Marine Management Organisation

North West Inshore and North West Offshore Marine Plan Technical Annex

Draft for consultation

January 2020

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Please note:

On 23 June 2016, the EU referendum took place and the people of the United Kingdom voted to leave the European Union. Until exit negotiations are concluded, the UK remains a full member of the European Union and all the rights and obligations of EU membership remain in force. During this period the Government will continue to negotiate, implement and apply EU legislation. The outcome of these negotiations will determine what arrangements apply in relation to EU legislation in future once the UK has left the EU.

References in marine plans to EU legislation, insofar as it is currently, or will become, part of UK law after the UK leaves the EU, may require some changes in relation to rights and obligations under EU legislation. Any such changes will be addressed at the most appropriate point during plan drafting or revision, as required.

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This document is also available on the gov.uk website: https://www.gov.uk/government/publications/draft-north-west-marine-plan-documents

Cover photo: Liverpool, Merseyside

Contents

Chapter One
1 Introduction and background

1.1 The North West Inshore and Offshore Marine Plan

1. The North West Marine Plan document and associated Technical Annex are separate documents. Due to commonalities and dependencies between the north west inshore and north west offshore marine plan areas, a single document has been produced, the North West Marine Plan. It is acknowledged that whilst there is one document they remain two separate plans – the North West Inshore Marine Plan and the North West Offshore Marine Plan. The Technical Annex supports the North West Marine Plan and includes additional detail, for example on the wider context for marine plan policies and how they will be implemented. The Technical Annex should be read alongside the plan to inform policy implementation and to support proposal development. By referring to the Explore Marine Plans digital service, users of the plan can access information to support marine plan application. The Explore Marine Plans digital service displays the appropriate marine policy documents for all of England's marine plan areas in an accessible online, quick reference format. It is aimed at interested parties seeking to understand marine plans, particularly in the context of proposals. This resource is also designed to provide support to public authorities in their use of marine plans in decision-making.

1.2 The north west inshore and offshore marine plan areas

2. The north west marine plan areas contain dynamic and low-lying coastlines and diverse marine environments, which are also very busy. The coast includes a diverse range of communities, with urban centres found in the southern part of the inshore marine plan area and predominantly rural communities to the north. There is varying wealth, with some areas with strong employment opportunities and other areas that are experiencing social and economic challenges. The marine plan areas are important for energy production, through discrete gas reserves, and both nuclear and renewable electricity production.

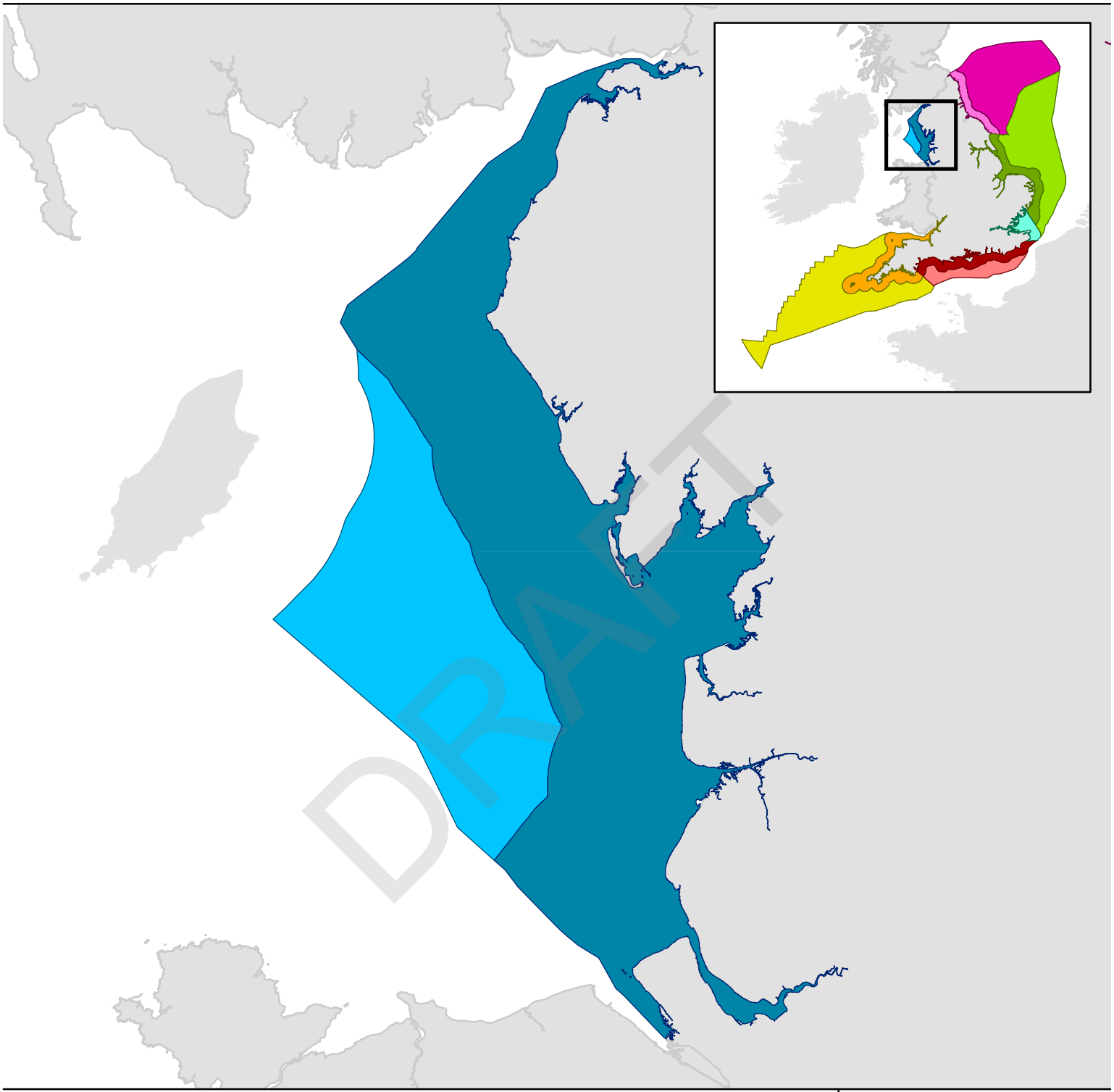
3. Within the north west marine plan areas there are a number of overlapping marine protected areas, two world heritage sites, the Lake District National Park, heritage coasts, two Areas of Outstanding Natural Beauty, sites of special scientific interest and extensive Ministry of Defence danger areas. Section 1.2 of the North West Marine Plan provides more information on the north west inshore and offshore marine plan areas.

4. In preparing the North West Marine Plan, adjacent areas (the marine areas of Scotland, Wales and the Isle of Man) referred to as reporting areas, have also been taken into account. This includes wider areas of analysis based on the issues being considered and also issues that do not have a defined geographical boundary, which is particularly important for the north west marine plan areas due to the administrative complexity of being surrounded by multiple different governments.

5. For more information see Figure 1, see also relevant evidence held on the Marine Management Organisation Evidence Projects Register or visit the Explore Marine Plans digital service.

Marine Management Organisation

Figure 1 | North West Inshore and Offshore Marine Plan Areas



Marine Plan Areas

- East Inshore
- East Offshore
- North East Inshore
- North East Offshore
- North West Inshore
- North West Offshore
- South East Inshore
- South West Inshore
- South West Offshore
- South Inshore
- South Offshore

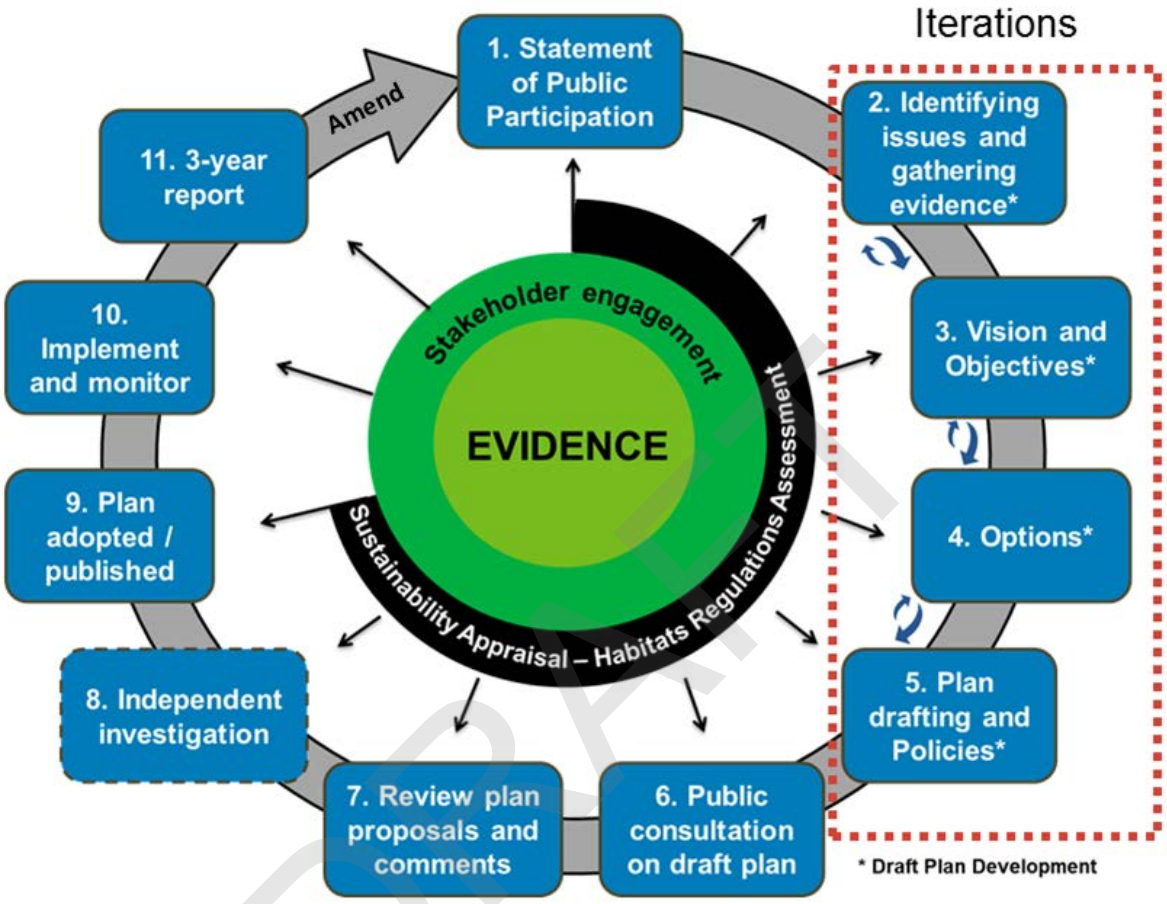
Information map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

1.3 Overview of plan development

Figure 2 shows the stages of marine planning[1]:

Figure 2: The marine planning process



6. Activities undertaken during the plan development process bring wider benefits. For example, sub-national policy analysis should lead to better integration of decision-making. Evidence collation and commissioning will improve the marine evidence base to inform decisions. Engagement, including workshops, meetings and training, has increased awareness or improved implementation of existing measures as well as measures within the North West Marine Plan and the Marine Policy Statement.

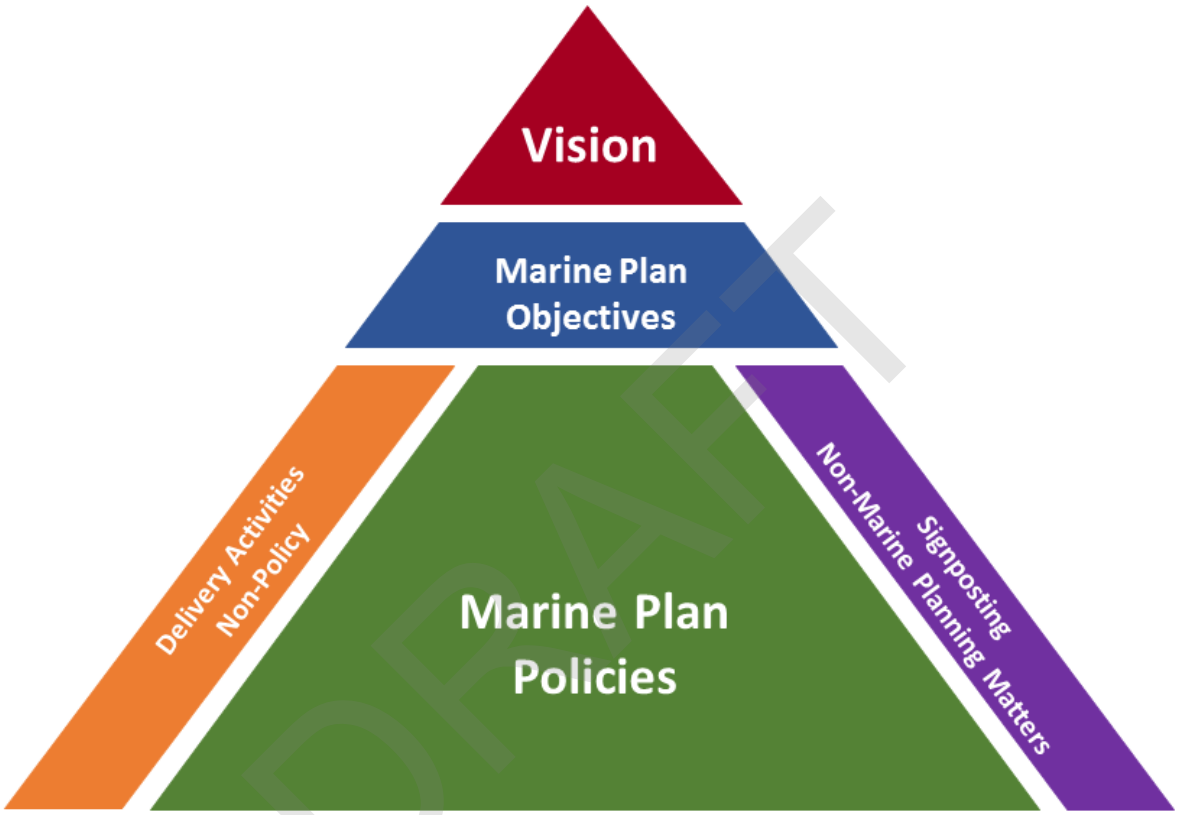
7. Consequently not all issues raised have resulted in a specific North West Marine Plan policy as some are already addressed by existing measures. It is important that the benefits of marine planning activities as a whole are recognised and included when measuring the success of the plan.

[1] All the relevant documents associated with the stages can be accessed at: https://www.gov.uk/government/collections/north-west-marine-plan including the Statement of Public Participation (SPP) and associated assessment documents.

1.4 The structure and composition of the plan

8. The following sets out the 'elements' that make up the North West Marine Plan. See Figure 3 for the overall structure. For further explanation of terms see the glossary in Annex 1. Refer to chapters 2, 3 and 4 for more information on vision, objectives, policies and signposting.

Figure 3: Elements making up the North West Marine Plan



Chapter Two
2 Vision

2.1 Vision statement

The vision for the north west marine plan areas in 2041

The north west marine plan areas are distinctive for the growth and variety of industries including energy generation, ports, aggregate extraction and tourism. The sustainable growth in marine infrastructure is facilitating access to the sea throughout the region. Sustainable coastal tourism is flourishing, with local centres such as Blackpool, the Lake District and Liverpool acting as catalysts for further regional development of recreation and tourism opportunities up and down the coast. The quality of the natural environment provides a safe haven for birds and other species located in the exceptional protected habitats across the plan areas. Effective environmental management between sectors provides the area with resilience to the impacts of climate change. Effective transboundary cooperation with partners across the Irish Sea, and more locally, has created marine plan areas which are benefitting from a wide variety of cross-border activities.

9. The Marine Policy Statement (2.1.1) states that "the UK vision for the marine area is for 'clean, healthy, safe, productive and biologically diverse oceans and seas'". That vision is reiterated in A Green Future: Our 25 Year Plan to Improve the Environment. The north west marine plan areas will contribute to achieving this vision, supported by a specific North West Marine Plan vision.

10. The North West Marine Plan vision for the next 20 years covers significant issues identified through the planning process and iterations to develop the plan. The plan aims, through sustainable, effective and efficient use of the north west marine plan areas, to manage competing priorities between economic growth, environmental conservation and social benefits, whilst considering the distinctive characteristics of the areas.

2.2 How will the north west marine plan areas look in 2041?

11. The north west marine plan areas sit in the bustling heart of the Irish Sea, stretching from the Scottish border to the River Dee boundary with Wales. It is a relatively small plan area that is variable in character, for example valued areas of tranquillity alongside industrial locations, support a wide range of existing activities and is already very busy. In 2041 the North West Marine Plan has facilitated the co-ordination of a variety of activities, sectors and governance structures that take place in, flow through, and sit next to the plan areas. Sustainable decision-making has accounted for, and balanced the considerations of economic, environmental and social needs along the coast and out into the marine plan areas. Understanding of the marine environment has developed through new scientific and socio-economic

research. Our understanding of the north west plan areas is better than ever before through sound science (including data collection, monitoring and research) that underpins effective marine management, policy developments and transboundary cooperation.

Achieving a sustainable marine economy

12. By 2041, the north west marine plan areas have become a hub for a variety of industries including the energy sector, ports and connected cable infrastructure to name a few. The expansion of associated industries such as aggregate extraction are being managed sustainably. Projects like the Atlantic Gateway have provided opportunities to showcase low carbon technologies to work towards a sustainable, inclusive economy. This expansion has been assisted through the use of both established and innovative technology, and has provided long term benefits such as increased employment opportunities for local communities, from Liverpool in the south to Carlisle in the north, and coastal communities around and in between. In addition, sustainable coastal tourism thrives throughout the plan areas with coastal hubs including The Lake District National Park, Blackpool and Liverpool helping to drive tourism in the north west. Given the tight boundaries of the marine plan areas and the north west coastline, the co-existence of activities and sectors has been paramount in decision-making for plan led development, particularly for providing the infrastructure to deliver sustainable economic growth.

Ensuring a strong, healthy and just society

13. Access to the coast and marine plan areas has been enhanced appropriately and inclusively allowing more people to explore and enjoy the varied marine environment of the north west marine plan areas. Improved access has led to the increased health and well-being of residents and visitors and led to a greater appreciation of the north west marine plan areas seascape and, natural and cultural heritage. For example, Liverpool's historic waterfront and the Solway Coast Area of Outstanding Natural Beauty. The continued expansion of the renewable energy sector is helping diversify and develop local skills and expertise to bring multiple areas out of deprivation. There is greater access to fisheries resources that are being managed in a sustainable way, recognising their importance as a social and environmental resource in addition to an economic one. The important role that the marine environment can play in mitigating climate change has been harnessed, particularly in coastal areas such as Marshside. Natural flood defences are contributing to the protection of local communities, whilst playing an important role in the local and regional ecosystem. The region is recognised for its excellent contribution to Ministry of Defence practice and exercise areas including tests sites such as Eskmeals Firing Range and the submarine base at Barrow-in-Furness, strengthening international peace and stability and the defence of the UK.

Living within environmental limits

14. By 2041, the marine and coastal environment continues to be conserved and where appropriate enhanced, building on the important role it plays in providing natural resources whilst maintaining the north west marine plan areas' distinctiveness and variety of habitats. Effective management of designated sites such as Morecambe Bay and other intertidal habitats, which make up so much of the North West's coastline, has improved the resilience of sensitive habitats and species. Marine development within the natural environment is being effectively managed, with

reduced impacts on sensitive species from pressures such as pollution and underwater noise. Intertidal and sub-tidal habitats are being enhanced, resulting in thriving populations of breeding and overwintering species like the red throated diver and common scooter. The extensive network of marine protected areas are being effectively managed as part of a coherent UK network, conserving and enhancing the regions highly valued habitats and species. The associated environmental enhancements to the marine plan areas have led to improved water quality with the wider benefits helping to drive tourism and improve well-being. The principle of 'environmental net gain' is well established within the north west marine plan areas with developments aiming to leave the natural environment in a measurably better state than beforehand.

Promoting good governance

15. The North West Marine Plan has promoted and achieved good governance by spatially planning the use of the marine environment. All those who have a stake in the marine environment input into associated decision-making. Marine, land and water management mechanisms have been responsive and now work effectively together, for example through integrated coastal zone management and the river basin management plans. The north west marine plan areas border Wales, Scotland and the Isle of Man. All these governments take account of the different management systems in order collaborate effectively in tackling transboundary issues. Marine businesses have been, and continue to, be subject to clear, timely, proportionate and, where appropriate, North West Marine Plan led regulation. Public authorities, including the 23 planning authorities, are utilising the plan and working efficiently together for transboundary issues. Relevant public authorities are all signed-up to the Coastal Concordat streamlining land-sea planning interactions.

Chapter Three
3 Objectives overview

3.1 Objectives

16. The vision for the North West Marine Plan will be achieved through the marine plan objectives (Table 1). Relevant high level marine objectives set out in the Marine Policy Statement are used as the plan objectives. The plan objectives reflect engagement with stakeholders and government throughout the planning process, and lessons from the development of earlier marine plans.

17. High level marine objectives relevant to the North West Marine Plan are those which are mainly delivered through plan policies. The plan objectives are therefore based on the economic, social and environmental high level marine objectives.

18. While some of the plan policies may also contribute towards the governance and sound science high level marine objectives, plan policies are not the primary mechanism to achieve these objectives. Those high level marine objectives that are delivered through planning process or other mechanisms, such as plan development or implementation[2], are not appropriate to use as marine plan objectives. Instead, these are considered as 'supporting' objectives and are set out in Table 1 alongside some examples of how these objectives are delivered.

