



Department
for Environment
Food & Rural Affairs

Biodiversity Marine target

Detailed evidence report

Date: 28 April 2022

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Statement of Interests

Conflict of interest

The supporting evidence for the proposed MPA target was collated by the Statutory Nature Conservation Bodies (SNCBs): Natural England and Joint Nature Conservation Committee (JNCC); and no potential conflict of interest was identified.

Statement of transparency for statistical robustness

The recoverability potential of the designated features is taken in most cases from Marine Biological Association's Marine Evidence-based Sensitivity Assessments (MarESA), which produce results banded across several recovery potential timeframes (1). Where MarESA assessments have not been undertaken, for highly mobile species and coastal habitats, Natural England contracted out sensitivity information, following a similar methodology. This work was carried out by NatureBureau in 2015/16 to develop sensitivity assessments for several coastal habitats including dune and saltmarsh features. For highly mobile species the assessments were undertaken by APEM (2). This was done to support the conservation advice project in 2016 following the MarESA method and remains the best available evidence for these features.

Statistics used to assess the condition of designated features are based on the most appropriate data to meet intended uses. It is ensured that source data are consistent and comparable over time, across different levels of aggregation and over geographic areas where possible. The impact of any data limitations is assessed and where necessary alternative approaches are used and explained by JNCC and Natural England (3). Uncertainty in the source data is identified and how any subsequent impacts are minimised, is made transparent within the MPA sites monitoring reports¹.

Changing status of evidence

The MarESA assessments are updated when new evidence becomes available or through peer-review, so evidence gaps may be addressed or knowledge of the recovery potential of features may change over time. Future direct evidence from monitoring surveys for example could change the current condition status of MPA features over time.

