe on best practice for island biosecurity. To achieve this the project will engage with organisations across Europe to initiate an advisory group and the creation of a technical website. The focus of this website will be as an information library and as a platform to collect data on biosecurity and incursion responses across Europe. Information that is currently not collected but will allow assessments into successful methods in the future which in turn will help improve our biosecurity knowledge.

How will this be achieved?

Three Biosecurity Officers will be appointed as part of the Project to cover the whole of the UK (one Officer will be responsible for the project delivery in Wales and Northern Ireland). The Officers and wider Project team will work towards:

- Evaluating the current biosecurity measures in operation on islands within the Project Area;
- The provision of training, advice and support to island communities, managers and other relevant practitioners to equip them with the skills required for writing biosecurity plans;
- Developing and delivering training courses for the key island target audiences, including island managers, communities, businesses and authorities;
- Recruiting and training volunteers;
- Overseeing the provision of biosecurity equipment and materials to meet biosecurity plan requirements (this will include the acquisition of a rodent detection dog);
- Ensuring the monitoring of seabird island SPAs for predator incursions, in line with the biosecurity plans;
- Wider community and public engagement through running a UK wide biosecurity awareness raising campaign, creating demonstration trails on three island SPAs and working with school children;
- Working with organisations across Europe to develop the EBIRAG and create a platform for cross organisational learning.

In Wales we have made contact with and will be working with a range of stakeholders and partners including National Resources Wales, RSPB Cymru, South and West Wales Wildlife Trust and the community on Bardsey Island. As the project grows we will engage more widely with communities local to each of the target SPAs to raise awareness of their local environment, gain support for continued biosecurity awareness and enlist volunteers to help manage the rapid incursion response hubs in the event of an incursion.

Project Duration

The Project commenced on 1 August 2018 and is due to be publicly launched in May 2019. The Project will run until July 2022.

Outcome(s) (actual/anticipated):

Key Project Aims

- Carry out a technical assessment of the biosecurity measures required on the 41 UK seabird island SPAs;
- The production of comprehensive, up-to-date biosecurity plans for all 41 SPAs;
- Enhance the capacity of island residents, businesses and local authorities to help maintain biosecurity;
- Establish 'rapid incursion response hubs' in strategic locations around the UK;
- Put into practice innovative surveillance methods to monitor INNS activity;
- Awareness raising of biosecurity measures amongst the wider public and key decision-makers;
- Establish and maintain a dedicated database to record incursions by non-native species onto seabird islands throughout the UK, and responses to those incursions;
- Initiate a European Eradication, Biosecurity and Incursion Response Advisory Group (EBIRAG);
- Develop a website that will act as a source of information for organisations across Europe involved in Invasive Non-Native Species work on islands. Including resources such as pro-forma biosecurity plans and a database of incursion responses.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	Yes	Provision of training, advice and support to island communities, managers and other relevant practitioners to equip them with the skills required for effective biosecurity.
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Project will establish and maintain a dedicated database to record incursions by non-native species onto seabird islands throughout the UK, and responses to those incursions.
Wider management	Yes	Mitigation of threat of invasive non-native species to SPAs. Awareness raising of biosecurity measures.

Annex B7

Project/Action title:	SeaSearch
Lead organisation:	Marine Conservation Society

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

Citizen science underwater surveys that seek to determine presence/absence, status and changes to habitats and species.

Summary of 2018 surveys in Welsh waters:

Crawfish (*Palinurus elephas*):

Dedicated crawfish survey dives were carried out in Pembrokeshire at two sites that were identified as suitable habitat for crawfish with regular sightings by divers. The numbers recorded during the survey are very low in contrast to higher numbers recorded by divers during the 1970s and 1980s. Crawfish were recorded from early May to October with higher numbers recorded in the late May, July and August surveys. A healthy number of juvenile animals were found showing that new recruits are entering the population. There were a good range of adult sizes again indicating a good age distribution in the population.

North & West Anglesey:

Unfortunately, again due to the weather, our planned dives targeting NRW priority points between North and South Stack and around Cemaes Bay were unreachable. Our divers, however, still managed to collect data from around Holy Island, in addition to exploring the Hope of Star wreck near Holyhead Harbour, known for its abundance of flint.