19. The plan objectives provide a link between the issues present in the north west marine plan areas, the future vision for the plan areas, and the policies developed to achieve the vision. The objectives cover the full scope of sustainable development, integrating the principles of a sustainable marine economy, ensuring a strong, healthy and just society, and living within environmental limits.

20. Table 1 describes the local relevance of the plan objectives to the north west marine plan areas. The objectives are further tailored to the north west marine plan areas through the policies that will apply to individual decisions made in the north west plan areas, and the evidence base that supports implementation.

21. Due to the cross-cutting nature of the objectives, Table 1 provides only a flavour of the relevance of each plan objective to the north west marine plan areas in order to avoid duplication across the objectives. The commentary is not definitive. Table 4 in Chapter 4 shows the broad range of policies that contribute towards the achievement of the plan objectives. In some cases policies contribute towards multiple plan

[2] For example, objective 17 'Marine businesses are subject to clear, timely, proportionate and, where appropriate, plan-led regulation' will be achieved through the development and implementation of marine planning as a whole rather than specific policies.

objectives, for example policy NW-CBC-1 which encourages cross-border co-operation.

22. The order of plan objectives does not reflect priority or weighting. The order follows the order as set out in the Marine Policy Statement. Economic, social and environmental objectives must be considered equally alongside one another. Plan objectives should be read and applied in an integrated way, though not every objective will apply to every situation and in every location, and their relevance may change over time as the evidence base evolves.

3.2 Contribution to the Marine Strategy

23. The Marine Strategy Regulations 2010 require the UK to take necessary measures to achieve or maintain Good Environmental Status of our seas by 2020 through the development of a Marine Strategy. The strategy reflects the UK vision for clean, healthy, safe, productive and biologically diverse oceans and seas and helps to deliver international obligations and commitments to protect and preserve the marine environment.

24. Good Environmental Status is wide ranging and defined by 11 'Descriptors' as set out in the updated Marine Strategy Part One. Good Environmental Status for each descriptor, including the ecosystem components[3] associated with descriptor 1 (biological diversity), will be delivered through the achievement of high level objectives set out in the updated Marine Strategy Part One and listed below in Table 3.

25. The Marine Strategy Part Three: UK Programme of Measures states that marine planning will make a positive contribution towards the achievement of Good Environmental Status. Table 3 demonstrates where the North West Marine Plan objectives and policies contribute either directly or indirectly across all of the descriptors. Marine plan objectives which are indirectly linked to the Marine Strategy objectives are included in brackets.

3.3 Contribution to other UK strategies

26. The plan objectives contribute towards the aims of the Industrial Strategy and the Sustainable Development Strategy by enabling sustainable economic growth in the north west marine plan areas. The plan objectives encourage a move towards net-zero carbon targets defined in the Clean Growth Strategy. The plan also encourages proposals to leave the environment in a measurably better state than beforehand to contribute towards aspirations set out in the 25 Year Environment Plan.

[3] cetaceans, seals, birds, fish, pelagic habitats and benthic habitats as set out in the Marine Strategy Part One

Table 1: Relevance of the marine plan objectives to the north west marine plan areas

Marine Plan Objectives			Relevance to North West Marine Plan Areas
Achieving a sustainable marine economy	1	Infrastructure is in place to support and promote safe, profitable and efficient marine businesses	The north west marine plan areas contain several marine sectors which rely on supporting infrastructure for day-to-day operations. For example there are significant shellfish beds in the north west which require provision and maintenance of infrastructure for landing and processing incoming catch. As relatively small and very busy marine plan areas, space for new infrastructure is increasingly restricted. Existing infrastructure can be reused or repurposed to support new developments, where appropriate. For example, infrastructure for aquaculture can also be used by fisheries and vice versa, which contributes to the integration of the industries. The north west region is considered "England's energy coast", with infrastructure in place such as cabling, ports and quays to support the maintenance and growth of offshore renewable energy. It is difficult to predict the future growth of ports in the north west as the size and number of vessels will respond to global markets. Subsea cabling in the north west marine plan areas is vital for supplying broadband and achieving the aims of Building Digital UK to ensure everyone has the right to request high speed broadband by 2020. Cabling is also essential to support offshore renewable energy supply in the area. Maintaining and supporting appropriate infrastructure for marine based activities, such as these, will help to promote safe profitable and efficient marine businesses in the north west marine plan areas.
	2	The marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future.	The marine environment of the north west marine plan areas provides a wide range of resources that are important for supporting the local and national economy. It is important that these environmental resources are used sustainably. As the north west is a key manufacturing base, future economic growth may lead to an increase in demands on ports and harbours. Port and harbour development will further support offshore renewable energy production. Dredging of ports and harbours plays a vital role in maintaining safe access at advertised navigational depth to ports and harbours. Sustainable port development brings economic benefits through direct and indirect job creation. Future expansion of ports to accommodate larger vessels may require deeper, wider and more frequent dredging. Oil and gas extraction has been declining since 2000, however it remains important to the UK's energy mix as we transition to a low carbon economy, and as a significant employer. Within the north west marine plan areas there are discrete gas reserves, with associated infrastructure that continue to be utilised. The UK aims to reduce emissions to net zero by 2050, including from energy generation, and increase the proportion of energy generated from renewable and nuclear energy sources. The north west marine plan areas will contribute to the growth of renewables and the delivery of nuclear electricity production. By ensuring that the marine environment and its resources are used to maximise sustainable activity, it will enable prosperity and opportunities for all, now and in the future.
	3	Marine businesses are taking long-term strategic decisions and managing risks effectively. They are competitive and operating efficiently.	Alongside other factors, increasing activity in some parts of the north west marine plan areas will require businesses to take long-term strategic decisions and manage risks effectively. As the marine plan areas become busier marine activities are required to take a long term, strategic view of the plan areas to enable future activities to make the most efficient use of available space. Activities within the north west marine plan areas such as renewable energy, cables, aggregate extraction, tourism, recreation and activities related to ports and harbours are just some of the marine businesses that require communication and co-operation between different sectors to ensure long-term strategic decisions are made. Over the lifetime of the North West Marine Plan there may be an increase in the requirement for marine aggregates due to the growing pressures on traditional land-based aggregates. There are currently 11 planned or operational windfarms and extensions in the north west marine plan areas, and areas have been identified that could potentially support future development. Ports within the plan area provide a range of support services to other economic activities, such as offshore wind, oil and gas and cables, in addition to transportation of people and goods. Co-operation between activities will allow early identification of risks including, enabling development of sufficient capacity and capability as well as protecting and identifying potential risk to access to ports.

Marine Plan Objectives			Relevance to North West Marine Plan Areas
			If the full range of marine businesses take long-term strategic decisions and managing risks effectively including to take account of other activities that share the same area it will help to achieve a sustainable marine economy.
	4	Marine businesses are acting in a way which respects environmental limits and is socially responsible. This is rewarded in the market place.	Marine business, if not managed in a responsible way, can have detrimental effects on the marine environment that they rely upon. That means continuing to assess impacts on the environment in line with existing requirements and those set out in the marine plan, including consideration of cumulative effects where appropriate. That includes how activities are undertaken as well as where. Over the lifetime of the North West Marine Plan, activity is set to increase as new infrastructure is deployed and existing infrastructure repurposed or decommissioned. For example, commercial fishing is dependent on a high quality environment and remains an important form of employment in the north west marine plan areas but faces increasing pressure on access to fishing grounds from activities competing for space. With climate change set to increase pressures on the marine environment, including a shift in fish stocks, marine businesses will need to take increasing account of such changes in ensuring they respect environmental limits. There is an existing but increasing emphasis on taking account of social values in planning for and making decisions on activities in the marine area. In the north west that includes giving due consideration to impacts on the fisheries sector and significant tourism and recreation sectors. With climate change set to increase pressures on the marine environment, including a shift in fish stocks, marine businesses will need to take increasing account of such changes in ensuring they respect environmental limits.
Ensuring a strong, healthy and just society	5	People appreciate the diversity of the marine environment, its seascapes, its natural and cultural heritage and its resources and can act responsibly.	The north west marine plan areas have a rich maritime heritage with a variety of heritage and seascape features which provide opportunities for tourism and recreation, health and well-being benefits and a strong sense of place. The north west marine plan areas have a distinctive character, which is valued by local communities and visitors alike, underpinning recreation and tourism activities. The sea is highly visible from the land in the north west, with iconic views of Scotland, Wales, Isle of Man and the Irish Sea. International designations reflect the importance of the intertidal habitats, including sand dunes, vegetated shingle, salt marsh and lagoons supporting a rich birdlife. The legacy of nuclear power generation at Sellafield from the 1950s remains as England's 'Energy Coast'. Liverpool has been an international port for several hundred years and remains an important trade hub and its waterfront is also a World Heritage Site. Formby beach hosts culturally and historically significant Mesolithic Period human and animal footprints. The North West Marine Plan policies will improve public knowledge, understanding, appreciation and enjoyment of the cultural and heritage assets and marine environment. Whilst it is important to increase awareness and education of these assets amongst the public, enabling people to appreciate them responsibly, without damage, will ensure they can continue to be appreciated in the future. Increasing awareness of these cultural and heritage assets will enhance the values and connectivity to the coast such as along the Solway Coast. The heritage and seascape benefits for coastal communities and visitors include improved mental and physical health and well-being, and an increased sense of place. These benefits can increase cohesion, pride and passion for the marine environment which stimulates the economy.
	6	The use of the marine environment is benefiting society as a whole, contributing to resilient and cohesive communities that can adapt to coastal erosion and flood risk, as	Coastal communities in the north west inshore marine plan areas have strong links to the sea. Many coastal communities continue to be intrinsically linked to the marine environment. However, coastal communities are most vulnerable to the effects of climate change at the coast, such as erosion, sea level rise and heightened flood risk. A significant amount of the coastline in the north west is identified as vulnerable to coastal change. As these issues become more widespread there is increased potential for significant adverse impacts on local residents, businesses (including ports, marinas and recreational facilities), and important coastal and marine habitats, such as saltmarshes, that offer natural flood defence protection. Policies within the North West Marine Plan support decision-makers and coastal communities as they adapt to these and future challenges. The

Marine Plan Objectives			Relevance to North West Marine Plan Areas
		well as contributing to physical and mental wellbeing.	plan aligns with and complements existing 'regional' strategies, including Shoreline Management Plans, which aim to ensure appropriate coastal development that considers future risks to people, assets and natural resources. Improving the quality of life for many people living in the north west inshore marine plan area is important, as numerous communities experience high levels of social and economic deprivation, linked to unemployment. Tourism and recreation are important, well-established sectors within the north west marine plan areas, with potential to expand and diversify. Facilitating access to iconic attractions such as Liverpool, Blackpool tower, Morecombe Bay and the Lake District National Park, and developing alternative recreation activities, can aid coastal regeneration, offering significant employment opportunities to revitalise communities and boost the regional economy.
	7	The coast, seas, oceans and their resources are safe to use.	The North West Marine Plan encourages diversification and continued sustainable economic growth and development. Alongside marine related sustainable development and use, such as coastal developments and recreational use, there are predicted increases in housing. The predicted increases in various activities could risk significant adverse impacts on the environment, society and the economy. For example increases in marine litter, including from food and drink packaging, have significant negative environmental, social and economic impacts. Coastal development may have adverse impacts on shipping transits from the busy freight and passenger's ports in the area (including Liverpool, Fleetwood, Heysham, Barrow and Manchester Ship Canal). Increases in shipping activity will increase emissions which may lead to poor air quality. Good water quality is important for essential fish habitats, commercial aquaculture and bathing waters. The waters of the north west inshore marine plan area have the UK's poorest ecological quality and face challenges from agricultural run-off, waste water and sewer overflows from the large catchments of Liverpool, Preston and Blackpool. In addition, oil and gas structures are the highest risk pathways for the introduction and spread of non-native species. This is exacerbated by the semi-enclosed nature of the Irish Sea and the close proximity to other marine plan areas. The north west marine plan areas also support a diverse range of internationally significant habitats and species which are vulnerable to the negative impacts of invasive non-native species. The North West Marine Plan has a role to promote effective management of potential negative impacts on the marine resources and values of the north west so that the marine area is safe to use for all.
	8	The marine environment plays an important role in mitigating climate change.	The marine environment serves a critical role in mitigating climate change. Channels of ecosystem services, those benefits derived from ecosystems, help to mitigate impacts of climate change. Within the north west marine plan inshore area lies integral coastal habitats that reduce certain causes of climate change including increasing carbon dioxide levels. For example, Saltmarshes, such as those, provide a natural carbon sequestration service. Seagrass beds, for example in the Solway Firth, are an important carbon sink and sediment stabilising habitat. Coastal squeeze, as a result of reduced space between hard structures and rising sea level or coastal erosion, can result in loss of habitats which provide regulatory services. Healthy and resilient ecosystems are important in mitigating local effects of climate change and so the North West Marine Plan aims to limit change or loss of coastal habitats which affects the function of ecosystems, and ecosystem service provision. Economic opportunities to mitigate climate change through the use of the marine environment in the north west marine plans areas are prevalent. The north west marine plan areas boast considerable wind and tidal resource, which can be utilised to deliver renewable energy schemes, producing clean energy sent back to our shores. The 11 operational and in development offshore wind farms exemplify the role the region has to play now and into the future for increasing renewable energy usage in a multitude of ways, therefore helping to reduce our greenhouse gas emission output.
	9	There is equitable access for those who want to use	Access to the coast and sea can improve people's quality of life, health and well-being, cultural identity and sense of place. Equitable access creates opportunities to raise environmental awareness as well as an increased understanding and

Marine Plan Objectives			Relevance to North West Marine Plan Areas
		and enjoy the coast, seas and their wide range of resources and assets and recognition that for some island and peripheral communities the sea plays a significant role in their community.	appreciation of the marine environment and its natural, cultural and heritage assets. This is important for remote, rural, coastal communities who are intrinsically linked to and dependent on access to the marine environment. The north west region includes a number of prominent coastal landmarks; the tower at Blackpool, Liverpool's historic waterfront and the expansive beach at Morecombe Bay. Access for tourism and recreational activities occurs up and down the coast with award winning sandy beaches, local wildlife reserves and the Lake District National Park all being big attractions. The north west coast is popular for wildlife watching with various national and local nature reserves. Multiple protected species are present at different times throughout the year, for example the entire population of Svalbard barnacle geese overwinter in the Solway Firth. Harbour porpoise and dolphin are regular visitors, and some locations in Cumbria offer opportunities to watch grey seals year-round. Access for appropriate recreation and tourism may also help protect these species through increased public awareness and funding. Commercial fishing activity occurs across the north west marine plan areas with a number of locations supporting historic shellfisheries. In addition, there are several commercial fishing ports such as Barrow, Fleetwood, Lancaster, Liverpool, Maryport, Preston, Runcorn, Workington and Whitehaven.
	10	Use of the marine environment will recognise, and integrate with, defence priorities, including the strengthening of international peace and stability and the defence of the United Kingdom and its interests.	Marine and land-based Ministry of Defence activities in the north west marine plan areas are of national importance. The north west marine plan areas contain over 2,000 km^2 of military practice and exercise areas, including areas of maritime navigational interest. The north west marine plan areas also contain extensive danger areas used for weapon test and evaluation activities. There are a number of coastal sites with associated danger and exercise areas used for firing ranges and ordnance disposal. Proposals for development of marine infrastructure may pose potential adverse effects on the continuity and future use of such Ministry of Defence activities and areas. The North West Marine Plan ensures Ministry of Defence activities and strategies are able to function to ensure protection of the UK's economy, peace and stability. The North West Marine Plan policies encourage early communication with the Ministry of Defence and public authorities to enable marine activities to be undertaken safely and in a manner that does not threaten Ministry of Defence activities and assets.
Living within environmental limits	11	Biodiversity is protected, conserved and, where appropriate, recovered, and loss has been halted.	The north west marine plan areas support a rich diversity of nationally and internationally significant marine life. The importance of biodiversity within the north west marine plan areas is recognised by 21 designated marine protected areas, covering more than 3,500 km^2. The mainly sedimentary coastline supports internationally significant populations of seabirds and waterfowl, such as little tern, red-throated diver and whooper swan. The expansive sand and mudflats along the shores of the north west inshore marine plan area are particularly important areas for feeding seabirds and waterfowl. The Ribble and Solway estuaries provide feeding grounds and areas for post-larval development for smelt. Allonby Bay supports large living reefs of honeycomb worm. Areas to the west of the Isle of Man support a variety of species, such as sea urchins, starfish, burrowing anemones, molluscs and commercially important species such as Norway lobsters. Biodiversity in the busy north west marine plan areas is vulnerable to loss, damage and disturbance caused by the numerous marine activities, and the effects of climate change. Habitats and species require space if they are to adapt to the effects of climate change. Species movement in the north west marine plan areas must be carefully managed to prevent the spread and introduction of invasive species. Protecting, conserving and enhancing biodiversity is important to ensure healthy, functioning and resilient ecosystems in can continue to deliver important services for wildlife, people and businesses in the north west marine plan areas.
	12	Healthy marine and coastal habitats occur across their natural range and are able to support strong,	The north west marine plan areas has a high concentration of activities across a diverse range of habitats. Coastal areas are characterised by estuaries in the north and south, with Morecambe Bay, the largest intertidal area in Britain, in the centre. Sandflat, mudflats and saltmarsh are important estuarine habitats that support many species of invertebrate, seabirds and waterfowl. The inshore marine plan area also hosts extensive beaches and sand dunes. The rich species assemblage

Marine Plan Objectives			Relevance to North West Marine Plan Areas
		biodiverse biological communities and the functioning of healthy, resilient and adaptable marine ecosystems.	associated with these habitats rely on natural sediment supply and transport to maintain healthy ecosystem function. The offshore marine plan area is characterised by muds, sands and gravels which support molluscs, worms, urchins, starfish and the Dublin Bay prawn, also known as scampi. Habitats in the north west marine plan areas are important natural capital assets that deliver a range of ecosystem services that in addition to the wildlife, benefit communities and businesses. Saltmarsh absorbs carbon and can dissipate wave energy to reduce impacts from storm surges. Seagrass and bivalves can remove nitrogen and hazardous chemicals from the water column to regulate water quality. Coastal habitats are particularly vulnerable to coastal squeeze as a result of sea level rise, which can be exacerbated by hard coastal defence structures. Storm surges, sea level, and maritime activity are predicted to increase over the lifetime of the marine plan. It is important that habitats have the space to adapt to the impacts of climate change. As maritime growth is expected, it is vital that the North West Marine Plan ensures that healthy and resilient habitats, communities and ecosystems are maintained and restored.
	13	Our oceans support viable populations of representative, rare, vulnerable, and valued species.	The north west marine plan areas support many rare, vulnerable and valued species as well as species typical of UK waters. Marine protected areas in the north west marine plan areas protect a range of habitats that support various life stages and behaviours of important species. Highly mobile species, such as seabirds and waterfowl, fish and marine mammals, may only spend a small proportion of their time in a protected area and may be vulnerable to impacts from human activities in the busy north west marine plan areas. St Bees Head, for example, is important for migratory seabirds which breed there from April to July. There are several Atlantic salmon rivers in the north west inshore marine plan area, with juvenile and adult salmon migrating through the area. Liverpool Bay supports red-throated diver and common scoter. The Solway Firth is an important nursery ground for bass, pollack and some flatfish species. Subtidal sand and gravel provides important spawning and nursery grounds for plaice, skate and thornback rays, and harbour porpoises are often spotted in the area. Migratory routes are essential to the success of key life stages of migratory species, such as breeding. Disruption to migratory pathways can negatively affect the success of a population, potentially threatening long term viability. The North West Marine Plan policies ensure that as activities within the marine plan areas increase, disturbance impacts to representative, rare, vulnerable and valued species are effectively managed.

Table 2: Supporting objectives delivered through non-policy mechanisms and processes

	Supporting Objective		Delivery Mechanisms and Processes
Promoting good governance	14	All those who have a stake in the marine environment have an input into associated decision-making.	Marine plan development and implementation will be the primary processes through which this objective is achieved.
	15	Marine, land and water management mechanisms are responsive and work effectively together for example through integrated coastal zone management and river basin management plans.	Marine plan implementation will be the primary process through which this objective is achieved, but marine plan policies for cross-border co-operation and water quality will also contribute.
	16	Marine management in the UK takes account of different management systems that are in place because of administrative, political or international boundaries.	Marine plan development and implementation will be the primary process through which this objective is achieved, but marine plan policy for cross-border co-operation will also contribute.
	17	Marine businesses are subject to clear, timely, proportionate and, where appropriate, plan-led regulation.	Marine plan implementation will be the primary processes through which this objective is achieved.
	18	The use of the marine environment is spatially planned where appropriate and based on an ecosystems approach which takes account of climate change and recognises the protection and management needs of marine cultural heritage according to its significance.	Marine plan development and the evolving evidence base that supports plan development and implementation will be the primary processes through which this objective is achieved. Marine plan policies for the environment, climate change and heritage will also contribute.
Using sound science responsibly	19	Our understanding of the marine environment continues to develop through new scientific and socio-economic research and data collection.	Marine plan development, implementation, and the evolving evidence base that supports these processes will be the primary processes through which this objective is achieved. Marine plan policy for underwater noise will also contribute.
	20	Sound evidence and monitoring underpins effective marine management and policy development.	Marine plan development, implementation, and the evolving evidence base that supports these processes will be the primary processes through which this objective is achieved.
	21	The precautionary principle is applied consistently in accordance with the UK Government and Devolved Administrations' sustainable development policy.	Marine plan implementation will be the primary processes through which this objective is achieved.