¹ <https://jncc.gov.uk/our-work/mpa-monitoring-survey-reports/>

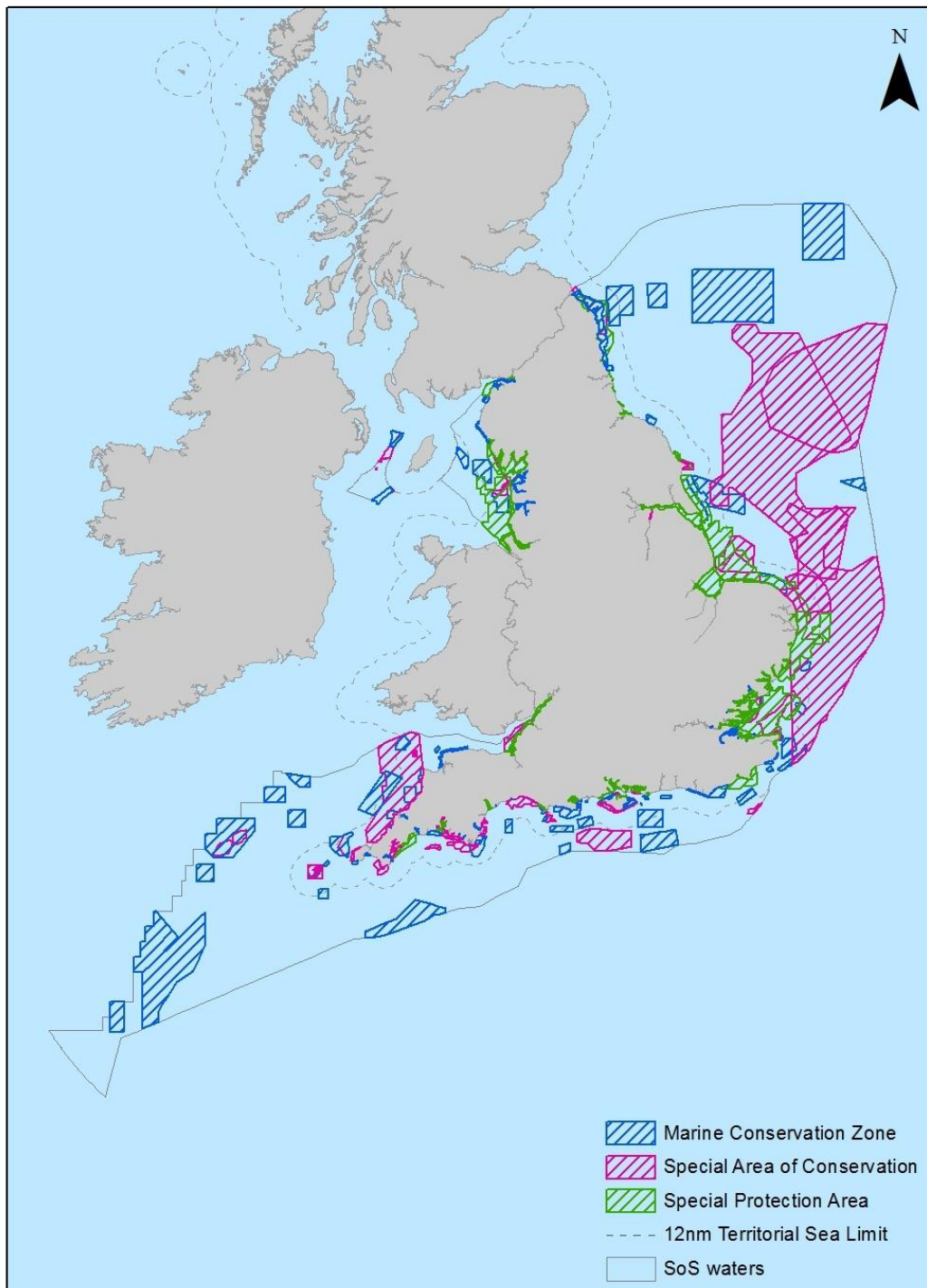
Introduction

Target proposal and existing evidence

The proposed MPA target is: 70% of the designated features in the MPA network to be in favourable condition by 2042, with the remainder in unfavourable but recovering condition, and additional reporting on changes in individual feature condition.

“MPA network” refers to Marine Conservation Zones (MCZs) designated under the Marine and Coastal Access Act 2009 (MCAA), Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated under the Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (Figure 1).

Figure 1: Map of the Marine Protected Area Network in 2022 including SACs, SPAs, MCZs



MPAs have been designated to protect representative examples of the UK's marine biodiversity and geomorphology by protecting specific features, which can be habitats (e.g. seagrass beds, coral gardens) or species (e.g. harbour porpoise, native oyster), which are listed at the time of designation for each site. Therefore, a feature-based approach for the MPA target is appropriate. The objective for all MPAs is for their features to be in favourable condition and the proposed target is designed to align with this. The proposed

target is based on the condition of designated features (species and habitats) in the MPA network. MPA feature condition is directly affected by its sensitivity (ability to resist change and ability to recover) to pressures (mechanisms through which a human activity affects a feature) to which it is exposed. Where a feature is sensitive to human activities, management of those activities is required to reduce or remove the pressure. This is intended to support the recovery of the feature to favourable condition.

If all pressures to which the features are sensitive to are reduced or removed, then all features should be in at least an unfavourable but recovering condition (3). It is proposed that the MPA target will be informed by an understanding of current MPA feature condition and how features may be expected to recover, in the absence of pressures to which the protected features of MPAs are sensitive:

- The condition of the designated features (favourable/unfavourable) is determined either by a condition assessment that evaluates monitoring and other scientific evidence, known as ‘direct evidence’ (4; 5) or by a vulnerability assessment, where direct evidence is not available (as set out in relation to MCZs in SNCBs’ MCZ Advice Project Technical Protocol F²; 6).
- The theoretical recovery potential of the feature as a timeframe (e.g., ‘recovery within 2 years’ or ‘over ‘25 years for recovery’) and is taken from feature sensitivity assessment resilience scores (3).

Table 1 provides a list of the existing evidence supporting the proposed MPA target development.

Table 1: Existing evidence for the proposed MPA target.