South Anglesey (Menai Strait & Conwy Bay SAC):

During a successful nudibranch hunt in the Menai Strait (Perch Rock and beneath the Menai Suspension Bridge), our Seasearchers recorded a total of 22 species over 3 days. With Ian Smith's knowledge and microscope, Seasearchers were able to confidently ID the more cryptic of species and benefited greatly from the guidance. Aside from the nudi diving, re-visit dives were undertaken around Puffin Island as part of Seasearch's 30th anniversary, with the aim to produce a comparative report between the first data collected in the area and the data recorded this year, 30 years later.

Llyn Peninsula (Pen Llŷn a'r Sarnau SAC):

Re-visit dives were also undertaken North East of Porth Ysgaden, in order to produce a similar report to that of Puffin Island, again using data collected 30 years apart. In addition to the 30th anniversary dives, the Angel Shark Project: Wales was due to begin with surveys commencing around Shell Island (near Harlech). Unfortunately, the weather blew out both planned weekends, however, we have learned from this and will use a more reactive approach to the surveys next year.

Milford Haven:

The Milford Haven waterway is a very active area with both commercial and recreational interest, containing many habitats and species of national importance: tidal rapid reefs, eelgrass *Zostera marina* beds and the native oyster *Ostrea edulis*. There are also high numbers of non-native species like the invasive slipper limpet *Crepidula fornicata*. Two sites were dived in the entrances of Milford Haven waterway in 2018: Linsway reef located on the north side of Dale Bay and Montreal reef, close to Little Castle Head in Sandy Haven bay. East Pickard Bay (south of the Angle Peninsula) is a proposed location as a Marine Energy Test Area (META) and the data from the Seasearch dives has been provided to Marine Energy Wales.

Skomer MCZ:

A Nudibranch identification course and nudibranch focused diving was completed in June with shore diving at Martins Haven, contributing to the Skomer MCZ nudibranch 2018 survey. The survey recorded 29 species were recorded including *Doto floridicola*, *Diaphorodoris alba* (below), *Eubranchius linensis* and *Thecacera pennigera* (which are rare or scarce in the UK).

A dive was completed on the North Marloes Peninsula to verify historical records of the ross worm, *Sabellaria spinulosa*; biogenic reefs of this species are protected under the EU Habitats Directive and are a feature of the Pembrokeshire Marine SAC. Also recorded was the long-lived mollusc Icelandic quahog, *Arctica islandica* (a Section 7 priority species in Wales).

Outcome(s) (actual/anticipated):

Outputs:

Received a total of 118 Seasearch forms for dives in 2018 – positions illustrated in two maps sent as separate attachments. The data has all been entered into Marine Recorder, shared with NRW and is in the process of appearing on the NBN Atlas (with sensitive species records blurred). A summary report will be made available on the Seasearch website.

Outcomes:

Improved evidence and data demonstrating temporal trends for a number of species at dive sites across Wales.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	No	
Wider management	Yes	Improved evidence and data demonstrating temporal trends for a number of species at dive sites across Wales.

Annex B8

Project/Action title:	Understanding the impact of activities on coastal waters
Lead organisation:	Dŵr Cymru Welsh Water

Brief description of project/action, including MPA(s) covered and whether the action is complete or ongoing (if ongoing, please provide deadline for completion):

Dŵr Cymru's current (2015-2020) investment programme includes a major programme of investigations to improve the company's understanding of the impact that it and others are making on Welsh coastal waters. The programme has been developed in close cooperation with NRW, and Dŵr Cymru has shared the subsequent results with it.

Dŵr Cymru was also instrumental in persuading the UK water industry to commission its research arm, UKWIR, to undertake a major project to look at a range of plastics-related issues including the fate of microplastics and nanoplastics entering our sewers. Although not specifically focused on the marine environment it should, nevertheless, make a useful contribution to the expanding body of knowledge on the fate of plastics in the aquatic environment.

Outcome(s) (actual/anticipated):

The evidence that has emerged has informed Dŵr Cymru's programme of improvements in its coastal wastewater assets during 2020-2025. Although mainly targeted at, for example, areas such as shellfish waters, hopefully some of Wales' MPAs will also indirectly benefit.

This action will also increase the knowledge base on the fate of plastics in the aquatic environment.

Which of the management principles does this project/action contribute to, and how?

Management Principle	Yes/No	If yes, please explain how
Strategic Planning	No	
Regulation, development consenting and assessment processes	No	
Management advice and guidance	No	
Understanding the condition of, and pressures and threats on, sites and their features to inform management	Yes	Information gathered through the programme will improve the evidence base on the pathways for introduction, and potential impact, of plastics on protected sites and their features.
Wider management	No	