Table 3: Contribution of marine plan objectives and policies to the Marine Strategy high level objectives

GES Descriptor	Marine Strategy High Level Objective	Plan Objectives	Contributing Policies					
D1, D4 Cetaceans	The population abundance of cetaceans indicates healthy populations that are not significantly impacted by human activities	11,13 (4, 5,)	NW-DIST-1	NW-BIO-1	NW-BIO-2	NW-MPA-1	NW-MPA-2	
			NW-NG-1	NW-UWN-1	NW-UWN-2	NW-CE-1		
D1, D4 Seals	The population abundance and demography of seals indicate healthy populations that are not significantly impacted by human activities.	11,13 (4, 5,)	NW-DIST-1	NW-BIO-1	NW-BIO-2	NW-MPA-1	NW-MPA-2	
			NW-NG-1	NW-UWN-1	NW-UWN-2	NW-CE-1		
D1, D4 Birds	The abundance and demography of marine bird species indicate healthy populations that are not significantly impacted by human activities.	11,13 (4, 5,)	NW-DIST-1	NW-BIO-1	NW-BIO-2	NW-MPA-1	NW-MPA-2	
			NW-NG-1	NW-CE-1				
D1, D4 Fish	The abundance and demography of fish indicate healthy populations that are not significantly impacted by human activities.	11,13 (4, 5,)	NW-FISH-3	NW-DIST-1	NW-BIO-1	NW-BIO-2	NW-MPA-1	
			NW-MPA-2	NW-NG-1	NW-UWN-1	NW-UWN-2	NW-CE-1	
D1, D4 Pelagic habitats	Pelagic habitats are not significantly adversely affected by human activities.	11,12 (4, 5,)	NW-FISH-3	NW-BIO-1	NW-BIO-2	NW-NG-1	NW-CE-1	
D1, D6 Benthic habitats	The health of seabed habitats is not significantly adversely affected by human activities.	11,12 (4, 5,)	NW-BIO-1	NW-BIO-2	NW-BIO-3	NW-FISH-3	NW-MPA-1	NW-MPA-2
			NW-MPA-3	NW-MPA-4	NW-NG-1	NW-CC-1	NW-CE-1	
D2 Non-indigenous species	The rate of introduction of NIS, spread and impact of invasive NIS caused by human activities is not adversely altering ecosystems.	4, 5, 11 (12, 13)	NW-INNS-1	NW-INNS-2	NW-MPA-1	NW-CE-1		
D3 Commercial fish	Populations of all commercially-exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.	4, 13 (5, 11, 12,)	NW-FISH-3	NW-DIST-1	NW-NG-1	NW-CE-1		
D4 Food webs	The health of the marine food web is not significantly adversely affected by human activities.	11, 13 (4, 5)	NW-BIO-1	NW-BIO-2	NW-MPA-1	NW-FISH-3	NW-NG-1	NW-CE-1

GES Descriptor	Marine Strategy High Level Objective	Plan Objectives	Contributing Policies					
D5 Eutrophication	Human-induced eutrophication is minimised in UK marine waters.	4, 5, 7, 11 (13)	NW-WQ-1	NW-MPA-1	NW-NG-1	NW-CE-1		
D7 Hydro-graphical conditions	The nature and scale of any permanent changes to hydrographical conditions resulting from anthropogenic activities do not have significant long term impacts on UK habitats and species.	11, 12, 13 (4, 8)	NW-CC-1	NW-CC-2	NW-CC-3	NW-MPA-1	NW-MPA-2	
			NW-NG-1	NW-CE-1				
D8 Contaminants	Concentrations of contaminants in water, sediment or marine biota, and their effects, are lower than thresholds that cause harm to sea life, and are not increasing.	4, 5, 7, 11 13	NW-WQ-1	NW-MPA-1	NW-CE-1			
D9 Contaminants in seafood	Concentrations of specified contaminants in fish and other seafood caught or harvested for human consumption in UK seas do not exceed agreed safety levels set in Regulation (EC) No 1881/2006.	4, 7 (11, 13)	NW-WQ-1	NW-CE-1				
D10 Marine litter	The amount of litter and its degradation products on coastlines and in the marine environment is reducing and levels do not pose a significant risk to the environment and marine life.	4, 5, 7, 11, 13	NW-ML-1	NW-ML-2	NW-NG-1	NW-CE-1		
D11 Underwater noise	Loud, low and mid frequency impulsive sounds and continuous low frequency sounds introduced into the marine environment through human activities are managed to the extent that they do not have adverse effects on marine ecosystems and animals at the population level.	4, 11, 13	NW-UWN-1	NW-UWN-2	NW-DIST-1	NW-MPA-1	NW-CE-1	

Chapter Four
4 Policies overview

4.1 Plan policies

27. The marine plan policies will be implemented by public authorities through existing regulatory and decision-making mechanisms; there are no new burdens in the form of additional mechanisms. The plan-led decision-making framework encourages early discussion between the potential applicants, relevant decision makers and associated consultees to help remove uncertainty and reduce the resources required. The plan policies should not be read in isolation as more than one policy could apply to any proposal. It is unlikely that a particular decision will involve a single policy or all policies. Instead it is likely that several plan policies will be pertinent to a decision.

28. Policies are set out under the following headings in Chapter 5 of this Technical Annex:

    - achieving a sustainable marine economy
    - ensuring a strong, healthy and just society
    - living within environmental limits
    - promoting good governance

29. The order of policies does not reflect their priority. Policies must be considered equally alongside each other and must be applied in an integrated way to achieve the cross-cutting marine plan objectives.

30. Land-based plans are primarily applied by local authorities and others, such as the Environment Agency, to inform authorisation and enforcement decisions. Marine plans, however, are used by a broader range of decision-makers and can apply to a greater scope of activities, many of which are not subject to authorisation or consenting regimes, eg the creation of a byelaw to manage a marine protected area. As such, terms such as ‘proposals’ have been developed to apply to a multitude of decisions that need to consider marine plans, mindful of the lack of an ‘application’ process in many cases, eg the development of a strategic plan. The phrasing used respects the differing decision-makers who apply the plan. Supporting information for decision-makers and applicants is provided in this Technical Annex, including a full glossary in Annex 1, and through the Explore Marine Plans digital service.

4.2 Policy structure

31. Each policy has a unique reference code, for example NW-BIO-1. Where policies are closely related they are grouped together and presented alongside each other in Chapter 5 of this Technical Annex, with shared supporting text. For example, policies related to aquaculture are grouped together. Each group of policies is presented in a box at the start of the section on that topic and then each individual policy is shown in a text box at the appropriate point in the text where implementation is discussed.

32. Each group of policies, or individual policies where there is only one for a topic, is accompanied by supporting text that sets out:

    - definitions of **what** the policies are focused on, eg what is biodiversity?
    - **why** policies are required, eg local importance, or national and international drivers
    - the **aim** of each policy
    - if the policy applies to the inshore, offshore or both marine plan areas
    - **how** each policy will be implemented and by whom[4]
    - maps or other information that indicate where the policy applies in the marine plan areas or where resources and activities are located
    - **signposting** to legislation, guidance, existing measures or other plans that may be relevant to implementation of the policies. Signposting to other relevant plan policies is not included because the plan must be read as a whole.

The marine plan must be read as a whole, taking all plan policies together rather than each policy in isolation. It is unlikely that a particular decision will involve a single policy or all policies. Instead it is likely that several plan policies will be pertinent to a decision. Decision-makers, working with proponents and others as necessary, are to determine which plan policies (and associated maps) apply to a particular decision. Proposals should indicate how they support the North West Marine Plan vision, objectives and policies.

[4] Each policy will be of interest to a wide range of plan users. This section draws out the main consideration for proponents and decision-makers.

Table 4: Achievement of marine plan objectives through marine plan policies

Marine Plan Objective			Contributing Policies												
Achieving a sustainable marine economy	1	Infrastructure is in place to support and promote safe, profitable and efficient marine businesses	NW-AQ-2	NW-CAB-2	NW-INF-1	NW-PS-2	NW-PS-3	NW-CBC-1							
	2	The marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future.	NW-AGG-1	NW-AGG-2	NW-AGG-3	NW-DD-1	NW-DD-2	NW-DD-3	NW-OG-1	NW-REN-1	NW-REN-2	NW-WIND-1	NW-AQ-1	NW-AQ-2	
			NW-CCUS-1	NW-CCUS-2	NW-EMP-1	NW-FISH-2	NW-OG-2	NW-PS-1	NW-PS-2	NW-PS-3	NW-CO-1	NW-CBC-1	NW-CE-1		
	3	Marine businesses are taking long-term strategic decisions and managing risks effectively. They are competitive and operating efficiently.	NW-AGG-3	NW-CAB-3	NW-CCUS-1	NW-CCUS-2	NW-PS-1	NW-PS-4	NW-WIND-1	NW-AGG-1	NW-AGG-2	NW-OG-2	NW-AIR-1		
			NW-CAB-1	NW-CAB-2	NW-FISH-1	NW-OG-1	NW-REN-1	NW-REN-2	NW-CC-2	NW-CC-3	NW-CE-1	NW-CBC-1			
	4	Marine businesses are acting in a way which respects environmental limits and is socially responsible. This is rewarded in the market place.	NW-AQ-1	NW-CAB-1	NW-EMP-1	NW-FISH-1	NW-CAB-3	NW-CBC-1	NW-CO-1	NW-CE-1					
Ensuring a strong, healthy and just society	5	People appreciate the diversity of the marine environment, its seascapes, its natural and cultural heritage and its resources and can act responsibly.	NW-HER-1	NW-SCP-1	NW-SOC-1	NW-CBC-1									
	6	The use of the marine environment is benefiting society as a whole, contributing to resilient and cohesive communities that can adapt to coastal erosion and flood risk, as well as contributing to physical and mental wellbeing.	NW-CC-1	NW-CC-2	NW-CC-3	NW-SOC-1	NW-TR-1	NW-ACC-1	NW-CO-1	NW-CBC-1	NW-CE-1				
	7	The coast, seas, oceans and their resources are safe to use.	NW-ML-1	NW-ML-2	NW-WQ-1	NW-AIR-1	NW-INNS-1	NW-INNS-2	NW-CBC-1						
	8	The marine environment plays an important role in mitigating climate change.	NW-CC-1	NW-NG-1	NW-BIO-3	NW-CBC-1	NW-REN-1	NW-REN-2	NW-WIND-1	NW-CO-1					

Marine Plan Objective			Contributing Policies										
	9	There is equitable access for those who want to use and enjoy the coast, seas and their wide range of resources and assets and recognition that for some island and peripheral communities the sea plays a significant role in their community.	NW-ACC-1	NW-FISH-2	NW-HER-1	NW-SCP-1	NW-TR-1	NW-CO-1	NW-CBC-1				
	10	Use of the marine environment will recognise, and integrate with, defence priorities, including the strengthening of international peace and stability and the defence of the United Kingdom and its interests.	NW-DEF-1	NW-CO-1	NW-CBC-1								
Living within environmental limits	11	Biodiversity is protected, conserved and, where appropriate, recovered, and loss has been halted.	NW-BIO-1	NW-BIO-2	NW-BIO-3	NW-MPA-1	NW-MPA-2	NW-MPA-3	NW-MPA-4	NW-NG-1	NW-WQ-1	NW-CE-1	NW-CC-1
			NW-CC-3	NW-INNS-1	NW-INNS-2	NW-DIST-1	NW-FISH-3	NW-UWN-2	NW-ML-1	NW-ML-2	NW-CO-1	NW-CBC-1	
	12	Healthy marine and coastal habitats occur across their natural range and are able to support strong, biodiverse biological communities and the functioning of healthy, resilient and adaptable marine ecosystems.	NW-BIO-1	NW-BIO-2	NW-BIO-3	NW-NG-1	NW-FISH-3						
			NW-CC-1	NW-CC-3	NW-CE-1	NW-CO-1	NW-CBC-1						
	13	Our oceans support viable populations of representative, rare, vulnerable, and valued species.	NW-DIST-1	NW-UWN-1	NW-UWN-2	NW-BIO-1	NW-BIO-2	NW-NG-1	NW-CE-1	NW-CO-1	NW-CBC-1		

4.3 Maps

33. Some of the policies in the North West Marine Plan Technical Annex are supported by data layers, presented in three types of maps. These map types are indicated by coloured text, which are (see Box 1 for details):

    - policy map – green text
    - indicative map – red text
    - information map – purple text

34. The maps are based on the most recent data available to the Marine Management Organisation and are available on the Explore Marine Plans digital service. While efforts will be made to make sure that the information provided here is up to date, some data is owned by third parties; therefore it cannot be guaranteed that all maps reflect the current position. Relevant data holders and regulatory authorities (as under existing requirements) should always be consulted to make sure the most up-to-date evidence is used when considering where plan policies apply.

Box 1: Map types

Policy maps

Policy maps principally define spatially discrete areas, for example, where defined activities, resources, designations, leases or licences exist. These areas are usually based on the provision of third party data. Where a policy map is provided, the policy applies specifically to the area defined on the map. Some policy boundaries are also derived from analysis of third party data by the Marine Management Organisation. As such, any changes to these maps will be undertaken by the Marine Management Organisation. Updates or changes made to data supporting any of these policy maps following publication of the North West Marine Plan may be a 'relevant consideration' and enable deviation from the plan by a public authority. Should substantial revisions be made to data supporting the policy maps, for example a significant change in where the plan policies apply, a revision of the North West Marine Plan through the formal review procedure may be required. The Marine Management Organisation is required to review and amend the plan as appropriate.

Indicative maps

Indicative maps are based on the best available data. They are for guidance only. They provide an indication of locations which are particularly relevant and do not set spatially defined boundaries to the related policies. They may not cover all locations to which the policies apply. Relevant policies should be applied across the whole of the north west marine plan areas. Additional locally specific data collected in the support and development of proposals will supersede information provided in indicative maps.

Information maps

Information maps provide context or signposting. For example, a map showing the boundaries of local authorities and county councils has been included to support consideration of other statutory and non-statutory plans with marine relevance. The

information provided in these maps is not exhaustive, and there may be other information available to support the application of policies and existing policies or measures. Applicants should consult other data sources to be able to apply the policy.

Explore Marine Plans digital service – policy groupings in the North West Marine Plan

Table 2 in the North West Marine Plan groups similar policy types together. It is important to note that many of the activities identified are transient, may be temporal or affected by seasonality and other factors such as market forces. The Explore Marine Plans digital service houses the most current information for all marine planning activities and should be considered in preference to Figures included within this document. Use this service to find and view:

- marine data on a map of the English marine area
- information on marine planning licences relating to a specific area
- policy information from the marine plans

4.4 Supporting evidence

35. The evidence base that supports implementation of policies will continue to develop over the lifetime of the North West Marine Plan. The most up-to-date evidence and government guidance must be applied at the time a decision is made.

36. The Explore Marine Plans digital service provides an online, interactive resource for viewing marine planning policies, evidence, and supporting information. It allows users to consider multiple sources of information at a resolution relevant to their interest.

37. The Marine Management Organisation marine evidence and data register includes evidence reports that support the work of the organisation, including marine planning. These reports may also support the implementation of policies.

4.5 Additional legislation

38. Additional legislation and regulation relevant to a proposal will be identified through the decision-making process. The North West Marine Plan does not remove the need for a proposal to meet the requirements of other relevant legislation. Relevant legislation includes, but is not limited to:

- The Conservation of Habitats and Species Regulations 2017[5]
- The Conservation of Offshore Habitats and Species Regulations 2017[6]
- Electricity Act 1989
- Energy Act 2016

[5] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[6] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

- Energy Act 2013
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[7]
- The Marine Works (Environmental Impact Assessment) Regulations 2007
- The Environmental Assessment of Plans and Programmes Regulations 2004
- Flood and Water Management Act 2010
- Harbours Act 1964
- Marine and Coastal Access Act 2009 (including chapters other than those on marine planning)
- The Marine Strategy Regulations 2010
- Petroleum Act 1998
- Planning Act 2008
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- Waste (England and Wales) Regulations 2011

[7] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018

Chapter Five

5 Objectives and policies

Achieving a sustainable marine economy

5.1 Infrastructure

Policy Code	Policy Wording
NW-INF-1	Appropriate land-based infrastructure which facilitates marine activity (and vice versa), including the diversification or regeneration of marine industries, should be supported.

What is infrastructure?

39. Land**-based infrastructure** is a physical structure or facility which could be in the form of, but not limited to:

    - boat repair facilities
    - landing, storage and processing facilities for fisheries catch, freight or goods
    - slipways
    - structures for passenger transfer
    - terminals for aggregate or waste handling
    - utilities transmission, including cables, associated structures and operations and maintenance bases

40. Diversification is the varying or enlarging of a field of operations typically to increase efficiency, range of products, services or output. Diversification allows for the expansion of use of land-based infrastructure within the intertidal area for marine based activities. Expansion of use of land-based infrastructure for marine use allows for a range of industries and activities to operate within an area. This provides more resilience to local economic and social change and optimises the use of space. Diversification could be seen in a wide range of ways in the inshore marine plan area including the changing of use of fishing facilities, the expanding of tourist opportunities, additional port and harbour roles such as varying the types of vessels given engineering support to, and the inclusion of maritime renewable energy infrastructure. An example would be a traditional fisherman becoming a tourist charter vessel alongside normal operation. This may require new infrastructure in the form of improved passenger handling facilities.

41. Regeneration refers to the economic regeneration or reinvigoration of local and regional economies, and associated improvements in economic competitiveness and prosperity. It is often linked with increased inward investment and the relocation of businesses and households in areas of decline. It aims to increase business start-ups and growth, employment, earnings and skills development. Regeneration can have the subsequent effect of improved quality of life in the area. Regeneration can occur through a wide range of maritime sectors including ports, tourism and existing fishing industry facilities.

Why is infrastructure important?

42. **Land-based infrastructure** in the intertidal area is important to make the vital connection between land and sea and to realise the ambitions of sustainable marine development. New or maintaining infrastructure is important for future activity, and north west growth and expansion. Some examples of expected infrastructure,

including those identified in MMO 1127 Futures analysis for the North East, North West, South East and South West marine plan areas report are:

- infrastructure to maintain and support the tourism industry
- maintenance and replacement of the cable network
- new or adapted infrastructure at ports to accommodate an expanding offshore renewable energy sector
- quays and landing facilities for fisheries and shellfisheries and their associated processing facilities, transport links and markets

43. Supporting infrastructure is important as it supports the National Policy Statement for Energy where 'the government is committed to increasing dramatically the amount of renewable energy capacity' including offshore wind, which would require land-based infrastructure for utilities transmission and port development to service new sites.

44. Supporting infrastructure is important as it supports the National Policy Statement for Ports where 'the government seeks to encourage sustainable growth in imports and exports' where land-based infrastructure, including landing facilities, enable this.

45. Supporting infrastructure is important as it supports the National Planning Policy for Waste that aims to 'deliver sustainable development and resource efficiency, including provision of modern infrastructure'.

46. Supporting infrastructure is important as it clarifies the integration of the terrestrial and marine systems as required in provisions of the Marine Policy Statement (Section 1.3) and the National Planning Policy Framework (paragraph 166).

47. **Diversification and regeneration**, facilitated by new or improved infrastructure could allow for multiple use benefits and promote co-existence between different sectors. The availability of existing infrastructure could attract new business to the marine plan areas. For instance, the north west is considered 'England's energy coast'[8]. The continued and enhanced use of infrastructure facilities to support renewable energy development could increase the economic success of small town ports.

48. The support for expansion or new infrastructure developments could further enable social and economic benefits within north west coastal communities. Expansion of current infrastructure could allow for multiple use benefits and promote co-existence between different sectors. Expansion could also allow regeneration of older buildings in need of repair which could potentially enhance the local seascape. New infrastructure development could provide better access to the coast by supporting new and existing tourism and recreation activities.

49. NW-INF-1 is important to support areas of economic and / or social disadvantage such as small coastal towns in the north west reliant on one type of industry. This could be done via the regeneration of current infrastructure or diversifying the use to increase economic resilience within these areas. New infrastructure that would renew and increase current economic activities or introduce new economic gains

[8] The North West Marine Plan Vision describes the area as "England's energy coast"

would also be supported. There are numerous north west coastal towns that have been affected socially and economically by the loss or reduction of marine based industries. Many north west coastal towns are heavily reliant on one or very few industries which means that the local economy has low resilience to decline in these industries. For instance, the port of Heysham currently provides freight ferry services to Ireland and passenger ferry services to the Isle of Man but could also be used to import and export bulk materials and aggregate.

50. NW-INF-1 supports the growth of the local economy and provide local social benefits via introduction of new jobs. Diversification of use will provide these communities with much needed resilience as it will reduce the reliance on a singular marine industry. Infrastructure that supports diversification will grow new and different business use meaning that the economy and job availability will be less affected should one industry decline in the area.

Policy NW-INF-1 Infrastructure

Appropriate land-based infrastructure which facilitates marine activity (and vice versa), including the diversification or regeneration of marine industries, should be supported.

Policy aim

51. Many marine activities in the north west and adjacent marine plan areas are reliant on land based infrastructure in the north west inshore marine plan area. Supporting infrastructure development, diversification or regeneration will provide economic and social benefits and support marine business, including those that are land based. NW-INF-1 supports integration between the marine and terrestrial systems by encouraging proposals and other measures that maintain existing or provide new infrastructure in the intertidal area that facilitate marine activity. Policy NW-INF-1 applies to the inshore marine plan area.

How will this policy be implemented?

52. The phrase ‘appropriate’ in NW-INF-1 refers to the need to be compliant with relevant local plans, for example proposals in the inshore marine area that would significantly compromise terrestrial development plans are unlikely to be supported. The appropriateness of any such infrastructure is to be assessed by relevant public authorities within their decision-making process. Proposals will be assessed on their individual merits as suitable with local plans as a material consideration where relevant.