Evidence document	Content
Condition assessment	List of current condition assessment for each MPA feature
Recoverability assessment	Recoverability timeframe for each MPA feature
Report on MPA feature recoverability analysis	Detailed method on how the condition and recoverability assessments were produced

² <https://data.jncc.gov.uk/data/723cec60-558d-43b0-88b5-74f38ea437b0/F-Assessing-scientific-confidence-of-feature-condition.pdf>

Methodology

Proposed target scope and ambition

The proposed MPA target aims to improve the health of marine species and habitats, expressed through the condition of MPAs.

The ambition is that a legally binding target for MPAs could reinforce existing legal duties of regulators to protect MPAs, by providing a clear trajectory for recovery of the MPA network. The proposed MPA target complements the existing policies and objectives of the Marine and Coastal Access Act 2009, the Conservation of Habitats and Species Regulations 2017, and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (each as amended) and the Fisheries Act 2020. Achieving and sustaining favourable condition of MPA features in English waters will also support the wider objectives of the Marine Strategy Regulations 2010 as set out in the UK Marine Strategy.

A bespoke monitoring programme to review progress towards achieving the proposed MPA target is being developed. Monitoring programmes will recognise whether the government of the UK is progressing toward the achievement of the marine environment objectives of its MPA network, and the proposed MPA target will provide a time bound requirement to do this.

Research commissioned and workshops held

SNCBs have been commissioned by Defra to deliver the evidence to support the proposed MPA target due to their experience and statutory duty in advising on MPAs within territorial waters (within 12 nautical miles from the coast for Natural England) and offshore (beyond 12 nautical miles from the coast to the extent of the UK Continental Shelf for JNCC). SNCB evidence leads have provided current condition assessments and theoretical recovery potential for each designated feature to identify which MPA features are likely to recover within the timescale of the 25 Year Environment Plan (i.e., by 2042).

Proposals on the type, format and parameters used to quantify the MPA target were determined through a series of workshops between the Defra MPA policy team as well as SNCBs leads. The plans for the proposed MPA target are summarised in Table 3.2.

Expert Group

The Biodiversity Targets Advisory Group (BTAG) was set up to provide advice to Defra specialists developing the evidence base for legally binding biodiversity targets (terrestrial and marine). This group is formed of three Science Advisory Council (SAC) members and one Economic Advisory Panel (EAP) member, including a chair. These members make up

the core membership for the group. Additional members were brought in to plug gaps in expertise, e.g., for marine and freshwater environment. Beyond that core group there was also an option to supplement the group with additional attendees with specific expertise as necessary, including economic expertise. Additional information on the remit of this group are available online (BTAG: Terms of Reference³).

MPA feature list development

The list of designated features within scope of the proposed MPA target has been determined on the basis that all marine features formally listed in MCZ, SAC and SPA designation orders should be included. This includes all marine features designated in MPAs set up under the Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (each as amended); or the Marine and Coastal Access Act 2009, within English inshore and offshore waters. JNCC maintains the UK Network Features List (7) to provide a standardised set of features (species and habitats) across MPAs in UK waters. This list was used as a reference point to create an MPA Target feature list for application in English waters, which includes 150 species and habitats. A feature occurrence list was then created which detailed all occurrences of those species and habitats designated in MPAs in English waters. To provide quality control for the feature list 10 percent of sites were checked against the site-feature databases maintained by JNCC and Natural England to confirm that all features designated within that site had been included.

Some MPA features have not been included:

- Sites of Special Scientific Interest (SSSIs): Where marine and intertidal SSSIs are not also protected as an SAC or SPA, then their protected species and habitats have not been included. Work is currently being undertaken to assess the feasibility of including all marine SSSI features in the proposed MPA target. It is not possible to complete this work ahead of the consultation and so marine and intertidal SSSIs are currently excluded from the proposed MPA target.
- Ramsar sites: Protection for features in Ramsar sites derives from them being protected features in SSSIs, SACs and SPAs. Those features which are protected by SACs or SPAs will be included in the proposed MPA target.

Current Condition and Recovery Potential

The proposed MPA target is informed by our understanding of current MPA feature condition and how features may be expected to recover, in the absence of pressures to

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/975245/btag-tor.pdf

which the protected features of MPAs are sensitive. The date at which each feature will be expected to reach favourable condition (current recoverability potential) is calculated based on its current condition (favourable/unfavourable) and its theoretical recoverability potential which are determined following the methods described below:

Current condition:

Ideally, this is determined by a condition assessment (4; 5) that evaluates monitoring and other scientific evidence, known as 'direct evidence', that is available for the feature. Each feature has defined attributes (such as extent, distribution, structure, function and supporting processes, e.g., water quality), which are used to determine the health of that feature. Direct evidence is collected to check if these attributes are favourable or unfavourable. If all attributes of a feature are in favourable condition, then the feature overall is in favourable condition.

Where direct evidence is not available, feature condition can be assessed indirectly, with a vulnerability assessment. These assessments use the occurrence and exposure of features to human activities to which they are known to be sensitive (i.e. if an activity is occurring on, or within close proximity to a feature's location, then that feature may be impacted if it is sensitive to the pressures associated with that activity). This method was developed during the MCZ designation process, using an established and independently reviewed protocol (Protocol F). The vulnerability assessments were used to determine the desired conservation objective for each protected feature of an MPA (recover to favourable condition or maintain in favourable condition).

Most highly mobile species don't have these assessments available, so to reduce uncertainty their current condition was predicted from the conservation advice attribute targets included in the designation packages for these sites. These are the same attributes used in condition assessments and each has a target which identifies the desired state for the attribute as either 'maintain' (considered equivalent to favourable condition) or 'restore' (considered equivalent to unfavourable condition).

Theoretical recoverability potential:

The theoretical recovery potential has been taken from feature sensitivity assessment resilience scores. The standard method used in UK marine sensitivity assessments was developed by MarLIN. The updated version of this is the Marine Evidence-based Sensitivity Assessments (MarESA) (1). These are updated regularly with new evidence, as part of a collaboration currently coordinated by MarLIN Steering Group, of which Natural England and JNCC are part of. Given the extensive development and regular updates to these assessments, they are considered the best available recoverability information and as such have been used in this work for all features that have an assessment available.

To support its conservation advice project, Natural England have contracted out sensitivity information for features not covered under MarLIN, following a similar methodology. This work was carried out by NatureBureau in 2015/16 to develop sensitivity assessments for several coastal habitats including saltmarsh features. For highly mobile species the

assessments were undertaken by APEM (2). These assessments look at the direct effects on the features themselves and the effects on the habitats that they rely on (supporting habitats).

Each of the sensitivity assessments categorise habitats or species based on their resistance (ability to withstand) and resilience (ability to recover after) to pressures caused by human activities. The resilience category gives a timeframe in which recovery is expected after the pressure is removed. It is this timeframe that we have used to determine theoretical recovery potential. The categories used and their definitions are given in Table 2.

Table 2: Sensitivity assessment resilience categories used in determining the recoverability potential of MPA features

Resilience score	Recovery timeframe	Assessment type	Definition	Recovery in the target timeframe?
High	Recovery within 2 years	Habitats & low mobility species (MarESA & NatureBureau)	Features with a 'High' resilience score, which will recover within 2 years once pressures have been removed	These features are likely to recover by 2042
High	Recovery within 3 years	Highly mobile species (APEM)	Features with a 'High' resilience score, which will recover within 3 years once pressures have been removed	These features are likely to recover by 2042
Medium	Recovery within 2-10 years	Habitats & low mobility species (MarESA & NatureBureau)	Features with a 'Medium' resilience score, which will take between 2-10 years to recover once pressures have been removed	These features are likely to recover by 2042

Medium	Recovery within 3-6 years	Highly mobile species (APEM)	Features with a 'Medium' resilience which will take 3-6 years to recover once pressures have been removed	These features are likely to recover by 2042
Low	Recovery within 6-12 years	Highly mobile species (APEM)	Features with a 'Low' resilience which will take 6-12 years to recover once pressures have been removed	These features are likely to recover by 2042
Low	Recovery within 10-25 years	Habitats & low mobility species (MarESA & NatureBureau)	Features with a 'Low' resilience score, which will take between 10-25 years to recover once pressures have been removed	Some of these features are likely to recover by 2042
Very Low	Over 12 years for recovery	Highly mobile species (APEM)	Features with a 'Very low' resilience which will take over 12 years to recover once pressures have been removed	These features are unlikely to recover by 2042
Very Low	Over 25 years for recovery	Habitats & limited mobility species (MarESA & NatureBureau)	Features with a 'Very low' resilience which will take over 25 years to recover once pressures have been removed	These features are highly unlikely to recover by 2042