Proponents

53. Proposals that maintain or support existing land-based infrastructure that facilitates marine activity in the intertidal area are encouraged.

54. Proposals for new or an expansion of land-based infrastructure in the intertidal area that clearly describe how the proposal facilitates one or more marine activity including the diversification or regeneration of the industry/business are encouraged.

Decision-makers

55. Public authorities should authorise proposals or confirm decisions which relate to land-based infrastructure that support marine and terrestrial activity including land-based infrastructure that lead to the diversification or regeneration of the industry/business.

56. Public authorities should support marine activities and their associated land-based infrastructure in their decision making as well as in other public authority enforcement or authorisation decisions, for example strategic policy making authorities in the drafting or amendment of their local plans. Public authorities should also consider proposals on land that have potential impacts on the application of marine plan objectives. The Coastal Concordat can be used for guidance on decisions regarding proposals with both terrestrial and marine authorisations providing a co-ordinated process.

57. Examples of land-based infrastructure which facilitates marine activity that should be supported by public authorities include land-based handling and disposal facilities for vessels for refuse, waste water and sewage.

58. In examining and determining applications for Nationally Significant Infrastructure Projects, examining authorities and the relevant secretary of state must have regard to this policy for proposals in the intertidal area which facilitate marine activity.

59. Small and large scale land-based infrastructure can occur across the intertidal area in the north west inshore marine plan area. Land-based infrastructure in the intertidal area facilitates and connects to activities in the inshore and offshore marine plan areas. The intertidal area is only within the inshore marine plan area.

Signposting

60. Legislation which relates to and may support the implementation of this policy includes:

    - Localism Act 2011

61. Guidance and other materials which relate to and may support the implementation of this policy include:

    - Welsh National Marine Plan
    - Scotland's National Marine Plan

62. Existing measures which support the implementation of this policy include:

    - Coastal Concordat
    - National Planning Policy Framework
    - Waste Management Plan for England

5.2 Co-existence

Policy Code	Policy Wording
NW-CO-1	Proposals that optimise the use of space and incorporate opportunities for co-existence and co-operation with existing activities will be supported. Where potential conflicts with existing activities are likely (including displacement) proposals must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts on existing activities (including displacement) d) if it is not possible to mitigate significant adverse impacts on existing activities (including displacement), proposals should state the case for proceeding.

What is co-existence?

63. **Co-existence** is where multiple developments, activities or uses exist alongside or close to each other in the same area or at the same time. Space is essential for marine activities to function. For example, shipping requires room for transit and anchorage and fishing requires access to grounds. Some activities can co-exist in the same space, such as aquaculture farms within a wind farm development. Others require exclusive use of an area such as for reasons of navigational safety.

64. **Co-operation** describes the positive working relationship between marine sectors to secure long term beneficial and sustainable growth for all. It is essential for sectors to communicate when considering multiple uses within a shared space to identify opportunities to optimise the use of the area, enhance sector activity or provide mutual benefits. Co-operation should facilitate sectors working together to resolve potential conflicts prior to an activity going ahead.

65. **Existing activities** can be described as how an area is currently used. This can include management measures of both protected and unprotected areas as well as industrial and recreational use. ‘Existing activities’ could include activities that have been authorised, but not yet implemented.

66. **Potential conflicts** with existing activities can result in a decline in expected economic gains or targets for the existing activity and / or a reduction in available space for an activity to take place. New activities that result in access restrictions to existing activities could cause displacement to less desirable areas or prevent the activity happening altogether. New activities could result in declines in environmental condition in non-designated areas that are managed by local authorities or environment groups and cause degradation of designated sites which could result in loss of favourable conservation status. Identifying and finding solutions to these conflicts at an early stage could assist in economic gains for the existing activity,

provide better access, and offer opportunities to diversify the current activity or enhance the environmental condition of the area.

Why is co-existence important?

67. The north west marine plan areas are busy, and space is limited due to high levels of shipping, a number of operational or consented offshore wind farms, a high proportion of protected areas and populations for recreational and tourist use. During the lifetime of the North West Marine Plan, the competition for space in the plan area is likely to increase as new activities develop and existing activities expand.

68. Optimisation of space and co-existence between competing sectors are important to ensure effective spatial planning of the north west marine plan areas. Co-operation between sectors can help reduce conflict and identify opportunities for existing and new activities to co-exist. For example, a wind farm developer could provide submerged infrastructure and allow access for shellfisheries facilitating the co-existence of both activities.

69. Existing activities within the north west marine plan areas can hold cultural, historical, economic and environmental importance for communities and individuals. Additional information on policies in the North West Marine Plan documents highlight why the various marine activities are important.

70. New developments could potentially provide benefits to existing activities. Conversely, new developments could be detrimental and cause conflicts with existing activities and local communities if the proposed new activity is not compatible with current use or does not hold as much social, economic or environmental value.

71. Proposals in the marine area are very rarely isolated from interaction with other existing activities. Therefore, it is important that a new proposal assesses the range of activities within, and adjacent to, the area of the proposed new activity and to consider if there are any conflicts. That should include consideration of interaction with activities in adjacent marine plan areas, including in the 'shared' waters of the Dee Estuary and the Solway Firth (see NW-CBC-1). In order for co-operation between sectors to occur and to facilitate co-existence, consultation with current users should be considered to support the application of this policy. Proposals near Welsh or Scottish marine plan areas should also consider co-existence policies within the Welsh National Marine Plan and Scotland's National Marine Plan.

72. Many local plans, national policy statements and government objectives require an increase in use of the marine area and so demand is anticipated to rise. Policies and associated information in the suite of marine plan documents state the relevance and importance of these current and expected requirements for each policy, for example ports and shipping, renewables, cables, climate change and biodiversity. NW-CO-1 is important as it ensures that future uses or expansion of current marine activities are considerate of existing use and seek ways to optimise the use of space whilst also exploring options to aid co-existence between sectors.

73. NW-CO-1 supports achievement of the Marine Policy Statement (such as 2.3.1.5) by identifying opportunities for compatibility and encouraging co-existence between different activities within the context of social, economic and environmental considerations. Activities that can optimise the use of space, co-operate or co-exist should be encouraged to do so.

Policy NW-CO-1 Co-existence

Proposals that optimise the use of space and incorporate opportunities for co-existence and co-operation with existing activities will be supported.

Where potential conflicts with existing activities are likely (including displacement) proposals must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts on existing activities (including displacement)
d) if it is not possible to mitigate significant adverse impacts on existing activities (including displacement), proposals should state the case for proceeding.

Policy aim

74. Space within the busy north west marine plan areas is limited. To realise sustainable social, environmental and economic benefits it is therefore important to plan for and make efficient use of the space. NW-CO-1 encourages proposals to be spatially planned, take account of existing activities, and promote co-existence. The policy ensures new activities seek to avoid creating conflicts and to minimise their footprint. Policy NW-CO-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

75. Existing activities occur throughout both of the north west marine plan areas and many policies in this marine plan state where these activities, uses, infrastructure or measures are located. In order to understand where existing activities are in relation to a proposal applicants, consultees and decision makers may wish to consult Explore Marine Plans, and relevant policy maps in this plan, in addition to the application information supplied.

76. The term “activities” in NW-CO-1 encompasses the full use of the marine area including, but not limited to, industrial, recreational and tourist use. As well as the need to manage spatial interactions with other marine users (for example fisheries), there is also the need to manage interactions with heritage sites (see policy NW-HER-1), marine protected areas (see policy NW-MPA-1) and other interests. An example of how this is being achieved is shown by the aggregates industry. They have adopted a range of best practice measures that include developing guidance notes concerning heritage, reporting protocols and fisheries liaison codes of practice. In addition, regional approaches to assessment, monitoring and management have been adopted through regional dredging associations and associated marine aggregate regional environmental assessments.

77. It is important that the application of this policy is supported with an overall assessment of the range of activities within and adjacent to the proposed new activity and to consider the relative importance of existing activities to the area. In order for co-operation between sectors to occur and to facilitate co-existence, consultation with current users should be considered to support the application of this policy.

Proponents

78. Proposals that optimise the use of space and incorporate opportunities for co-existence and co-operation with existing activities, or other known planned proposals, are encouraged.

79. Proposals will demonstrate whether and how their footprint could be reduced to optimise the use of space as well as how they have considered engagement opportunities with existing users to promote co-operation between sectors. Existing activities can be identified (although this is not exhaustive) via the Explore Marine Plans digital service and the public register of marine licences. Additionally, existing activities are described in other relevant policies in this marine plan. There could also be opportunities to discuss the proposal at local management groups, especially in estuarine or coastal waters.

80. Proposals will need to assess any significant adverse impacts (both beneficial and adverse including displacement) on existing activities as a result of the proposal and co-operate with existing users to, in order of preference: (a) avoid, (b) minimise or (c) mitigate these consequences. An applicant cannot proceed to (b) minimise and (c) mitigate unless they have first demonstrated why they cannot avoid significant adverse impacts on existing activities. Where it is not possible to avoid, minimise or mitigate significant adverse impacts, proposals should state the case for proceeding (d). This can include how the proposal supports the North West Marine Plan vision, objectives and policies and an outline of the relative benefits of the proposal proceeding and whether or not these outweigh the disbenefits. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

81. Proposals need to take other factors into consideration including Habitats Regulation Assessment, Environmental Impact Assessment, National Planning Policy Framework and National Policy Statements where appropriate.

82. Avoidance of significant adverse impacts could be spatial or temporal, ie the proposed activity could take place in a different area or at a different time; requiring the applicant, where appropriate, to demonstrate an understanding of the location and seasonal importance of existing activities.

83. Examples of how to minimise significant adverse impacts on existing activities could include reducing the intensity or frequency of the proposed activity or decreasing the spatial footprint of the proposal to minimise conflict with the existing activity. .

84. Mitigating significant impacts on existing activities is highly dependent on the type of existing activity that will be affected, however some examples include:

    - compensate the displacement of the activity or provide opportunity for the activity to occur in another location within the marine plan area;
    - financial compensation to the industry/sector/business that is in conflict;
    - provide other benefits to the activity/industry/sector/business that is in conflict (for example, improved communications or technology, new staff support or training).

85. Applicants should consult with stakeholders that currently use the area to promote co-operation between sectors, minimise conflict and find ways to co-exist where appropriate. Note that current users can be a broad spectrum of stakeholders from fishermen to coastal communities that have a view of the coast. Consultation should therefore consider to engage all interested parties who should be identified before the consultation stage begins.

86. Applicants may find it useful to do an assessment of their proposal to comply with NW-CO-1 in line with NW-CE-1 as it is likely to be relevant.

Decision-makers

87. Public authorities will support proposals that optimise their use of space.

88. Public authorities will support proposals if it has been demonstrated that the proposal incorporate opportunities for co-existence and co-operation with existing activities.

89. Public authorities must determine (based on the evidence provided) if a proposal will have conflicts with existing activities including displacement. This conflict could be the impact on current and known future users of the same marine space.

90. Public authorities should ensure that proposals that are in conflict with existing activities demonstrate that they (a) avoid significant adverse impacts on these existing activities including displacement. An assessment of proposals must not proceed to (b) minimise and (c) mitigate unless they have first demonstrated why they cannot avoid significant adverse impacts.

91. Public authorities assessing proposals that have selected option (d) (‘if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.’) will fully consider the relative importance of proceeding with the activity. The decision-maker should only authorise the proposed activity if it is clear that it will provide significant economic, social and / or environmental benefits that outweigh the adverse impacts on existing activities. It is essential that proposals are in compliance with all policies in the marine plan. Consultation with stakeholders, and an assessment of the proposed activity against all of the policies, will also provide decision-makers with an indication of the relative importance of the proposed activity compared to existing activities.

92. In examining and determining applications for Nationally Significant Infrastructure Projects, examining authorities and the relevant Secretary of State must have regard

to this policy for projects capable of affecting existing activities in the marine plan areas.

Signposting

93. Legislation which relates to and may support the implementation of this policies includes:

- Climate Change Act 2008
- The Conservation of Habitats and Species Regulations 2017[9]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[10]
- The Flood and Water Management Act 2010
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017[11]
- The Marine Works (Environmental Impact Assessment) Regulations 2007
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[12]
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

94. Guidance and other materials which relate to and may support the implementation of this policy include:

- 25 Year Environment Plan
- National flood and coastal risk management strategy for England
- National Planning Policy Framework
- National Policy Statements EN-1 and EN-3
- National Policy Statement for Ports

[9] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[10] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[11] The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018
[12] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018

5.3 Aggregates

Policy Code	Policy Wording
NW-AGG-1	Proposals in areas where a licence for extraction of aggregates has been granted or formally applied for should not be authorised, unless it is demonstrated that the other development or activity is compatible with aggregate extraction.
NW-AGG-2	Proposals within an area subject to an Exploration and Option Agreement with The Crown Estate should not be supported unless it is demonstrated that the other development or activity is compatible with aggregate extraction.
NW-AGG-3	Proposals in areas where high potential aggregate resource occurs should demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts on aggregate extraction d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

What are aggregates?

95. **Marine aggregates** are sand and gravel removed from the seabed, commonly intended for use in the construction industry. Marine aggregate extraction can only take place where commercially viable deposits of sand and gravel occur. In turn, the distribution of these deposits is dependent on the spatially discrete areas where they were formed by geological processes.

96. **Aggregates Exploration and Option Agreements** are issued by The Crown Estate following acceptance of a marine aggregates tender bid for a defined area.

97. The Exploration and Option Agreement provides exclusive rights to explore the defined area and carry out activities in that area to support a marine licence application. The Exploration and Option Agreement is for a period of 5 years from the date of grant.

98. **Areas of** high **potential aggregate resource** describes spatial areas where there is a high potential for marine aggregate resource, which can be used to guide future decisions on marine aggregate extraction, exploration and optioning.

99. Areas of high potential aggregate resource were developed by the British Geological Survey, in conjunction with The Crown Estate in 2014. Areas of high potential aggregate resource were identified by spatially modelling a mix of existing geological evidence, sea bed and core samples taken by the British Geological Survey, bathymetry and geophysical information. Should an improving evidence base allow, future updates to this mapping may be issued.

Why are aggregates important?

100. Current active marine aggregate dredging sites or areas subject to Exploration and Option Agreements in the north west marine plan areas can be viewed in Figure 4.

However, growing pressures on traditional land-based aggregates means that these areas may change with time. It is therefore important to safeguard potential future aggregates resources. There are also areas of high potential aggregate resource which would support this future extraction.

101. In the wider English and European construction industries, marine aggregates extraction is important for ensuring a supply of sand and gravel. Circa. 20 million tonnes is extracted annually in England, and more than 20% of sand and gravel currently used for construction in Great Britain is marine aggregate. Demand is predominantly for use in construction projects, supporting associated benefits such as investment and jobs, and contributing to the economy both in the UK and in Europe. In addition it is, and will remain for the foreseeable future, a critical component in the defence and adaptation of our coastline.

102. The Marine Policy Statement Section 3.5.1 highlights that England has some of the best marine aggregate resource in the world, and Section 3.5.6 states that marine plan authorities and decision-makers must consider the need to safeguard marine aggregate reserves for future extraction. Further, The National Planning Policy Framework states that "It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation". This means the marine plans must seek to safeguard important marine aggregate resources for the future.

Policy NW-AGG-1 Aggregates

Proposals in areas where a licence for extraction of aggregates has been granted or formally applied for should not be authorised, unless it is demonstrated that the other development or activity is compatible with aggregate extraction.

Policy aim

103. NW-AGG-1 safeguards marine aggregate licence areas from other activities, unless it is demonstrated that the other activities are compatible with marine aggregate extraction. This enables continuity of supply of construction aggregate and supports local and national objectives and economies.

104. Current active marine aggregate dredging sites or areas subject to Exploration or Option Agreements in the north west marine plan areas can be viewed in Figure 4. However, growing pressures on traditional land-based aggregates means that these areas may change with time. It is therefore important to safeguard potential future aggregates resources. There are also areas of high potential aggregate resource which would support this future extraction. Policy NW-AGG-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

105. Proposals in areas where a licence for extraction of marine aggregates has been granted or formally applied for must demonstrate compatibility with marine aggregates extractions or the proposal will not be authorised.

106. A demonstration of compatibility may include, but is not limited to:

- consideration of existing marine aggregate licence areas
- consultation with all relevant stakeholders, asset and land owners (frequently The Crown Estate in England)
- evidence of the interaction between the proposal and marine aggregate licence areas

107. Activities which are unlikely to be compatible with marine aggregates extraction include, but are not limited to:

- cable and pipeline placement
- certain types of fishing (bottom trawling and netting)
- energy extraction
- other dredging activities

Decision-makers

108. Decision-makers must not authorise any proposal in areas where a licence for extraction of marine aggregates has been granted or formally applied for, unless the proposal has demonstrated that it is compatible with marine aggregates extraction.

109. A demonstration of compatibility may include, but is not limited to:

- consideration of existing marine aggregate licence areas
- consultation with all relevant stakeholders, asset and land owners (frequently The Crown Estate in England)
- evidence of the interaction between the proposal and marine aggregate licence areas

110. Activities which are unlikely to be compatible with marine aggregates extraction include, but are not limited to:

- cable and pipeline placement
- certain types of fishing (bottom trawling and netting)
- energy extraction
- other dredging activities

111. Figure 4 shows licenced marine aggregate extraction areas.

Policy NW-AGG-2 Aggregates

Proposals within an area subject to an Exploration and Option Agreement with The Crown Estate should not be supported unless it is demonstrated that the other development or activity is compatible with aggregate extraction.

Policy aim

112. NW-AGG-2 safeguards marine aggregate Exploration and Option Agreement areas to enable the aggregate industry to explore defined areas to identify commercially viable aggregate resource. Proposals will only be supported if they are compatible with marine aggregate extraction. This enables future supply of construction aggregate and supports local and national objectives and economies. Policy NW-AGG-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

113. Proposals in areas subject to an Exploration and Option Agreement with The Crown Estate must demonstrate compatibility with marine aggregates extractions or the proposal will not be supported.

114. A demonstration of compatibility may include, but is not limited to:

- consideration of existing Exploration and Option Agreement areas
- consultation with all relevant stakeholders, asset and land owners (frequently The Crown Estate in England)
- evidence of the interaction between the proposal and Exploration and Option Agreements areas

115. Activities which are unlikely to be compatible with marine aggregates extraction include, but are not limited to:

- cable and pipeline placement
- certain types of fishing (bottom trawling and netting)
- energy extraction
- other dredging activities

116. Once an operator's exploration or option rights are relinquished for any reason (such as the transfer of an area to a production agreement or finding the area unsuitable for aggregates extraction) they will fall outside of the scope of this policy.

Decision-makers

117. Decision-makers should not support any proposal in areas subject to an Aggregates Exploration and Option Agreement with The Crown Estate, unless the proposal has demonstrated that it is compatible with marine aggregates extraction.

118. A demonstration of compatibility may include, but is not limited to:

- consideration of existing Exploration and Option Agreement areas
- consultation with all relevant stakeholders, asset and land owners (frequently The Crown Estate in England)
- evidence of the interaction between the proposal and Exploration and Option Agreement areas

119. Activities which are unlikely to be compatible with marine aggregates extraction include, but are not limited to:

- cable and pipeline placement
- certain types of fishing (bottom trawling and netting)
- energy extraction
- other dredging activities

120. Once an operator's exploration or option rights are relinquished for any reason (such as the transfer of an area to a production agreement or finding the area unsuitable for aggregates extraction) they will fall outside of the scope of this policy.

121. Figure 4 shows areas of aggregates exploration and options agreements.

Policy NW-AGG-3 Aggregates

Proposals in areas where high potential aggregate resource occurs should demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts on aggregate extraction
d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Policy aim

122. NW-AGG-3 ensures that proposals consider areas of high potential aggregate resource, as defined by the British Geological Survey. It ensures that any impacts on access to commercially viable marine sand and gravel resources in the future are managed, enabling secure access to sufficient supply of aggregate resources. Policy NW-AGG-3 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

123. Proposals in areas where high potential aggregate resource occurs should demonstrate that they will, in order of preference: a) avoid, b) minimise, c) mitigate significant adverse impacts on marine aggregate extraction, d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

124. Proposals cannot proceed to (b) unless they have first demonstrated why (a) cannot be met, (c) unless they have demonstrated (b) cannot be met and (d) unless they have demonstrated that (c) cannot be met.

125. Examples of how significant adverse impacts can be avoided, minimised or mitigated include:

- avoiding impacts through a change in location of the project
- minimising impacts through consultation with the relevant land owners (frequently The Crown Estate in England)
- mitigating impacts by provision in the project design for the future extraction of aggregates

126. Where it is not possible to avoid, minimise or mitigate significant adverse impacts applicants should state the case for proceeding without such measures. The case for proceeding may include, but is not limited to:

- agreement from seabed owners to locate a proposal inside the area of high potential aggregates resource
- evidence that there is no possible interaction between the proposal and future aggregates extraction
- evidence that all other possible avoidance, minimisation and mitigation has been considered

Decision-makers

127. Decision-makers should ensure that proposals in areas of high potential aggregate resource have demonstrated that they will, in order of preference: a) avoid, b) minimise, c) mitigate significant adverse impacts on marine aggregate extraction, d) if it is not possible to mitigate significant adverse impacts, stated the case for proceeding. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

128. Proposals cannot proceed to (b) unless they have first demonstrated why (a) cannot be met, (c) unless they have demonstrated (b) cannot be met and (d) unless they have demonstrated that (c) cannot be met.

129. Examples of how significant adverse impacts can be avoided, minimised or mitigated include:

- avoiding impacts through a change in location of the project
- minimising impacts through consultation with the relevant land owners (frequently The Crown Estate in England)
- mitigating impacts by provision in the project design for the future extraction of aggregates

130. Where it is not possible to avoid, minimise or mitigate significant adverse impacts applicants should state the case for proceeding without such measures. The case for proceeding may include, but is not limited to:

- agreement from seabed owners to locate a proposal inside the area of high potential aggregates resource

- evidence that there is no possible interaction between the proposal and future aggregates extraction
- evidence that all other possible avoidance, minimisation and mitigation has been considered

131. Figure 4 shows areas of high potential aggregates resource.

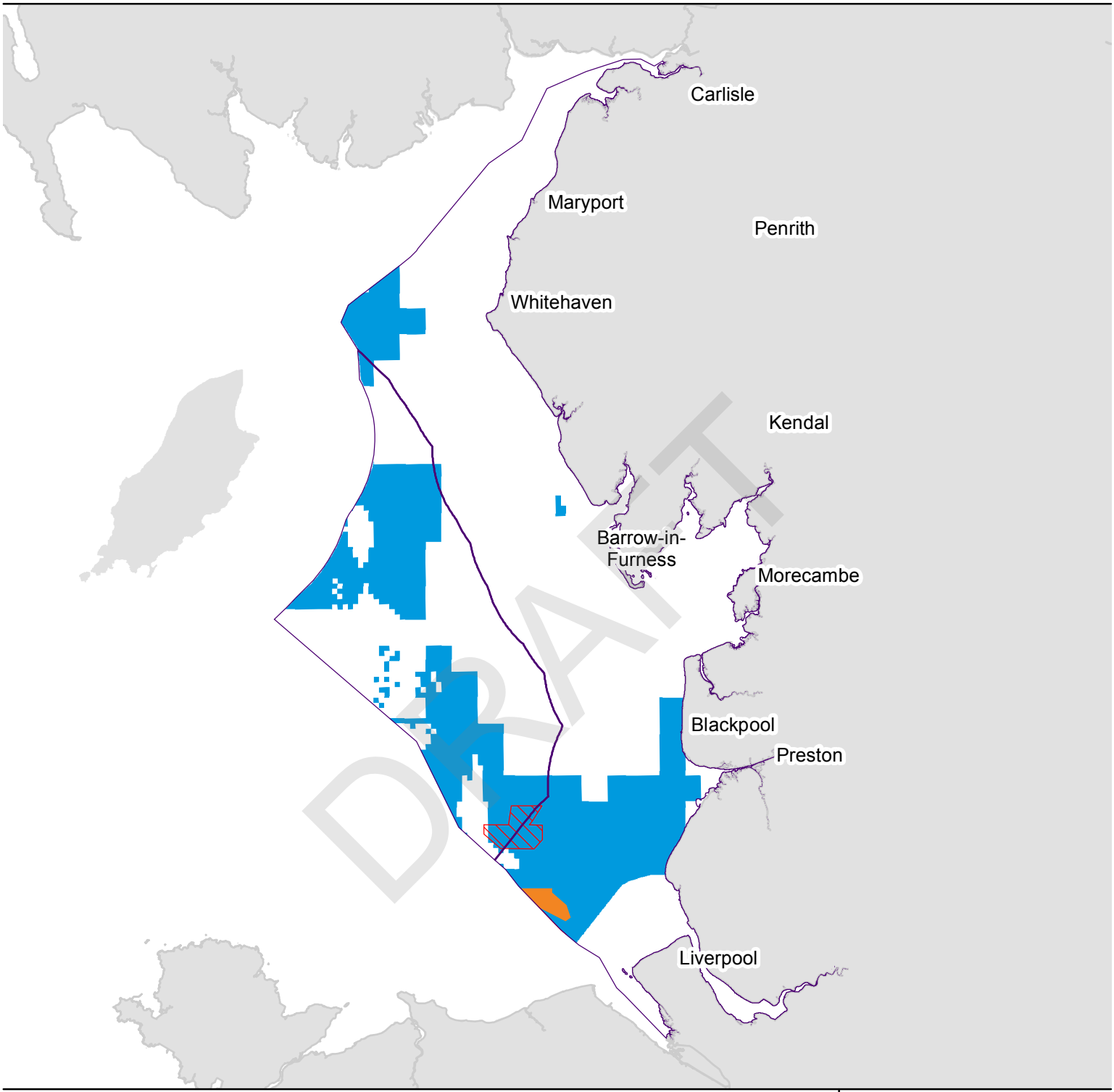
Signposting

132. Guidance and other materials which relate to and may support the implementation of these policies include:

- The Crown Estate's Marine Aggregate Capability and Portfolio 2018
- Good Practice Guidance – Extraction by Dredging of Aggregates from England's Seabed
- Marine Management Organisation's Marine Licensing Guidance

Marine Management Organisation

Figure 4 | Aggregate Marine Licensed Areas, Applications to The Crown Estate, Exploration Agreements and Potential Opportunity



North West Marine Plan Areas

MMO Licensed Aggregate Dredging Areas

Aggregate Application Areas

Aggregate Exploration and Option Agreements

Areas of Future Technical Opportunity for Marine Aggregates

Policy map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

 Note: The areas of future technical opportunity do not include the presence of hard constraints posed by existing uses of the marine estate or other factors including natural & cultural resources, marine users, economics & market appetite and policy drivers required for the opportunity to be supported. Cables and pipelines outside of the territorial waters limit (other than export cables) are not shown as they are not subject to The Crown Estate's permission.

5.4 Aquaculture

Policy Code	Policy Wording
NW-AQ-1	Proposals within existing or potential strategic areas of sustainable aquaculture production must demonstrate consideration of and compatibility with sustainable aquaculture production. Where compatibility is not possible, proposals must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts on sustainable aquaculture production d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.
NW-AQ-2	Proposals enabling the provision of infrastructure for sustainable aquaculture and related industries will be supported.

What is aquaculture?

133. **Aquaculture** refers to the controlled rearing of aquatic shellfish and finfish, the cultivation of aquatic plants and algae and the restocking of wild populations, for example using lobster hatcheries where individuals are grown from eggs and released into the marine environment. Aquaculture can take place in both the inshore and offshore marine environment.

134. Sustainable aquaculture should consider environmental, economic and social sustainability; it should:

- avoid disrupting ecosystems or impacting biodiversity (such as through the introduction of invasive species), should not negatively impact water quality, and should reduce dependence on wild stocks
- support long term economic growth and help meet increased customer demand
- be socially responsible and positively impact on surrounding communities through the creation of jobs and businesses

135. **Infrastructure for aquaculture** are those structures and facilities that are required to enable and support aquaculture.

136. Shellfish are often relayed from natural beds to areas better suited for on-growing, and can be farmed intensively using trestles and racks. For fish and algal aquaculture, intensive growing is often the preferred method, using ropes, cages and other fixed marine infrastructure.

137. Shore side infrastructure to consider includes but is not limited to:

- local food establishments
- markets, including infrastructure that helps build supply chain resilience

- ports and harbours with offloading facilities (vessel berths for dry goods landing)
- repair and chandlery facilities
- storage and processing facilities (including depuration plants for shellfish and storage for wet fish, dry goods and other produce)
- transport of produce to shore and once on shore (logistics companies)

138. Aquaculture is a highly variable industry, with a correspondingly wide variety of infrastructure requirements dependent on the system in use.

Why is aquaculture important?

139. Aquaculture is an important industry in the north west inshore marine plan area, with UK production values and industry statistics available at Eurostat (Aquaculture Statistics). The Marine Management Organisation Sustainability Appraisal Scoping Report notes important shellfish beds for cockles in Morecombe Bay and mussels in Heysham flat, New Brighton and Lytham and Pacific oyster in Silloth.' There is also an oyster hatchery (plus some mussel spat) on the north coast of Morecambe Bay (Europe's largest oyster nursery, being an important source of oyster seed for farms across the UK and also in Ireland) and further production on the Cumbrian coast (The Seafish Guide to Who's Who in UK Aquaculture). Mussels are also farmed at Ravenglass and there are proposals for future mussel culture at Morecambe Bay. There is currently no marine finfish aquaculture in the north west inshore marine plan area. The north west marine plan areas also contain potential strategic areas of sustainable aquaculture production as defined by the relevant layers on Explore Marine Plans.

140. Although aquaculture accounts for 0.01% employment in the north west region, there could be future potential and employment in areas which are deprived or peripheral areas, or those with a limited numbers of alternative employment options (Sustainability Appraisal Scoping Report). It is seen as an industry where development could occur particularly at local levels (Integrating aquaculture within local communities), and is therefore a means to increasing or maintaining employment levels in the north west and realising the associated social and economic benefits. Aquaculture can therefore support coastal peripheral towns or ports, or communities where the employment base is aging, emigrating or transitioning from traditional occupations, helping to maintain communities' traditions and social identities (Evidence Supporting the Use of Environmental Remediation to Improve Water Quality in the south marine plan areas).

141. Aquaculture industries employ people across a number of different skill sets. In particular, aquaculture requires knowledge and skills similar to those found in the fisheries (eg boat builders/handlers and processors) and therefore can support the diversification of the fishing industry. The establishment of supporting agencies protecting the surrounding environment and monitoring the quality of output can also create jobs. The integration of aquaculture with other coastal activities can also extend the benefits of the sector to the wider community and across other marine activities (Social impacts of fisheries, aquaculture, recreation, tourism and marine protected areas (MPAs) in marine plan areas in England).

142. In order to facilitate sustainable aquaculture, provision and maintenance of accompanying infrastructure is required, without which the potential value of aquaculture cannot be realised. Provision and maintenance of infrastructure would include ensuring sufficient facilities are available to receive, process, store and transport incoming produce. The north west marine plan areas are busy with many demands on the space available, therefore new or improved infrastructure is increasingly restricted for space. Provision of sufficient and appropriate infrastructure for aquaculture can also be combined with infrastructure to support fisheries, since they can share much of the same shore side infrastructure for landing and processing.

143. When managed sustainably, aquaculture can be a means to conserve and recover marine biodiversity through restocking species. Large populations of species such as native oysters provide ecosystem services (water filtering and stabilising shorelines) through the establishment of biogenic reefs (in the form of successive generations of oysters). These reefs also act as 'hotspots' where biodiversity is very different from that of surrounding sediments and are therefore of high importance to the ecological functioning of the surrounding area (Identifying sites suitable for marine habitat restoration or creation). Restocked species and the resulting higher biodiversity can also support commercial and recreational fishing and, thereby supporting the livelihoods of local fishermen.

144. As a rapidly growing marine activity, aquaculture is a key area for development due to its potential to contribute to the sustainability and security of the UK's food supply, 80% of which is imported from overseas sources which may not be viable over longer time scales term and due to increasing global demand of less economically developed countries (Planning for sustainable growth in the English Aquaculture Industry). The vision of the Seafood 2040: A strategic framework for England framework is that by 2040, a sustainable aquaculture sector will have seen significant growth, thriving within a safe regulatory framework. The aquaculture policies within the North West Marine Plan give a clear policy direction for aquaculture which fulfils one of the key requirements to achieve the goals of Seafood 2040. Sustainable aquaculture offers substantial potential to increase its current contribution to the UK economy, and can contribute to domestic food production and thereby meet the requirements of health and food security agendas.

Policy NW-AQ-1 Aquaculture

Proposals within existing or potential strategic areas of sustainable aquaculture production must demonstrate consideration of and compatibility with sustainable aquaculture production. Where compatibility is not possible, proposals must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts on sustainable aquaculture production
d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Policy aim

145. The policy recognises that aquaculture is an important industry with potential to grow, contributing to food supply and security. NW-AQ-1 seeks to protect both existing aquaculture operations as well as opportunities for aquaculture in strategic areas of sustainable aquaculture production. These strategic areas have been spatially defined for species of commercial importance by considering environmental factors, technical constraints and other users of the sea (planning constraints). Policy NW-AQ-1 applies to the inshore and offshore marine plan areas.

146. The policy does not prevent other developments or activities; it supports sustainable aquaculture production by spatially defining areas where other industries are required to demonstrate compatibility with aquaculture. If this cannot be demonstrated, proposals must avoid, minimise or mitigate significant adverse impacts on sustainable aquaculture production, or state the case for proceeding if mitigation is not possible.

How will this policy be implemented?

147. NW-AQ-1 refers to areas of existing aquaculture production and those defined as potential strategic areas of sustainable aquaculture production, which have been spatially defined through Marine Management Organisation Evidence Project 1184. The 14 species (four seaweed, four finfish, 1 crustacean and five shellfish) included in this modelling have been selected based on their current contributions to English aquaculture, their importance as commercial fish species, or potential future importance. For each species, the areas are defined by overlaying the following spatial data layers: 1) optimal species growth rates in relation to environmental factors, 2) technical constraints, ie where the culture method can occur based on physical factors, and 3) planning constraints or others users of the sea. The final data layers can be viewed and queried per species on the Explore Marine Plans digital service.

Proponents

148. All proposals (including new aquaculture proposals) within or in the vicinity of existing or potential strategic areas of sustainable aquaculture production as identified on the Explore Marine Plans digital service must demonstrate they have considered potential significant adverse impacts on:

- the culture species and its immediate environment – more information on culture species can be found in Seafish Aquaculture Profiles,
- the wider water column – for example could pollutants, increased chlorophyll or invasive species released by a proposal flow towards an aquaculture site
- water quality within the site where common adverse impacts could include pollutant release or increases in turbidity
- the location and placement of future aquaculture developments

149. Relevant organisations it may be beneficial to consult to determine whether there are aquaculture developments (or proposals) in the area, and the potential impacts of the proposal on sustainable aquaculture production include:

    - Centre for Environment, Fisheries and Aquaculture Science, who can advise on water quality and wider species requirements, as well as seafood safety standards
    - Fish Health Inspectorate – to ensure that aquaculture production businesses are compliant with European and national aquatic animal health legislation
    - Inshore Fisheries and Conservation Authorities if your proposal is within 0-6nm as they will be aware of aquaculture operations here
    - Natural England who are responsible for management agreements in SSSIs for activities that are likely to damage the protected features
    - The Crown Estate for land use consents or if a proposal is outside 6nm as they will be aware of any aquaculture lease proposals here

150. More information on the relevant organisations that should be consulted to determine potential effects of proposals on existing and future aquaculture development are listed in the Aquaculture Regulatory Toolbox for England. Engagement should be as early as possible in the planning process, and evidence should be provided within the proposal. Early engagement will improve compatibility and may increase support for proposals.

151. In identified strategic areas of sustainable aquaculture production, proposals must demonstrate that they will, in order of preference, avoid, minimise or mitigate significant adverse impacts on sustainable aquaculture production. Proposals should not proceed to (b) minimise and (c) mitigate unless they have first demonstrated why they cannot (a) avoid significant adverse impacts on sustainable aquaculture production. Measures implemented to avoid, minimise and mitigate significant adverse impacts may vary depending on the proposed activity.

152. Avoidance of significant adverse impacts might involve the relocation of the development outside strategic areas of sustainable aquaculture production. Minimisation may include co-location with, or provision of space within the proposals area for sustainable aquaculture production, or demonstrating how physical obstructions to sustainable aquaculture production or significant adverse impacts on production (such as relating to water quality or culture species) would be reduced. Mitigation may include identification of alternative sites for use by aquaculture developers. Given the uncertainty that applies to the location of future aquaculture

developments, NW-AQ-1 makes allowance for the possibility of other, competing developments to proceed under particular circumstances.

153. Proposals that cannot avoid, minimise and mitigate significant adverse impacts will not be supported unless they can demonstrate that the benefit of the proposal will outweigh the impacts on sustainable aquaculture production or potential areas for sustainable aquaculture. Where it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding, in addition to setting out how the proposal supports the North West Marine Plan vision, objectives and policies. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

Decision-makers

154. Decision-makers will apply this policy when determining decisions on proposals in areas of current and future potential aquaculture production. Given the uncertainty on the exact location of future aquaculture developments, the policy makes allowance for the possibility of other, competing developments to proceed under particular circumstances.

155. Decision-makers should assess the potential impacts that other proposals may have on areas of potential aquaculture production, and measures taken into account to promote coexistence and compatibility Marine Policy Statement (3.9.6) and NW-CO-1). The potential importance and relative contributions of areas of aquaculture potential should also be considered. Decision-makers should have regard to evidence of consultation with relevant organisations concerning existing aquaculture businesses and areas of potential future sustainable aquaculture.

156. Refer to the following Explore Marine Plans digital service layers, which show areas of potential for the species listed:

- Sugar kelp (*Saccharina latissimi*)
- Oarweed (*Laminaria digitata*)
- Badderlocks (*Alaria esculentaI*)
- Dulse (*Palmaria palmata*)
- Atlantic salmon (*Salmo salar*)
- Rainbow trout (*Oncorhynchus mykiss*)
- Brown (sea) trout (*Salmo trutta trutta*)
- Atlantic cod (*Gadus morhua*)
- European lobster (*Homarus gammarus*)
- Pacific oyster (*Crassostrea gigas*)
- Native oyster (*Ostrea edulis*)
- Blue mussel (*Mytilus edulis*)
- Manila clam (*Ruditapes philippinarum*)
- King scallop (*Pecten maximus*)

Policy NW-AQ-2 Aquaculture

Proposals enabling the provision of infrastructure for sustainable aquaculture and related industries will be supported.

Policy aim

157. NW-AQ-2 aims to tackle barriers to aquaculture by encouraging the provision, maintenance and development of marine and land infrastructure to support sustainable aquaculture and related industries. This policy supports the development of sustainable aquaculture projects by ensuring connectivity between marine operations and land infrastructure, which will ensure opportunities for aquaculture are realised. Due to the overlap between some shore side aquaculture and fisheries infrastructure, NW-AQ-2 supports integration of aquaculture with the fishing industry, and the diversification of fishers. This policy will also benefit employment and development of skills in coastal communities. Policy NW-AQ-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

158. The extent of aquaculture in the north west marine plan areas is varied; there are also areas highlighted for future sustainable production released as data layers on Explore Marine Plans. The existing supporting infrastructure is based predominantly in the inshore marine plan areas. Specific sites for culture are highlighted in NW-AQ-1, aquaculture-specific infrastructure as described above such as ropes and trestles for mussels can be found at these sites.

159. In the north west marine plan areas, the major port for fisheries landings is Whitehaven, which also has supply chain connections to smaller ports. The Solway Firth contains a series of small but active ports with docks and associated infrastructure. A coastal railway links the port towns of Whitehaven, Workington and Maryport. Infrastructure for marine aquaculture across the north west region includes all port and harbour facilities and associated landing, storage and offloading facilities for fish, as well as storage and processing facilities and other supporting infrastructure such as transporters and sellers of produce.

Proponents

160. Proposals should demonstrate how they are supporting infrastructure for sustainable aquaculture. Proposals should consider consulting with other organisations, with positive impacts identified in the proposal:

- Inshore Fisheries and Conservation Authorities – will have detailed knowledge of aquaculture operations in their district
- Seafish – advice on the distribution and requirements of the aquaculture industry
- Shellfish Association of Great Britain - can offer advice on shellfish specific aquaculture requirements

161. There is also a need to ensure that infrastructure proposals comply with existing environmental legislation and other policies in the North West Marine Plan. During

infrastructure development, impacts upon hydrodynamic regimes, sediment movement and substrate types will be considered. Current aquaculture in the north west marine plan areas is composed of shellfish facilities that are generally small scale and are not removing large tracts of habitat. Many current aquaculture sites are based around existing natural beds that were once much more extensive in nature. Individual developments of the scale likely to cause impact will, where necessary, include conditions to mitigate impacts on marine mammals. As with other marine activities the aquaculture industry may increase disturbance for example through vessel traffic, and could displace wildlife through mooring lines etc. Organisations to consult on the above may include, but are not limited to:

- Local marine conservation groups and wildlife groups – to advise on protected species and habitats in the area
- Natural England - As most sites are Sites of Special Scientific Interest and / or are designated under the Habitats Regulations
- Statutory Port Authorities – advise on shipping routes and aggregate dredging areas
- The Crown Estate – lease land in the inshore and offshore marine plan areas of marine developments

162. Proposals should also ensure cohesion with local planning authorities and terrestrial plans when concerned with the provision and use of infrastructure to support aquaculture, such as large scale offshore finfish aquaculture operations that may develop in the future. As part of this, provision and use of infrastructure for aquaculture should also consider the opportunity to influence and improve local employment opportunities. The Coastal Concordat sets out how regulatory bodies can co-ordinate the separate processes for coastal development consents including aquaculture, while paragraphs 24-27 of the National Planning Policy Framework highlight methods for effective co-operation and joint working between authorities.

Decision-makers

163. Decision-makers with functions capable of influencing infrastructure should support proposals which result in positive impacts on infrastructure for sustainable aquaculture. Considerations could include ensuring that sufficient facilities are available to support growth of sustainable aquaculture in the north west marine plan areas, and that facilities are fully operational and accessible to operators.

164. Decision-makers should ensure infrastructure does not impede other interests, and that applicants have provided proof of engagement and consultation with relevant organisations and stakeholders as part of demonstrating the positive impacts on infrastructure for sustainable aquaculture.