Results and Discussion

Assumptions

Recovery generally takes longer where the habitat has been altered (e.g., by physical pressures, such as dredging), compared to pressures which don't affect the habitat (e.g., noise disturbance). The recovery potential is based upon the pressures to which the features are most sensitive (i.e., where recovery will take longer) and this represents a precautionary approach (8) which has been followed to determine the recoverability potential for the designated features. The main assumptions to determine the recoverability potential are listed below:

- Recovery potential assumes that the pressures are removed to allow the recovery to occur. Management measures are being implemented by regulators (including Marine Management Organisation (MMO) and Inshore Fisheries and Conservation Authorities (IFCA)) to ensure that all pressures on features are removed by 2024.
- If the feature is currently in favourable condition, then management measures will ensure it remains in favourable condition and is not damaged.
- That features are not destroyed or part-destroyed (as defined by Natural England).
- 'Recovered' means that the feature is now in favourable condition, a good healthy state, but not necessarily equivalent to the pristine state it was in before any human impacts. Every component species may not have returned to its prior condition, abundance or extent but the relevant functional components are present, and the habitat is structurally and functionally recognisable as the initial habitat of interest in a healthy state.
- Environmental change, particularly climate change, may affect recovery potential of features and MPAs. In the context of the proposed MPA target, climate change has been considered a permanent pressure as it is not possible to remove this pressure from MPAs.
- The introduction or spread of invasive non-indigenous species (INIS): Resilience associated with this pressure across all biotopes / species is considered very low. INIS can only be removed through active management or natural processes. Therefore, the INIS pressure has been excluded as it can effectively be classed as a permanent pressure. This pressure may be addressed with active management in nearshore sites and so could be considered on a case basis within nearshore MPAs through the interim targets.

Results

A breakdown of the types of species and habitats which are expected to be in favourable condition by 2042 and those features which are currently expected to take longer than 18 years to recover (18 years from 2024 when management is due to be in place to 2042 and the end of the proposed target), are available in Annex A. Although some MPA features'

conditions would be expected to improve to unfavourable but 'recovering', full recovery would be expected after 2042. It is important to clarify that no MPA feature is excluded from the proposed target based on recoverability alone.

Many instances of features are already in favourable condition, i.e., where they have not been damaged. Some damaged features are likely to recover to favourable condition in some occurrences within the MPA network while being unlikely to recover by 2042 in other occurrences. This is because, the current condition may be different in different locations and/or because the recoverability potential varies depending on the biogeographic region the feature is found within.

The resulting statistics have been prepared using a precautionary approach, during each stage of the process and as such recovery may occur more quickly than is projected (e.g., where necessary management is all in place prior to 2024, or where the 2042 deadline falls in the middle of the recoverability category). To account for this uncertainty, SNCBs have reviewed the number of feature occurrences with missing information and those where the 2042 deadline falls in the middle of the recoverability category, to examine where this level of precaution could be reduced. This has been used to produce high, medium and low scientific certainty options (Table 3).

Looking purely at recovery rates, we estimate that the percentage of features in favourable condition by 2042 would be between 71% and 88%. For the low end of this range there is a high level of scientific certainty that biological recovery rates are not overestimated; for the upper end of the range there is a high likelihood that the biological recovery rates may be overestimated. Recoverability is determined using our understanding of current condition and the ability of a protected feature to recover based on the best-available evidence. These recoverability assessments assume that all damaging activity is prevented by 2024 at the latest (not all activities are damaging, and it is feature specific). Given slow growth and/or reproduction rates (for example maerl beds can take 50 years or so to recover), the remaining features may not have recovered by 2042, but we want to ensure they are on a recovering trajectory.

The proposed percentage of 70% for the target, has a high level of scientific certainty that biological recovery rates are not overestimated. Although these slow recovering species and habitats may recover quicker than assumed, setting the target at this level also allows for any challenges in implementing entirely effective management measures across all our MPAs.

Table 3: High, medium, and low scientific certainty options for recoverability

Target %	Features included as favourable	Risk of overestimating recovery potential and so missing the target
71%	<p>Features that are considered to already be in favourable condition, or those within favourable condition within 12 years (812 occurrences out of 1,144) (as inclusion of any higher timeframe recovery bands would exceed 19 years from 2024, when all necessary management is considered to be in place)</p>	<p>Low - Only features whose recovery timeframe is complete by 2042 are included in scope.</p>
79%	<p>In addition to the features assessed as favourable within 12 years in option 1, the following will be presumed favourable:</p> <ul style="list-style-type: none"> • Half of the features with 10–25-year potential recoverability (33.5 occurrences out of 1,144, 3%) • Half of the features with no condition assessment and theoretical recoverability potential of over 12 years or over 25 years (22 occurrences out of 1144, 2%) • Half of features with no condition or theoretical recoverability potential 	<p>Medium - a compromised approach between low and high risk.</p>

	<p>(15 occurrences out of 1,144, 1%)</p> <ul style="list-style-type: none"> • Quarter of the features with over 12-year potential recoverability (22.5 occurrences out of 1,144, 2%) 	
88%	<p>In addition to the features assessed as favourable from options 1 and 2, the following will be presumed as favourable:</p> <ul style="list-style-type: none"> • All features with 10–25-year potential recoverability (33.5 additional occurrences out of 1,144, 3%) • All features with no condition assessment and theoretical recoverability potential of over 12 year or over 25 years (22 additional occurrences out of 1,144, 2%) • All features with no condition or theoretical recoverability potential (15 additional occurrences out of 1,144, 1%) • Half of the features with over 12-year potential recoverability (22.5 additional occurrences out of 1,144, 2%) 	High - risk that recovery rates may be overestimated.

System interactions

There are interactions with other sea users including fisheries and the delivery of offshore wind farms to meet the net zero target. All MPAs are protected through the planning and licensing regimes that cover activities such as dredging for aggregates and constructing offshore wind farms. In addition, 98 sites in our waters now have management measures in place to protect sensitive features from bottom towed fishing gears.

Defra will work with regulators to ensure activities are not damaging MPA features including working with BEIS to enable offshore wind expansion without damage to the MPA network.

Policy scenario analysis

Delivery of the proposed MPA target would tie in with requirements to manage impacts of activities on protected features of MPAs under the Marine Coastal and Access Act 2009, the Conservation of Habitats and Species Regulations 2017 and the Conservation of Offshore Marine Habitats and Species Regulations 2017.

SNCBs are responsible for assessing the condition of designated features (carried out through monitoring), to inform the government on whether conservation objectives of MPAs are being met and finally to advise on management measures for MPAs. The success or otherwise of the policy will be monitored through monitoring systems yet to be developed, of which appropriate funding will need to be secured.

Future plans

Appropriate interim targets that correspond with the recoverability timeframes of MPA features will need to be agreed to help assess progress towards the overarching proposed target.

We propose that additional reporting will provide a greater degree of granularity using feature attributes (such as extent, distribution, structure, function and supporting processes, e.g., water quality) to show progress towards the proposed target. This will summarise the progress being made towards favourable condition across the individual features, for example, more feature attributes in a good healthy state would show progress towards but not yet achieved favourable condition.

Over time there will be an increase in the proportion of assessments done on the basis of survey data, or for those MPAs where monitoring resources are not sufficient, the use of data collected for similar MPAs/features will be used to improve their vulnerability assessments.

If further MPAs are designated in the future, we propose to consider at the time whether their features should be included in the target (it would seem unreasonable to expect features in MPAs designated close to 2042 to have recovered by then).