165. Refer to the following Explore Marine Plans digital service layers which show areas of potential for the species listed:

- Sugar kelp (*Saccharina latissimi*)
- Oarweed (*Laminaria digitata*)
- Badderlocks (*Alaria esculental*)

- Dulse (*Palmaria palmata*)
- Atlantic salmon (*Salmo salar*)
- Rainbow trout (*Oncorhynchus mykiss*)
- Brown (sea) trout (*Salmo trutta trutta*)
- Atlantic cod (*Gadus morhua*)
- European lobster (*Homarus gammarus*)
- Pacific oyster (*Crassostrea gigas*)
- Native oyster (*Ostrea edulis*)
- Blue mussel (*Mytilus edulis*)
- Manila clam (*Ruditapes philippinarum*)
- King scallop (*Pecten maximus*)

Signposting

166. Legislation which relates to and may support the implementation of these policies includes:

- Aquatic Animal Health (England and Wales) Regulations 2009
- Alien and Locally Absent Species in Aquaculture (England and Wales) Regulations 2011
- The Merchant Shipping (Distress Signals and Prevention of Collisions) Regulations 1996
- Localism Act 2011
- Planning Act 2008
- The Conservation of Habitats and Species Regulations 2017[13]
- The Conservation of Offshore Habitats and Species Regulations 2017[14]
- The Gangmasters (Licensing) Act 2004
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

167. Guidance and other materials which relates to and may support the implementation of these policies include:

- Aquaculture Regulatory Toolbox for England
- Background information for sustainable aquaculture development, addressing environmental protection in particular - Part 1 and Part 2
- Cefas Food Safety - Research, Advice and Consultancy
- Fish, shellfish or crustacean farm authorisation
- Food Standards Agency - Shellfish classification

168. Existing measures which support the implementation of these policies include:

- River Basin Management Plans

[13] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[14] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

- Sustainable aquaculture: the United Kingdom multiannual national plan (MANP)

5.5 Cables

Policy Code	Policy Wording
NW-CAB-1	Preference should be given to proposals for cable installation where the method of installation is burial. Where burial is not achievable, decisions should take account of protection measures for the cable that may be proposed by the applicant. Where burial or protection measures are not appropriate, proposals should state the case for proceeding without those measures.
NW-CAB-2	Proposals demonstrating compatibility with existing landfall sites and incorporating measures to enable development of future landfall opportunities should be supported. Where this is not possible proposals will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts on new and existing landfall sites d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.
NW-CAB-3	Where seeking to locate close to existing sub-sea cables, proposals should demonstrate compatibility with ongoing function, maintenance and decommissioning activities of the cable.

What are cables?

169. **Subsea cables** are used for several purposes, including connecting offshore infrastructure to the point where the cable comes ashore, connecting different electricity markets, known as interconnectors, and ensuring telecommunication between separate landmasses. Submarine cabling is important to the growth and sustainability of telecommunications, offshore energy generation and electricity transmission.

170. Subsea cables are subject to differing controls in legislation and licensing depending on what the cables are for and where the cables are to be located. All subsea cables are subject to licensing controls within the 12 nautical mile UK territorial waters, although the licensing process for telecommunication and interconnector cables is different from cables used for offshore energy generation. Outside the 12 nautical mile limit telecommunications and interconnector cables are exempt from licensing, but cables associated with exploration or exploitation of natural resources (such as offshore wind energy generation) within the UK Exclusive Economic Zone remain subject to licensing control (for example inter array cables for wind farms or power cables).

171. **Landfall sites** are areas on the coast where subsea cables come ashore.

172. Licensing controls protect cables to reduce the risk of telecommunications unavailability of service, or lack of power supply.

Why are cables important?

173. The north west marine plan areas contain several large wind farms and therefore interconnector cables play an essential part in maintaining the nation's energy supply. There are also several landfall sites for telecommunication cables at Heysham, Blackpool and Southport. The north west marine plan areas are also notable for the high density of cable routes connecting Ireland, Northern Ireland and the Isle of Man with England.

174. Subsea cabling is important to the growth and sustainability of a range of interests including:

- climate change mitigation
- electricity transmission
- offshore wind farms
- telecommunications

175. Submarine telecommunications cable connectivity is a vital part of supplying a high quality superfast broadband experience to users. It contributed to the Building Digital UK plans to achieve superfast broadband for up to 95% of the UK by 2017, and will by 2020 ensure that everyone in the UK has a clear, enforceable right to request high speed broadband. Successful implementation of the Building Digital UK plans may require new infrastructure or upgrades to existing infrastructure.

176. Lack of telecommunications service can have a significant impact upon the financial trading industry and other internet based businesses, with considerable implications for the economy. Given their support role to the UK, electricity power cables also need similar protection measures to ensure the safety and security of the energy supply network.

177. The Marine Policy Statement (3.7.1) and Building Digital UK emphasise the importance of telecommunication and power cabling as vital infrastructure for the domestic and global economy. Timely development of the telecommunications network in all parts of the UK is vital to action the government's plan for minimum broadband speed. The National Planning Policy Framework (Parts 10 and 14) confirms support for continued expansion of high quality, advanced communications infrastructure, in which cables play an essential part. National policy also continues to support the development of offshore wind energy and the associated subsea cables to connect those installations to land, with continued funding and support set out in the Renewable Energy Road Map. This approach supports both the Clean Growth Strategy and Industrial Strategy.

178. Cables are also important for the future of electricity transmission, including the mitigation of climate change through greater efficiency and enhanced cabling and transmission networks.

Policy NW-CAB-1 Cables

Preference should be given to proposals for cable installation where the method of installation is burial.

Where burial is not achievable, decisions should take account of protection measures for the cable that may be proposed by the applicant. Where burial or protection measures are not appropriate, proposals should state the case for proceeding without those measures.

Policy aim

179. Submarine cabling is important to the growth and sustainability of telecommunications, offshore wind farms and electricity transmission. NW-CAB-1 supports and encourages cable burial where possible to meet the needs of the sector whilst enabling the co-existence with other users of the north west marine plan areas. Policy NW-CAB-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

180. When planning a proposal applicants should preferentially consider burial of the cable as a protection measure.

181. Where burial is not achievable, applicants should propose alternative protection measures.

182. Alternative protection measures may include rock armour or other various types of cable protection.

183. Areas where cable burial may not be achievable include, but is not limited to:

- areas of hard seabed
- areas where burying a cable may have a larger environmental impact than another cable protection method

184. Where burial or protection measures are not appropriate, applicants should state the case for proceeding without any such measures. The case for proceeding may include, but is not limited to:

- the presence of natural cable protection
- extreme depth and / or inaccessibility of the cable
- evidence that all types of cable protection have been considered

185. Applicants should also demonstrate consultation with relevant stakeholders. This may include but is not limited to:

- Department for Communities Media and Sport
- European Subsea Cables Association
- fishing interests
- Marine Management Organisation
- National Grid

- local authorities
- recreational users

Decision-makers

186. For developments including subsea cables, preference should be given to proposals for cable installation where the method of installation is burial.

187. Where burial is not achievable, decision-makers should take account of alternative protection measures for the proposed development.

188. Alternative protection measures may include rock armour or other various types of cable protection.

189. Areas where cable burial may not be achievable include, but is not limited to:

    - areas of hard seabed
    - areas where burying a cable may have a larger environmental impact than another cable protection method

190. Where burial or protection measures are not appropriate, decision-makers should take into account any case presented for proceeding without any such measures. The case for proceeding may include, but is not limited to:

    - the presence of natural cable protection
    - extreme depth and / or inaccessibility of the cable
    - evidence that all types of cable protection have been considered

Policy NW-CAB-2 Cables

Proposals demonstrating compatibility with existing landfall sites and incorporating measures to enable development of future landfall opportunities should be supported.

Where this is not possible proposals will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts on new and existing landfall sites
d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Policy aim

191. Subsea cabling is important to the growth and sustainability of telecommunications, offshore wind farms and electricity transmission. Existing and potential future landfall sites for subsea cables are not currently protected from other uses, which may prevent these sites being used as cable landfall locations. NW-CAB-2 seeks to avoid the loss of existing and potential future landfall sites and supports proposals that consider the requirement for future cable landfall opportunities, ensuring that socially and economically vital cable activities can continue. Policy NW-CAB-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

192. Applicants should demonstrate they have considered compatibility with cable landfall sites within the area of their proposal, and incorporated measures to enable the development of future landfall opportunities.

193. Where this is not possible applicants must demonstrate that they will, in order of preference, (a) avoid, (b) minimise or (c) mitigate significant adverse impacts on new and existing landfall sites for subsea cables.

194. Demonstrations cannot proceed to (b) unless they have first demonstrated why (a) cannot be met, (c) unless they have demonstrated (b) cannot be met and (d) unless they have demonstrated that (c) cannot be met.

195. Examples of how significant adverse impacts can be avoided, minimised or mitigated include:

- proposing alternative locations for subsea cables to connect
- change in location of the proposal
- provision of space within the proposal area for cables to connect

196. Where it is not possible to avoid, minimise or mitigate significant adverse impacts applicants should state the case for proceeding without such measures. The case for proceeding may include, but is not limited to:

- demonstrating that there is no possibility for future cable landfall at the site
- agreement from asset owners to locate a proposal close to an existing cable landfall site
- evidence that all other possible avoidance, minimisation and mitigation has been considered

Decision-makers

197. Decision makers should consider the impacts a proposal may have on cable landfall sites within the proposal, and support those which demonstrate compatibility with existing landfall sites and incorporate measures to enable development of future landfall sites.

198. Where proposals have not demonstrated compatibility with cable landfall sites within the area of their proposal, or incorporated measures to enable the development of future landfall opportunities, decision-makers must consider information provided regarding how the proposal aims to (a) avoid, (b) minimise or (c) mitigate any significant impacts on new and existing landfall sites for subsea cables.

199. Demonstrations cannot proceed to (b) unless they have first demonstrated why (a) cannot be met, (c) unless they have demonstrated (b) cannot be met and (d) unless they have demonstrated that (c) cannot be met.

200. Examples of how adverse impacts can be avoided, minimised or mitigated include:

- proposals for alternative locations for subsea cables to connect

- change in location of the proposal
- provision of space within the proposal area for cables to connect

201. Where a proposal states it is not possible to avoid, minimise or mitigate significant adverse impacts decision-makers should consider any case for proceeding without such measures the proposal may have provided. The case for proceeding may include, but is not limited to:

    - demonstrating that there is no possibility for future cable landfall at the site
    - agreement from asset owners to locate a proposal close to an existing cable landfall site
    - evidence that all other possible avoidance, minimisation and mitigation has been considered

202. Figure 5 shows subsea cables in the north west marine plan areas, as well as their landfall sites.

Policy NW-CAB-3 Cables

Where seeking to locate close to existing sub-sea cables, proposals should demonstrate compatibility with ongoing function, maintenance and decommissioning activities of the cable.

Policy aim

203. NW-CAB-3 protects the continued function, maintenance and decommission of subsea cables, up to the point of landfall. Policy NW-CAB-3 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

204. Proposals that seek to locate close to existing subsea cables should demonstrate compatibility with ongoing function, maintenance and decommission activities of the cable.

205. European Subsea Cables Association guidelines in relation to cable proximity and maintenance for offshore wind farms and the proximity of aggregate extraction to subsea cables has been endorsed by government departments with an interest in cables, and other agencies including the Marine Management Organisation.

206. Proposals should ensure appropriate consultation with relevant stakeholders and asset owners. Consultation with the relevant stakeholders will ensure that compatibility with ongoing function, maintenance and decommissioning activities of cables can be provided.

Decision-makers

207. Decision-makers should consider how proposals that seek to locate close to existing sub-sea cables demonstrate compatibility with ongoing function, maintenance and decommissioning activities of the cable.

208. European Subsea Cables Association guidelines in relation to cable proximity and maintenance for offshore wind farms and the proximity of aggregate extraction to subsea cables has been endorsed by government departments with an interest in cables, and other agencies including the Marine Management Organisation.

209. Decision-makers should ensure that the proposal has consulted with relevant stakeholders and asset owners. Consultation with the relevant stakeholders will ensure that compatibility with ongoing function, maintenance and decommissioning activities of cables can be provided.

210. Figure 5 shows subsea cables in the north west marine plan areas.

Signposting

211. Legislation which relates to and may support the implementation of these policies includes:

- Electricity Act 1989
- Planning Act 2008

212. Guidance and other materials which relate to and may support the implementation of these policies include:

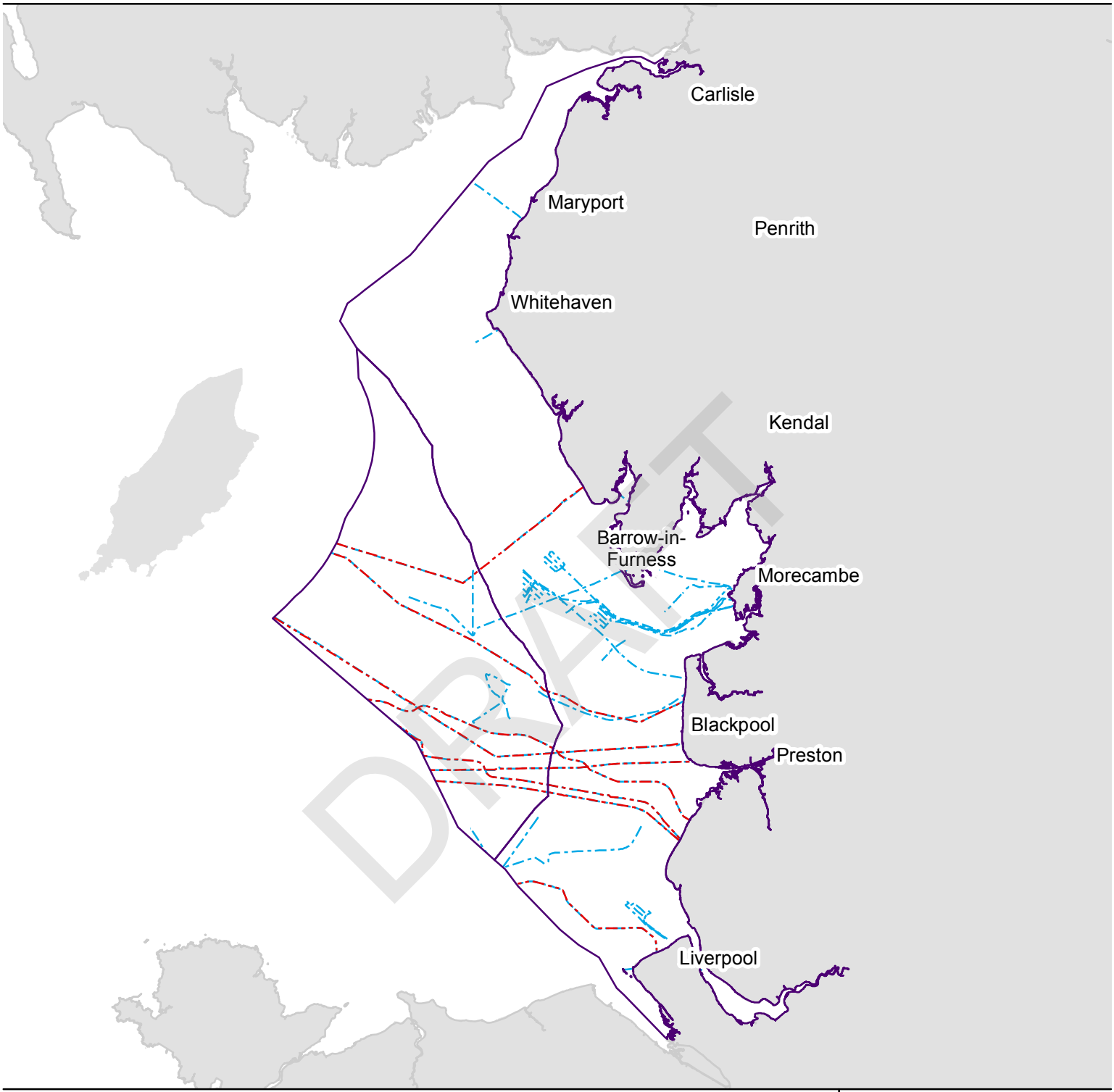
- Marine Management Organisation Licensing Cables Guidance
- Marine Management Organisation Subsea Cables Desknote

213. Existing measures which support the implementation of these policies include:

- Renewable Energy Road Map
- Electricity Ten Year Statement
- Building Digital UK

Marine Management Organisation

Figure 5 | Distribution of Subsea Cables



North West Marine Plan Areas

Subsea Cables (KIS-ORCA)

Subsea Cables (UKHO)

Policy map
This map is to be used for reference only.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

5.6 Dredging and disposal

Policy Code	Policy Wording
NW-DD-1	In areas of authorised dredging activity, including those subject to navigational dredging, proposals for other activities will not be supported unless they are compatible with the dredging activity.
NW-DD-2	Proposals that cause significant adverse impacts on licensed disposal areas should not be supported. Proposals that cannot avoid such impacts must, in order of preference: a) minimise b) mitigate c) if it is not possible to mitigate the significant adverse impacts, proposals must state the case for proceeding.
NW-DD-3	Proposals for the disposal of dredged material must demonstrate that they have been assessed against the waste hierarchy. Where there is the need to identify new dredge disposal sites, proposals should be supported which are subject to best practice and guidance.

What is dredging and disposal?

214. **Dredging activity** involves the removal of sediment from waterways and the sea bed followed by discard of this sediment at an agreed site. There are two main types of navigational dredging: maintenance and capital.

215. Maintenance dredging is required to maintain water depths in areas where sedimentation occurs and is a routine activity required for the preservation of navigable depths[15].The legal requirement for ports to maintain safe navigational access to the majority of ports and harbours would not be possible without maintenance dredging.

216. Capital dredging enables new activities to proceed by creating new or improved existing navigational channels and berths, often making them deeper and / or wider.

217. Other types of dredging activity include clearance dredging which is the removal of silt from outfalls or culverts.

218. Authorised dredge areas include those that are licensed or those that are exempt from a license but which are required to be carried out by, or on behalf of, the competent authority.

219. **Disposal areas** are designated sites in which sediment, for example from navigational dredging, is discarded. Disposal sites are classified into open, disused and closed sites. Sites are assessed and classified on a case by case basis, but in general, sites which are open are defined as those that are in use, disused sites are those that have not been used in the last five years, and closed sites are defined as

[15] Marine Management Organisation (June 2017) Futures Analysis for the North East, North West, South East and South West Marine Plan Areas MMO1127

those that have not been used in the last ten years. Beneficial and alternative use sites are also currently considered as a category of disposal site.

220. **Disposal of dredged material** refers to the relocation of dredged material. Dredged material can only be disposed of in identified areas subject to the type of dredged material. Disposing of dredged material means that the material serves no further purpose and can often cause localised disturbance within and near disposal sites.

221. The preferred option in the Waste (England and Wales) Regulations 2011 waste hierarchy is prevention, for example, by not carrying out dredging activities. If prevention is not possible, the options in the waste hierarchy in order of preference are: preparing for re-use, recycling and other recovery. These options are encompassed by the term alternative use.

222. Preparing for re-use relates to the re-use of dredged material as sediments, commonly referred to as beneficial use projects. Therefore, alternative use encompasses beneficial use projects. Examples include:

- engineering uses such as for construction materials, flood defence, land reclamation and beach nourishment
- environmental enhancement including habitat creation and enhancement, and recreation
- sustainable relocation – relocating the dredged material back into the system that it was removed from to maintain the sediment budget of a system – this can be done if the sediment is clean and it is the best option for the system. This includes mid-river disposal sites[16,17]

223. Recycling relates to the re-use of dredged material as sediments or for other purposes, where the dredged materials have had to be reprocessed to other products, materials or substances. This can include making high grade products from dredged material such as bricks or aggregates.

224. Other recovery can include treatment of dredged material to reduce contamination or alter the physical nature of the material.

Why is dredging and disposal important?

225. The north west is a major manufacturing base and key area for UK exports with several ports playing an increasing role in export of key products such a chemicals, cars and textiles. In particular the Port of Liverpool and the smaller ports along the River Mersey are seen as key to economic activities in the future through the Atlantic Gateway initiative. Plans for this initiative include upgrades of port facilities and other port infrastructure[18]. The ports and shipping service in this marine plan area also support the expanding renewable energy sector in both the production and assembly of renewable facilities. Therefore dredge and disposal activity plays a vital role in the

[16] OSPAR (July 1998) OSPAR Commission Guidelines for the Management of Dredged Material
[17] Marine Management Organisation (September 2014) Use of beneficial dredge materials in the South Inshore and South Offshore Marine Plan Areas MMO1073
[18] Marine Management Organisation (June 2017) Futures Analysis for the North East, North West, South East and South West Marine Plan Areas MMO1027

maintenance of ports and harbours along with the expanding social and economic benefits that port development attracts through direct and indirect job creation.

226. In addition to this, there are several commercial shipping routes across the region with key connections to world markets. The Port of Liverpool also contains several international passenger routes. These activities similarly require maintenance dredging, resulting in the need for disposal sites in this area.

227. Dredging also supports terrestrial infrastructure as well as imports, exports and tourism. Ports create a cluster effect by bringing together groups of related businesses, within and around the estate, which supports economic growth by encouraging innovation and the creation and development of new business opportunities. When considered alongside expected growth in port expansion, marine development proposals and the offshore renewable energy developments in particular, there is scope for expansion of the dredging and disposal sector, particularly for alternative use, to support this growth.

228. Ports and harbours in the north west inshore marine plan area require regular maintenance dredging as a result of estuary processes that deposit suspended material in maintained navigational channels and berths pockets[18]. Part II of the Coastal Protection Act 1949 gives ports powers to undertake navigational dredging to maintain this access.

229. Increased shipping activity and larger vessels are likely to result in proposals to dredge deeper, wider and more frequently, increasing licence proposals for navigational dredging, disposal activity and an increased need for disposal sites within the north west marine plan areas. However, alternative use can reduce the disposal of this dredged material. By increasing the re-use, recycling and other recovery rate it increases available space within areas under development. This is important in the north west marine plan areas where there is a high density of activities. Using dredge material for alternative use also supports the growth of industry by providing an additional source of material, for example, dredge material can be used for engineering, agriculture and product uses.