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Annex A

Summary of feature potential recoverability

The following tables summarise each type of feature's potential recoverability within the proposed MPA target timeframe. There are some features which are likely to be in favourable condition in some occurrences within the network, whilst being unlikely to recover within the target timeframe in other occurrences. This is because the current condition may be different in different locations and/or because the recoverability potential varies depending on the biogeographic region the feature is found within. It is, therefore, not possible to create a defined list of 'recoverable features' reflecting best available evidence, so the features have been split into following tables:

- Marine features likely to be in favourable condition by 2042
- Marine features likely to be in unfavourable but recovering condition by 2042
- Marine features with varying condition in 2042

For the last two tables we do of course expect instances of these species and habitats that are already in favourable condition to remain in that state.

Marine features likely to be in favourable condition by 2042	
Allis shad (<i>Alosa alosa</i>)	Light-bellied brent goose (<i>Branta bernicla hrota</i>)
Atlantic puffin (<i>Fratercula arctica</i>)	Little egret (<i>Egretta garzetta</i>)
Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>)	Littoral chalk communities
Barnacle goose (<i>Branta leucopsis</i>)	Long snouted seahorse (<i>Hippocampus guttulatus</i>)
Bar-tailed godwit (<i>Limosa lapponica</i>)	Long-tailed duck (<i>Clangula hyemalis</i>)
Black seabream (<i>Spondyliosoma cantharus</i>)	Lagoon sand shrimp (<i>Gammarus insensibilis</i>)
Black-throated diver (<i>Gavia arctica</i>)	Low energy infralittoral rock and thin sandy sediment

Common goldeneye (<i>Bucephala clangula</i>)	Mediterranean gull (<i>Larus melanocephalus</i>)
Common guillemot (<i>Uria aalge</i>)	Moderate energy intertidal rock
Common redshank (<i>Tringa totanus</i>)	Northern gannet (<i>Morus bassanus</i>)
Common seal (<i>Phoca vitulina</i>)	Northern lapwing (<i>Vanellus vanellus</i>)
Common shelduck (<i>Tadorna tadorna</i>)	Northern pintail (<i>Anas acuta</i>)
Couch's goby (<i>Gobius couchi</i>)	Pied avocet (<i>Recurvirostra avosetta</i>)
Dark-bellied brent goose (<i>Branta bernicla bernicla</i>)	Pink-footed goose (<i>Anser brachyrhynchus</i>)
Defolin's lagoon snail (<i>Caecum armoricum</i>)	Purple sandpiper (<i>Calidris maritima</i>)
Dunlin (<i>Calidris alpina alpina</i>)	Razorbill (<i>Alca torda</i>) (SPA feature)
Eurasian curlew (<i>Numenius arquata</i>)	Red knot (<i>Calidris canutus</i>)
Eurasian marsh harrier (<i>Circus aeruginosus</i>)	Red-breasted merganser (<i>Mergus serrator</i>)
Eurasian spoonbill (<i>Platalea leucorodia leucorodia</i>)	Red-throated diver (<i>Gavia stellata</i>)
Eurasian teal (<i>Anas crecca</i>)	Ringed plover (<i>Charadrius hiaticula</i>)
Eurasian wigeon (<i>Anas penelope</i>)	River lamprey (<i>Lampetra fluviatilis</i>)
European golden plover (<i>Pluvialis apricaria</i>)	Roseate tern (<i>Sterna dougallii</i>)
Giant goby (<i>Gobius cobitis</i>)	Ross worm (<i>Sabellaria spinulosa</i>) reefs
Greater scaup (<i>Aythya marila</i>)	Ruddy turnstone (<i>Arenaria interpres</i>)