230. Dredging of ports and harbours removes material from estuaries and coastal systems and can lead to coastal erosion and increased vulnerability to pressures caused by climate change. As described in the Sustainability Appraisal Report Card – Climate, pressures such as sea level rise and coastal erosion exist within all marine plan areas. The alternative use of dredged material is important because it can contribute to the protection of coastal areas from these pressures. For example, dredged material can be used to protect, create and restore designated and deteriorating habitats, such as saltmarsh and mudflats[19].

231. The designated disposal sites in the north west plan areas are predominantly used for the disposal of dredged material. Protecting disposal sites within the same vicinity as the dredging activity aids in retaining the material within the same sediment cell. This is a useful way of managing sediment budgets within estuaries, and therefore

[19] Marine Management Organisation (September 2014) Use of beneficial dredge materials in the South Inshore and South Offshore Marine Plan Areas MMO1073

maintaining environmental conditions and habitats for native species. This may be prevalent in the areas where sediment movement is high, for example in the Mersey, and therefore protecting disposal sites within the north west marine plan areas will aid in retaining this sediment.

232. Disposal activities have a range of potential environmental impacts which may be reduced by considering alternative use options to disposal. Disposal activities may release contaminants into the water column which could have secondary impacts through bioaccumulation and biomagnification in the food web[20]. Contaminants associated with dredged material include organotin compounds, trace metals and polycyclic aromatic hydrocarbons. Tributyltin (an organotin) can cause shell malformation in oysters and imposex in marine snails, for example. When found above the natural background level, mercury (a trace metal) is a neurotoxin and can adversely impact the reproduction and development of many species. Polycyclic aromatic hydrocarbons may cause changes in enzyme activity, reproductive failure and reduced growth potential in marine organisms. Disposal activities can also have physical impacts, for example, the smothering of sensitive species and habitats and the disruption of sensory capabilities of fish by masking natural characteristics of sea water or tributary streams. However, these factors amongst others are considered in the licensing process.

233. Following best practice and guidance, such as those stated in the OSPAR Guidelines for the Management of Dredged Material, will minimise any potential environmental impacts, including biological, chemical and / or physical, that dredge disposal may have. Through the potential reduction of these impacts, this policy supports environmental policies in the north west marine plan areas.

234. These policies will support Shoreline Management Plans which may include the need to identify options for alternative use of dredged material. In the north west inshore marine plan area, the Shoreline Management Plan from Great Ormes Head to Scotland refers to saltmarsh development, habitat creation and beach recharge, all of which could be opportunities for alternative use of dredged material.

235. The Marine Policy Statement Section 3.4.1 identifies ports as an essential part of the UK's economy and how they provide an important infrastructure between the land and the sea. Furthermore, in Section 3.6.3, dredging is identified as an enabling activity for the successful and safe function of ports and marinas and therefore it is important to protect dredging and disposal activity. However Section 3.6.8 states that waste disposal proposals must consider the Waste (England and Wales) Regulations 2011 waste hierarchy, in which the re-use of waste is a priority over disposal. These policies are in alignment with the OSPAR Guidelines for the Management of Dredged Material which states that it is important to recognise the potential value of dredged material as a resource and to consider the availability of beneficial uses. Section 207 of the National Planning Policy Framework which requires Mineral Planning Authorities to prepare annual Local Aggregate Assessments and consider dredged material as a possible source of aggregates is complemented by these policies. Marine licences for dredging activities which may

[20] OSPAR Commission Assessment of Dumping and Placement of Dredged Material

stipulate alternative use of the dredged material as a condition, in accordance with the waste hierarchy are also supported.

Policy NW-DD-1 Dredging and disposal

In areas of authorised dredging activity, including those subject to navigational dredging, proposals for other activities will not be supported unless they are compatible with the dredging activity.

Policy aim

236. Dredge areas, and the area surrounding these that are required for dredge activity to take place, are often affected by new proposals, including cables or built infrastructure, that negatively impact the ability to access or egress from these sites. NW-DD-1 ensures continued safe access by vessels to ports and harbours over the lifetime of the North West Marine Plan. Adjacent areas in this policy are defined as those identified to be necessary to dredge activity. This policy discourages proposals that would cause significant adverse impacts on dredge activities, due to the need for related vessels to navigate to and from authorised dredge areas. Policy NW-DD-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

237. In the north west inshore marine plan area there are ten ports, two of which have been classified as major ports[21], these are Heysham and Liverpool. Ports require navigational dredging to maintain safe access. The Explore Marine Plans digital service and the Public Register identifies the most up-to-date record of licensed sites for dredging.

Proponents

238. Proposals should include supporting information illustrating all known and potential impacts on dredging activity. This may include a consultation to identify issues at the scoping stage and include how the proposal supports the North West Marine Plan vision, objectives and other plan policies. Consultation should include all relevant ports and harbours and as this policy may apply more widely than Statutory Harbour Areas, proposals should identify all ports and harbours that may be effected and engage with them early in the proposal development.

239. Where they exist, port master plans and their descriptions of future development should be referred to. Inclusion of this information does not indicate that approval of the proposal will follow by default. Approval will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans and policies.

240. Proposals should consider applicable environmental constraints based on specifications of the proposed activity (including location, scale and timing), associated risks, and consequences.

[21] Marine Management Organisation (June 2017) Futures Analysis for the North East, North West, South East and South West Marine Plan Areas MMO1027

241. Applicants can find guidance online regarding exempted activities and how to make a marine licence application. Where the proposal area for dredging activity occurs from mean low water springs landwards, an environmental permit may also be required. Where The Crown Estate, or another party, own the seabed, their permission is also likely to be needed. The Marine and Coastal Access Act Transitional Provision Order 2012 requires all maintenance and navigational dredging to gain consent through a marine licence, unless it is specifically exempted under the Marine and Coastal Access Act 2009 (Section 75).

Decision-makers

242. Decision-makers will establish whether the intent of this policy has been achieved through the determination of any proposals. Decision-makers will take account of a range of relevant considerations including The Conservation of Habitats and Species Regulations 2017[22], The Conservation of Offshore Marine Habitats and Species Regulations 2017[23], Environmental Impact Assessment and National Policy Statements, where appropriate. Further considerations also include compliance with legislation and regulations detailed in the relevant local maintenance dredging protocol where applicable.

243. Decision-makers should note that harbour authorities' statutory powers to dredge and dispose of dredged materials in tidal water are subject to consent unless the activity is specifically exempt.

244. In examining and determining proposals for Nationally Significant Infrastructure Projects under the Planning Act 2008, examining authorities and the Secretary of State for the Ministry of Housing, Communities and Local Government must have regard to this policy for Nationally Significant Infrastructure Projects that may have significant adverse impact on areas of authorised dredge activity.

Policy NW-DD-2 Dredging and disposal

Proposals that cause significant adverse impacts on licensed disposal areas should not be supported.

Proposals that cannot avoid such impacts must, in order of preference:

a) minimise
b) mitigate or
c) if it is not possible to mitigate the significant adverse impacts, proposals must state the case for proceeding.

Policy aim

245. Disposal areas, and the areas surrounding these that are required for the disposal activity to take place, are often impacted on against new proposals, including cables or built infrastructure, that negatively impact the ability to access or egress from

[22] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[23] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

these sites. NW-DD-2 ensures that disposal areas are not compromised, reducing the need to designate new disposal sites which are not intended for alternative use, reducing environmental impacts. Adjacent areas in this policy are defined as those identified to be necessary for disposal activity. This policy discourages proposals that would cause significant adverse impacts on disposal activities, due to the need for vessels to navigate safely to and from disposal sites.

246. Preserving current disposal sites, particularly where sites are being used for beneficial and alternative use, will enable the growth of ports within the north west inshore marine plan area. Over the 20 year life span of the plan this may become more prevalent in the developing economic climate. Policy NW-DD-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

247. There are 42 designated disposal sites in the north west marine plan areas, which are located in both the inshore and offshore plan areas. Nineteen of the sites are designated as open, two are disused and 21 are closed[24]. The Explore Marine Plans digital service and the Cefas Data Hub contains the most up-to-date record of dredge disposal sites.

Proponents

248. Proposal should include supporting information illustrating potential significant adverse impacts upon licensed disposal sites. This may include consultation with relevant stakeholders to identify issues at the scoping stage, and suggest measures to avoid, minimise or mitigate them. Proposals that cause significant adverse impacts on licensed disposal areas cannot proceed to (a) minimise unless they have first demonstrated why they cannot avoid significant adverse impacts, (b) mitigate unless they have first demonstrated why they cannot meet (a) and (c) state the case for proceeding unless they have demonstrated why they cannot meet (b). Where it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding including how the proposal supports the North West Marine Plan vision, objectives and other plan policies. Inclusion of this information does not indicate that approval of the proposal will follow by default. Approval will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans and policies.

249. Examples of how significant adverse impacts can be avoided, minimised or mitigated include:

- avoid - alternative location for the proposal
- minimise - variation in the proposal to allow disposal activity to occur when required
- mitigate - propose alternative location for disposal activity to occur

250. Applicants can find guidance online regarding exempted activities and how to make a marine licence application. Where the disposal area occurs from mean low water

[24] Marine Management Organisation (June 2017) Futures Analysis for the North East, North West, South East and South West Marine Plan Areas MMO1027

springs landwards, an environmental permit may be required and where The Crown Estate, or another party, own the seabed, their permission is also likely to be needed.

Decision-makers

251. Decision-makers will establish whether the intent of this policy has been achieved through the determination of any proposals. Decision-makers will take account of a range of relevant considerations including The Conservation of Habitats and Species Regulations 2017[25] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[26], Environmental Impact Assessment and National Policy Statements, where appropriate. Further considerations also include compliance with legislation and regulations detailed in the relevant local maintenance dredging protocol where applicable.

252. Decision-makers should note that harbour authorities' statutory powers to dredge, and dispose of dredged materials, in tidal waters are subject to consent unless the activity is specifically exempt. A licence to dispose of dredge material must be obtained from the Marine Management Organisation.

Policy NW-DD-3 Dredging and disposal

Proposals for the disposal of dredged material must demonstrate that they have been assessed against the waste hierarchy. Where there is the need to identify new dredge disposal sites, proposals should be supported which are subject to best practice and guidance.

Policy aim

253. As a result of dredging activity, disposal of this material is often required, whether this is direct disposal as a last resort in the waste hierarchy or disposal of material for alternative uses. NW-DD-3 provides a source of best practice and guidance for the designation of new dredge disposal sites. This is required as the demand increases for new disposal sites, and encourages early consideration of impacts to avoid conflicts during the proposal process. The establishment of new dredge disposal sites should only be explored after previous levels within the waste hierarchy have been considered and where the disposal is for the purposes of alternative use. If existing designated disposal sites cannot be used, for example where sediment size does not match or there are particular constraints, and the potential to utilise closed or disused sites has been fully investigated and discounted, the designation of new dredge disposal sites may also be required. Policy NW-DD-3 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

254. Sources which may aid in identifying potential locations for alternative use of dredged material may include, but are not limited to; Shoreline Management Plans,

[25] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[26] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Beach Management Plans, Port Master Plans, the assessment of Sites of Scientific Interest, Alternative use of dredge material in the north east, north west, south east and south west marine plan areas and Identifying sites suitable or marine habitat restoration or creation. In addition to these suggested sources, other existing and future studies should also be considered to identify alternative use opportunities in the north west.

255. Potential locations for the alternative use of dredged material should not be restricted to the north west marine plan areas. Locations in other marine plan areas can be considered if the proposal is practical and meets the requirements of the relevant marine plan area policies. In considering locations for the alternative use of dredged materials outside the north west marine plan areas, it should be kept in mind that this may include jurisdictions beyond England's waters, including Devolved Administrations and / or the Isle of Man as appropriate.

Proponents

256. Proposals for disposing of dredged material must be assessed against the Waste (England and Wales) Regulations 2011 waste hierarchy which specifies the order of preference for how waste should be dealt with. The preferred option is prevention, followed by preparing for re-use, recycling, other recovery and finally, disposal. Therefore, proposals for disposing of dredged material must first consider prevention and if this is not possible, consider alternative use as the next preference. Disposal is considered as a last resort.

257. A licence to dispose of dredge material, including the tidal extent of rivers and up to the mean high water springs mark, must be obtained from the Marine Management Organisation. Alternative use is considered as a type of disposal activity and so requires a marine licence. Such marine licences include pre-application requirements for alternative use proposals. Proposals not considering alternative use or other preferred options in the waste hierarchy and instead disposing of dredged material, must also obtain a marine licence. Permissions for any type of disposal may also be required from the landowner, Harbour Authority, The Crown Estate and / or any other parties with jurisdiction/ownership of the river/seabed. Marine licence guidance, exemption guidance and information on the licensing application process can be found on the Marine Management Organisation's website.

258. A project level appropriate assessment, ie The Conservation of Habitats and Species Regulations 2017[27] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[28], will be required where disposal or alternative use proposals mean that the possibility of a likely significant effect on a European/Ramsar site cannot be excluded on the basis of currently available information. An Environmental Impact Assessment and a Water Regulations Assessment may also be required. Proposals should consider other interests, including potential impacts from other marine activities and the impacts that disposal or alternative use has on these

[27] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[28] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

activities. They should also consider applicable environmental constraints based on specifications of the proposed activity (including location, scale and timing), associated risks, and consequences.

259. Proposals should demonstrate how other disposal sites, potential beneficial and alternative use opportunities in the vicinity have been taken into account during assessment against the waste hierarchy. New sites should be designated where there are positive benefits to designation, the Waste (England and Wales) Regulations 2011 and related waste hierarchy has been taken into account, and a characterisation study has been completed. Examples of characterisation studies can be found on the marine licensing selected cases page such as the Plymouth Dredged Material Disposal Site Selection – Characterisation Report, the Hornsea Offshore Wind Farm Dredging and Disposal: Site Characterisation report and the Harwich Dredge Disposal Characterisation report.

260. Proposals which are unable to consider alternative use or the other preferred options in the waste hierarchy and instead dispose of dredged material, must demonstrate the reasons why. Proposals must detail the process which the applicant went through to assess and screen out any other management options. Cases where alternative use is not practicable may be due to contamination status of the material, site selection, technical feasibility, environmental acceptability, costs/benefits and / or legal considerations.

Decision-makers

261. Decision-makers will establish whether the intent of this policy has been achieved through the determination of any proposals. Inclusion of this information does not indicate that approval of the proposals will follow by default. Decision-makers will take into account a range of relevant considerations including The Conservation of Habitats and Species Regulations 2017[29], The Conservation of Offshore Marine Habitats and Species Regulations 2017[30], Environmental Impact Assessment and National Policy Statements, where appropriate. Further considerations also include compliance with legislation and regulations detailed in the relevant local maintenance dredging protocol where applicable.

262. Plans and strategies should consider dredge disposal in relation to their area of responsibility, for example mineral and waste planning, when considering extraction of aggregates adjacent to existing or potential dredge disposal sites.

263. Figure 6 shows potential alternative use sites for dredge material in the north west marine plan areas.

[29] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[30] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Signposting

264. Legislation which relates to and may support the implementation of these policies includes:

- The Conservation of Habitats and Species Regulations 2017[31]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[32]
- The Environmental Permitting (England and Wales) Regulations 2016[33]
- The Marine Works (Environmental Impact Assessment) Regulations 2007
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- The Waste (England and Wales) Regulations 2011

265. Guidance and other materials which relate to and may support the implementation of these policies include:

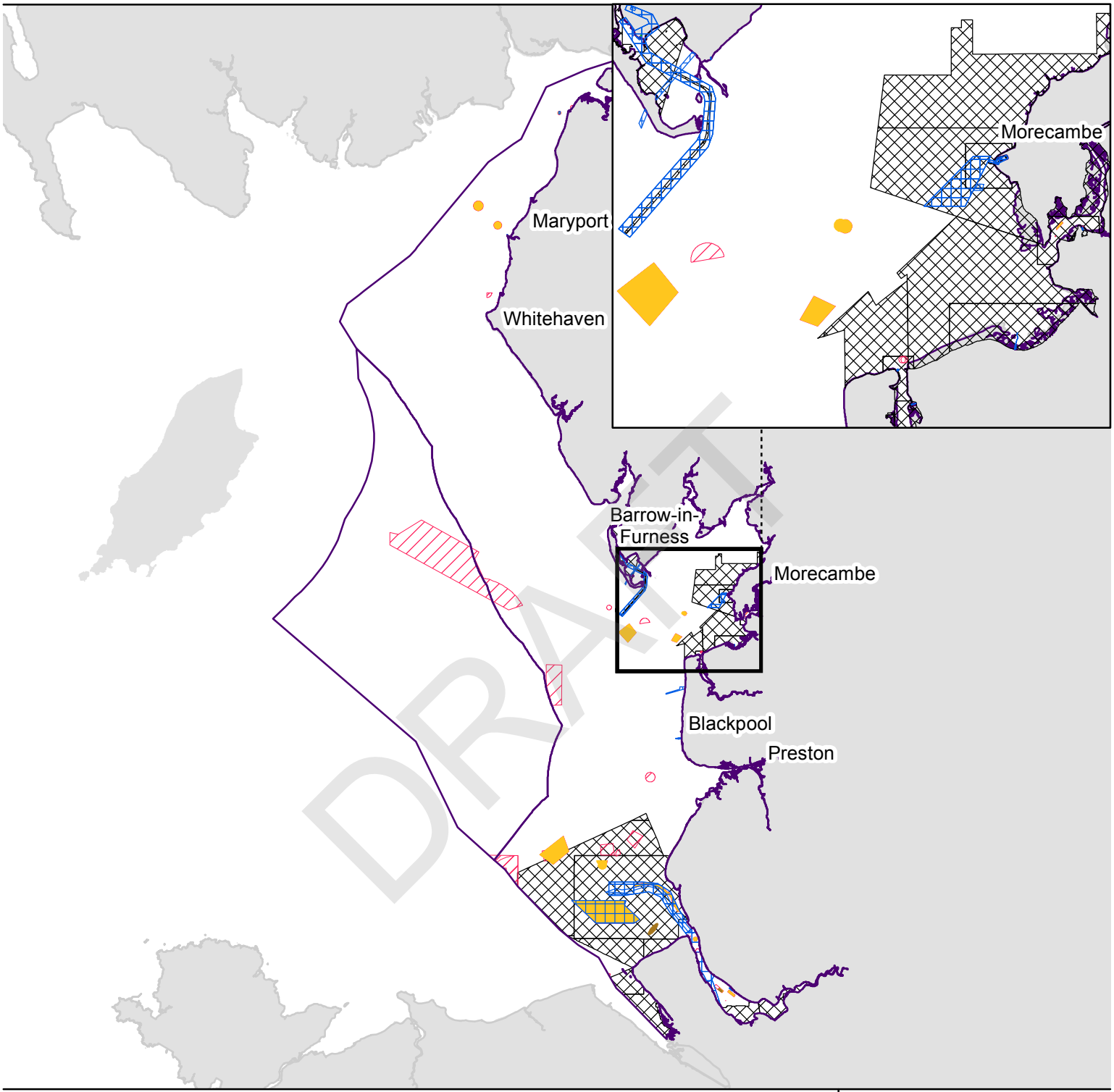
- An approach to seascape character assessment
- Biosecurity Action Plans
- Environmental impacts of maintenance dredging and disposal
- Guidance on applying the Waste Hierarchy
- Landscape and seascape character assessment
- Maintenance Dredging Protocols
- Marine Licensing application process
- Marine Licensing exemption for certain dredging activities
- Marine Licensing guidance: Disposing of waste to sea
- National Character Area Profiles
- National Planning Policy Framework
- OSPAR Commission Assessment of Dumping and Placement of Dredged Material
- OSPAR Commission Guidelines for the Management of Dredged Material
- OSPAR Convention for the Protection of the Marine Environment of the North East Atlantic
- Port Master Plans
- River Basin Management Plans
- Self-Service Marine Licensing
- Shoreline Management Plans
- Sustainable Shores
- The Royal Society for the Protection of Birds report: Precipitating a SEA Change in the Beneficial Use of Dredged Sediment

[31] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[32] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[33] As amended by The Environmental Permitting (England and Wales) (Amendment) (EU Exit) Regulations 2019

- Use of beneficial dredge materials in the South inshore and offshore marine plan areas (MMO1073)

Marine Management Organisation

Figure 6 | Dredging and Disposal Sites including Licenses and Beneficial Reuse



- North West Marine Plan Areas
- Potential Future Sites for Dredging Activity
- Historic Beneficial Use of Dredged Material
- Potential Future Sites for Beneficial Reuse
- Licensed Dredging Areas
- Licensed Disposal Areas
- Open Marine Disposal Sites
- Harbour Administrative Areas

Policy map
This map is to be used for reference only.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

5.7 Oil and gas

Policy Code	Policy Wording
NW-OG-1	Proposals in areas where a licence for oil and gas has been granted or formally applied for should not be authorised unless it is demonstrated that the other development or activity is compatible with the oil and gas activity.
NW-OG-2	Proposals within areas of geological oil and gas extraction potential demonstrating compatibility with future extraction activity will be supported.

What is oil and gas?

266. **Oil and gas activity** in the marine area includes exploration for and production of oil and gas from below the seabed. Oil and gas deposits are located in spatially discrete areas where the deposits were formed and the associated infrastructure required to explore for or exploit the resource usually has a limited spatial footprint.

267. Exploration activities include various boat-based surveys and discrete sampling works, which are of limited duration. Production activities utilise infrastructure such as a fixed platform or floating production facilities, where hydrocarbons may be processed prior to being exported ashore via pipelines or using shuttle tankers, Production facilities are installed for the duration of the field life.