Greater white-fronted goose (<i>Anser albifrons albifrons</i>)	Ruff (<i>Philomachus pugnax</i>)
Great-northern diver (<i>Gavia immer</i>)	Sanderling (<i>Calidris alba</i>)
Grey plover (<i>Pluvialis squatarola</i>)	Sea lamprey (<i>Petromyzon marinus</i>)
Grey seal (<i>Halichoerus grypus</i>)	Sheltered muddy gravels
Greylag goose (<i>Anser anser</i>)	Short snouted seahorse (<i>Hippocampus hippocampus</i>)
Harbour porpoise (<i>Phocoena phocoena</i>)	Slavonian grebe (<i>Podiceps auritus</i>)
High energy infralittoral rock	Smelt (<i>Osmerus eperlanus</i>)
High energy intertidal rock	Spiny lobster (<i>Palinurus elephas</i>)
Honeycomb worm (<i>Sabellaria alveolata</i>) reefs	Stalked jellyfish (<i>Calvadosia campanulata</i>)
Infralittoral muddy sand	Stalked jellyfish (<i>Calvadosia cruxmelitensis</i>)
Infralittoral sandy mud	Stalked jellyfish (<i>Haliclystus</i> spp)
Intertidal biogenic reefs	Subtidal biogenic reefs
Intertidal coarse sediment	Subtidal coarse sediment
Intertidal mixed sediments	Subtidal sand
Intertidal under boulder communities	Tentacled lagoon-worm (<i>Alkmaria romijni</i>)
Clacton Cliffs and Foreshore	Twaite shad (<i>Alosa fallax</i>)
North Sea glacial tunnel valleys: Swallow Hole	Celtic Sea Relict Sandbanks

Folkestone Warren (Gault Formation)	North Norfolk Coast assemblage of subtidal sediment features and habitats
English Channel Outburst Flood Features (Quaternary fluvio-glacial erosion features)	Spurn Head (subtidal) and "the Binks"
Bracklesham Bay	Haig Fras rock complex
Bouldnor Cliff geological feature	Portland Deep

Marine features likely to be in unfavourable but recovering by 2042	
Black (common) scoter (<i>Melanitta nigra</i>)	Herring gull (<i>Larus argentatus</i>)
Black-legged kittiwake (<i>Rissa tridactyla</i>)	Large Shallow Inlets and Bays
Cold-water coral reefs	Little gull (<i>Larus minutus</i>)
Common eider (<i>Somateria mollissima</i>)	Maerl beds
	Moderate energy infralittoral rock and thin mixed sediment
Coral gardens	Native oyster (<i>Ostrea edulis</i>) beds
Deep-sea bed	Razorbill (<i>Alca torda</i>) (MCZ feature)
European shag (<i>Phalacrocorax aristotelis</i>)	Spartina swards (<i>Spartinion maritimae</i>)
European storm-petrel (<i>Hydrobates pelagicus</i>)	Subtidal coarse sediment and subtidal mixed sediments mosaic
Fan mussel (<i>Atrina fragilis</i>)	Subtidal macrophyte-dominated sediment

Greater black-backed gull (<i>Larus marinus</i>)	
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Marine features with varying condition in 2042	
Arctic tern (<i>Sterna paradisaea</i>)	Mudflats and sandflats not covered by seawater at low tide
Black-tailed godwit (<i>Limosa limosa islandica</i>)	Native oyster (<i>Ostrea edulis</i>)
Blue mussel (<i>Mytilus edulis</i>) beds	Ocean quahog (<i>Arctica islandica</i>)
Coastal lagoons	Peacock's tail (<i>Padina pavonica</i>)
Coastal saltmarshes and saline reedbeds	Peat and clay exposures
Common tern (<i>Sterna hirundo</i>)	Pink sea-fan (<i>Eunicella verrucosa</i>)
Estuaries	Reefs
Estuarine rocky habitats	Salicornia and other annuals colonising mud and sand
Eurasian oystercatcher (<i>Haematopus ostralegus</i>)	Sandbanks which are slightly covered by sea water all the time
Fragile sponge and anthozoan communities on subtidal rocky habitats	Sandwich tern (<i>Sterna sandvicensis</i>)
High energy circalittoral rock	Seabird assemblage
Intertidal mud	Sea-fan anemone (<i>Amphianthus dohrnii</i>)
Intertidal sand and muddy sand	Seagrass beds

Lesser black-backed gull (<i>Larus fuscus</i>)	Sea-pen and burrowing megafauna communities
Little tern (<i>Sterna albifrons</i>)	Submerged or partially submerged sea caves
Low energy infralittoral rock	Subtidal chalk
Low energy intertidal rock	Subtidal mixed sediments
Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)	Subtidal mud
Moderate energy circalittoral rock	Waterbird assemblage
Moderate energy infralittoral rock	