268. **Oil and gas licenses** fall into several categories. The principal distinctions are between landward and seaward licences, and between exploration licences (which cover exploration alone and are not exclusive to a particular area) and production licences (which may include an element of exploration during the first phase of the development and are exclusive to a specified area). Licenses are granted by the Oil and Gas Authority. Except in special circumstances, production licences run for three successive periods or Terms. These Terms are commonly associated with a particular activity, the Initial Term for exploration, the Second Term for the approval of a development plan and the Third Term for production. Licenses expire at the end of these terms if the specified work has not been completed (Types of Licence).

269. **Areas of geological extraction potential** are where undeveloped oil and gas discoveries are located that have been identified through exploration work, but have not yet seen any production, extraction or development.

270. Areas of geological extraction potential refer to areas where oil and gas deposits may exist under the seabed with potential for future oil and gas extraction activities.

271. Oil and gas deposits are located in spatially discrete areas where the deposits were formed. Hydrocarbon deposits are identified during geophysical surveys and when deemed economically viable, are extracted.

Why is oil and gas important?

272. Oil and gas production has been on a long-term decline on the UK Continental Shelf since 2000, but will remain of central importance to the UK's energy mix (Industrial

Strategy). Oil and gas (including pumped storage) contributed 41.8% of total UK electricity in 2018, while oil and gas extraction contributed 0.99% of Gross Domestic Product in 2017. Oil and gas also continues to be a significant provider of employment (UK energy in brief).

273. Sustainably maximising the economic recovery and transmission of oil and gas from the UK Continental Shelf (UKCS) is a priority for energy supply and security and is crucial to meeting UK energy needs during the transition to a low carbon economy (Statutory Security of Supply Report). This is also an important aspect of increasing the UK's reliance on indigenous energy sources, minimising reliance on foreign imports and thereby enhancing energy security.

274. This builds upon Marine Policy Statement (3.3.4 and 3.3.8) which refers to: 'The UK's policy objective to maximise economic development of the UK's oil and gas resources reflecting their importance to the UK's economic prosperity and security of energy supply' and 'maximising the economic recovery of UK oil and gas resource sustainably is therefore a priority in the UK's energy supply and energy security strategies'.

Policy NW-OG-1 Oil and gas

Proposals in areas where a licence for oil and gas has been granted or formally applied for should not be authorised unless it is demonstrated that the other development or activity is compatible with the oil and gas activity.

Policy aim

275. The potential to extract oil and gas is important to the UK's energy supply. However, oil and gas exploration and production may require access to the same area of seabed within existing licenses as other sector proposals. This policy safeguards areas where there are existing licenses but recognises that proposals which demonstrate compatibility with oil and gas activities may be supported.

276. The policy gives clarity on dealing with potential future conflicts with other users who may want to use the same space as oil and gas extraction activities by supporting co-existence opportunities for different users of the north west marine plan areas. This supports the UK in meeting its energy and security objectives, as activities that may impact or sterilise areas that may be used for potential oil and gas extraction would hinder the fulfilment of the objectives of the Marine Policy Statement and the UK's energy objectives. Policy NW-OG-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

277. Areas of interest to this policy include those where licences for oil and gas have been granted by the Oil and Gas Authority or formally applied for. UK oil and gas reserves are predominantly in the North and Irish Seas, with the majority of oil to the north of the continental shelf and the gas to the south. The Marine Management Organisation Sustainability appraisal scoping report notes a gas terminal at Barrow-in-Furness, and a number of oil and particularly gas fields in the north west marine plan areas.

Proponents

278. The potential for interaction between proposed oil and gas activity and current activities is addressed through existing measures, both as part of the process to identify and award licence blocks and to support application for a production licence (both requiring substantial investment) and through arrangements in place where any conflict remains. The policy wording supports that approach.

279. The Oil and Gas Authority is responsible for issuing Seaward Production and Exploration Licences, whilst the Department for Business Energy and Industrial Strategy Offshore Petroleum Regulator for Environment and Decommissioning is responsible for issuing activity specific approvals. The above organisations should be consulted when considering whether a proposal has a potential impact on current or future exploration and production of oil and gas in areas where licenses for oil and gas have been granted or formally applied for. Applicants should review the licence that has been granted and consult with the licensee to establish whether their proposal is compatible with the licensed activity as the temporal nature of certain oil and gas activities and / or the limited footprint may allow their proposal to be supported.

280. Proposals located in or around licensed blocks that have been granted or formally applied for should demonstrate how they could co-locate with any oil and gas exploration and production activities. Proposals should demonstrate measures to ensure that they do not sterilise areas in regards to the oil and gas activities covered by the licence or application for licence. Applicants should demonstrate awareness of the spatial extent of the various oil and gas activities.

281. Licensed oil and gas blocks should be safeguarded for the activities identified in the licence until the licence is surrendered, (including completion of any relevant decommissioning activity). This means that areas covered by licenses should not be sterilised against future oil and gas extraction activities. However, if this safeguarding is not preferable, such as in areas where licensed blocks and offshore wind farm Agreement for Lease areas directly overlap, agreement over co-located use should be negotiated, or suitable mitigation such as temporal measures agreed between all parties involved. Applicants should provide evidence in their proposal of the agreements reached and the engagement that this has involved.

282. Applicants should note that a consultation zone exists around all offshore helicopter destinations, and as such it is recommended that early engagement between wind energy lease holders, oil and gas developers, and petroleum licence holders occurs to enable future development plans to be discussed and to minimise the risks of unanticipated conflict at a later date.

283. Early engagement with the oil or gas licence holder is recommended as there may be requirement for negotiation between parties involved, the Oil and Gas Authority and the Department for Business, Energy and Industrial Strategy. Where conflict arises public authorities should take account of the full range of benefits and risks, the national policy on development of oil and gas resources and arrangements in place for managing conflicts.

284. In the case of conflict between oil and gas and offshore renewables, all parties involved are expected to make every reasonable effort to each a commercial agreement at the earliest stage. More detail on how such issues may be resolved between offshore wind and oil and gas is provided by the written ministerial statement made by the Secretary of State for Energy and Climate Change to Parliament on the 12th July 2011 and the subsequent Oil and Gas Clause in Crown Estate Leases guidance on procedures for independent valuation where necessary.

Decision-makers

285. This policy should be considered by decision-makers (such as Marine Management Organisation Marine Licensing) when authorising proposals and making decisions for activities within areas where licenses have been granted or applied for which may require access to the same area of seabed as future oil and gas extraction activities in the north west marine areas. Decision-makers should favour proposals that have highlighted the measures they have taken to demonstrate compatibility with oil and gas activity in their proposals, and that have provided proof of any relevant engagement and / or agreements.

286. Figure 7 shows areas where this policies applies, namely oil and gas blocks with existing awards, or those with recent provisional awards. Figure 8 shows layers of relevance to this policy, such as the existence of oil and gas fields, and existing oil and gas infrastructure such as pipelines.

Policy NW-OG-2 Oil and gas

Proposals within areas of geological oil and gas extraction potential demonstrating compatibility with future extraction activity will be supported.

Policy aim

287. Maximising economic recovery of oil and gas resources may require access to discoveries that have not yet been developed. However, future oil and gas extraction proposals may require access to the same area of seabed as other proposals. This policy safeguards areas identified as having geological potential for future oil and gas extraction by supporting proposals that take future oil and gas extraction into account.

288. The policy gives clarity on dealing with potential future conflicts with other users who may want to use the same space as oil and gas extraction activities by supporting co-existence opportunities for different users of the north west marine plan area. This supports the UK in meeting its energy and security objectives, as activities that may impact or sterilise areas that may be used for potential oil and gas extraction would hinder the fulfilment of the objectives of the Marine Policy Statement and the UK's energy objectives. Policy NW-OG-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

289. This policy applies within areas of geological oil and gas extraction potential as spatially defined by relevant layers on the Explore Marine Plans digital service. UK

oil and gas reserves are predominantly in the North and Irish Seas, with the majority of oil to the north of the continental shelf and the gas to the south. The Marine Management Organisation Sustainability appraisal scoping report notes a number of oil and particularly gas fields in the north west marine plan areas.

Proponents

290. Applicants should demonstrate awareness and consideration of the importance of maximising economic recovery of oil and gas resources, and also how evidence detailing known areas of oil and gas extraction potential have been taken into account in their proposals (such as relevant data layers on the Explore Marine Plans digital service). Proposals should demonstrate compatibility with future oil and gas extraction; preferentially they should consider demonstrating that they can co-exist with future extraction activities if there is a possibility of overlap. Other examples of how compatibility with future extraction can be demonstrated include: change in location and provision of space within the proposal area for oil and gas extraction and associated operations and infrastructure.

291. The OGA should be consulted in relation to areas of geological potential and when considering whether a proposal has a potential impact on future exploration and production of oil and gas

Decision-makers

292. This policy should be considered by decision-makers (such as Marine Management Organisation Marine Licensing) when authorising proposals and making decisions for activities within areas of geological oil and gas extraction, which may require access to the same area of seabed as future oil and gas extraction activities in the north west marine areas. Decision-makers will support proposals that have highlighted the measures they have taken to demonstrate compatibility with oil and gas activity in their proposals, and that have provided proof of doing so, such as proof of engagement.

293. Figure 8 shows areas where this policies applies, namely areas of discovered yet undeveloped oil and gas discoveries.

Signposting

294. Legislation which relates to and may support the implementation of these policies includes:

- Energy Act 2008
- Energy Act 2010
- Energy Act 2016
- Petroleum Act 1998
- Planning Act 2008

- The Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999[34]

295. Guidance and other materials which relate to and may support the implementation of these policies include:

- CAP 764: Policy and Guidelines on Wind Turbines
- Oil and Gas Authority: Licensing & consents
- Statutory security of supply report
- The Crown Estate interests

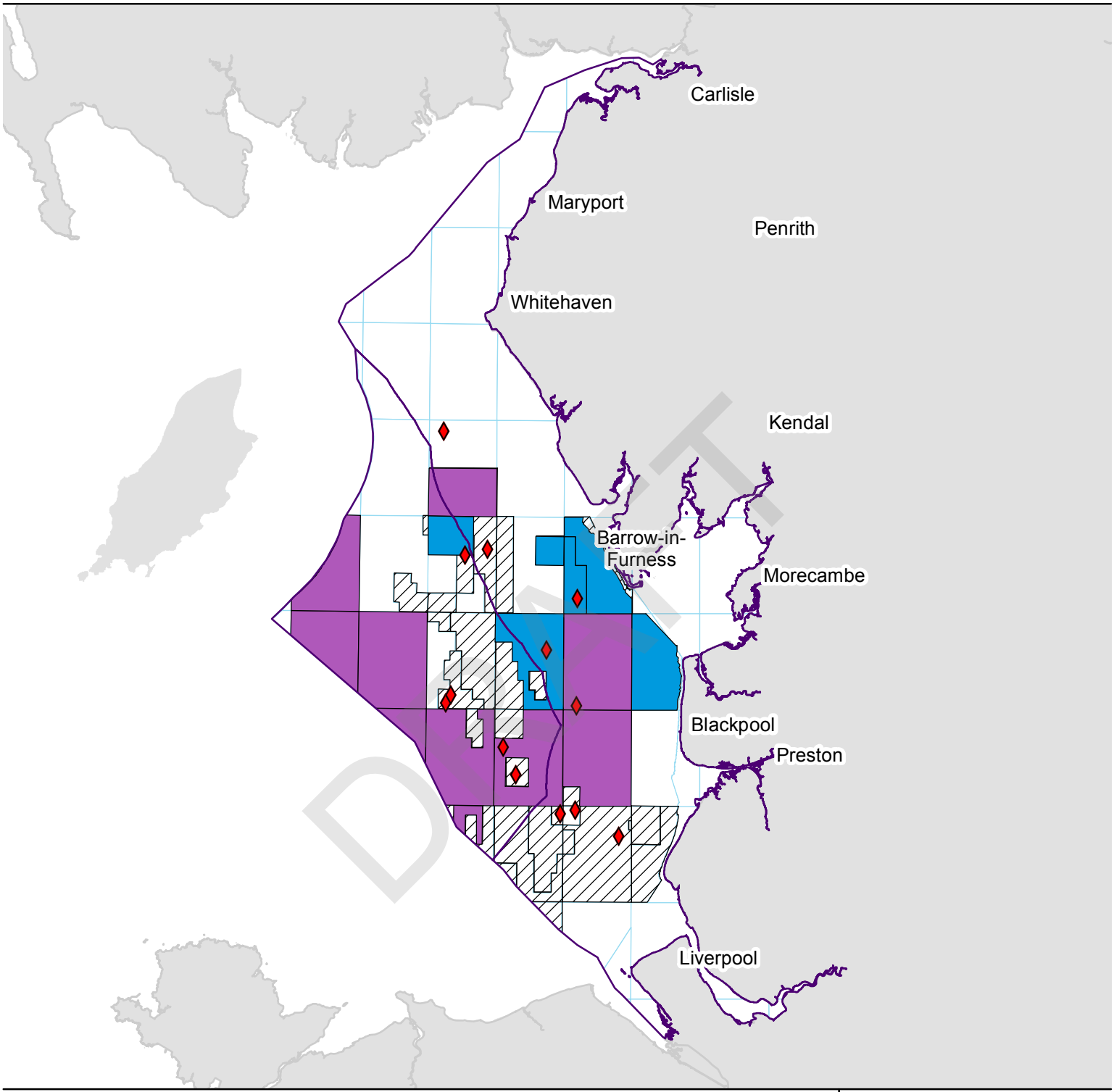
296. Existing measures which support the implementation of these policies include:

- Industrial Strategy
- National Planning Policy Framework
- National Policy Statement for Energy EN-1
- Clean Growth Strategy

[34] As amended by the Offshore Petroleum Production and Pipe-lines (Environmental Impact Assessment and other Miscellaneous Provisions) (Amendment) Regulations 2017

Marine Management Organisation

Figure 7 | Oil and Gas License Blocks and Licensing Round Awards



North West Marine Plan Areas
Undeveloped Discoveries
Current Licensed Blocks
OGA License Blocks
29th Round Provisional Awards
30th Round Provisional Awards
31st Round Provisional Awards

Policy map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
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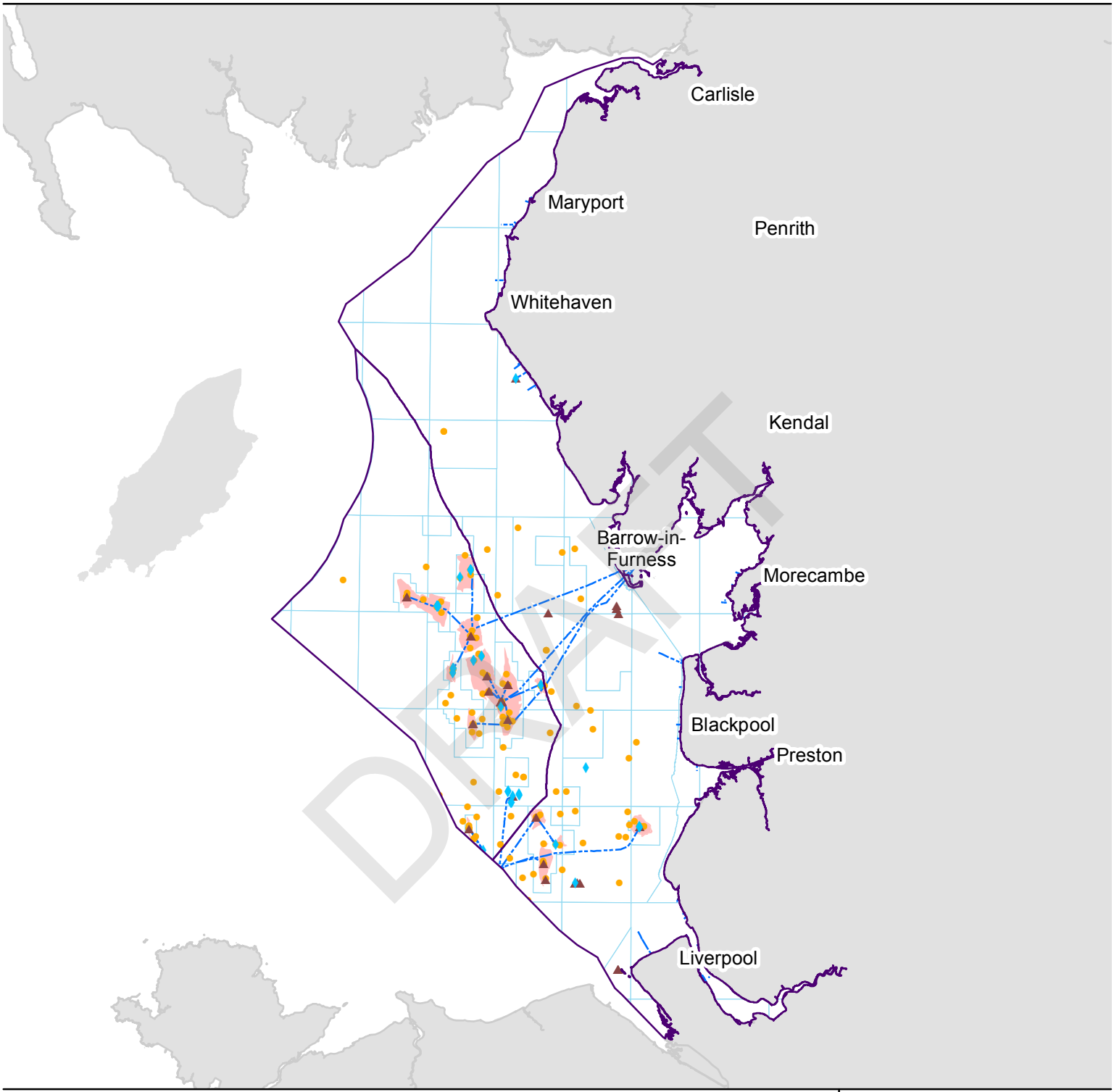
Datum: ETRS 1989

Marine Management Organisation

Figure 8 | Oil and Gas Infrastructure and Fields



North West Marine Plan Areas
Subsurface Infrastructure
Surface Infrastructure
Wells
Pipelines
Hydrocarbon Fields
OGA License Blocks

Indicative map
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5.8 Ports, harbours and shipping

Policy Code	Policy Wording
NW-PS-1	Only proposals demonstrating compatibility with current activity and future opportunity for sustainable expansion of port and harbour activities will be supported. Proposals that may have a significant adverse impact upon current activity and future opportunity for expansion of port and harbour activities must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.
NW-PS-2	Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance must not be authorised within or encroaching upon International Maritime Organization routeing systems unless there are exceptional circumstances.
NW-PS-3	Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance which encroaches upon high density navigation routes, strategically important navigation routes, or that pose a risk to the viability of passenger services, must not be authorised unless there are exceptional circumstances.
NW-PS-4	Proposals promoting or facilitating sustainable coastal and / or short sea shipping as an alternative to road, rail or air transport will be supported where appropriate.

What are ports, harbours and shipping?

297. **Ports and harbours** are essential to realising the economic and social benefits of marine resources including ports' and harbours' ability to respond to opportunities for growth. UK ports compete with each other and with European ports. This helps drive efficiencies and lowers costs for industry and consumers, contributing to the competitiveness of the UK economy (National Policy Statement for Ports). Synchronising ports' and harbours' functions requires careful planning and management to ensure efficient use of space and to support future growth.

298. **Port and harbour activities** in the north west marine plan areas include:

- facilitating recreational use
- harbour maintenance activities
- hosting of naval and research vessels
- landing of marine aggregates and fisheries products
- transport of cargo (including bulks, oil, petrol and gas, nuclear fuel, vehicles and roll-on roll-off units) and passengers
- waste and recycling management as well as bioenergy centres

299. Ports and harbours also play a role in managing their local environments (natural and historic) and often play an active role in marine and maritime related events. The location and level of shipping activity is related to the location of ports, harbours and destinations for passenger and commercial traffic. The north west marine plan area is home to significant levels of coastal, short sea and international shipping.

300. The future growth of ports and harbours is directly related to the number of vessels and / or the size of vessels using them, making their growth difficult to predict as it is responsive to global markets. Consequently, there is a need for flexibility within port and harbour operations to respond quickly to the demands of international trade based on commercial judgements in a highly dynamic and competitive market. However, growth is not the aspiration of all ports and harbours, some seek to maintain current operations and management practices with no further expansion.

301. The **International Maritime Organization** is the United Nations agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships. **International Maritime Organization routeing systems** are established to maintain navigational safety by managing shipping traffic in busy areas and / or in response to prevailing hydrographic features.

302. **High density navigation routes** are areas at sea along which shipping traffic travels. This reflects routes used by vessels of 300 gross tonnes or more, including cruise services. Passenger ferry services are regular routes for these vessels (which may or may not overlap with high density navigation routes).

303. **Strategically important navigation routes** are those routes which are essential to regional, national and international trade.

304. **Short sea shipping** is the movement of cargo and passengers by sea over short distances including along the coast between domestic ports and to and from the UK to European ports. Short sea shipping reduces congestion caused by terrestrial road transport and can provide air quality improvements through greater fuel economy and lower emissions of CO_2. Short sea shipping is one of the most sustainable and economically competitive modes of transport. There is a risk that promotion of short sea shipping could increase levels of harmful pollutants including sulphur dioxide and nitrogen oxides, which could lead to degradation of European Sites due to ocean acidification and nitrogen enrichment. Any sustainable increase in short sea shipping would have to be made with reference to policy NW-AIR-1. The government vision for the future of the British maritime sector, Maritime 2050, (particularly chapter 8) is to support a move to new environmental standards in line with the UK Clean Air Strategy.

305. **Under-keel clearance** is the minimum clearance available between the deepest point on a vessel and the bottom in still water (see Nautical and Offshore Renewables Liaison Group advice on under-keel clearance).

Why are ports, harbours and shipping important?

306. Ports in the north west inshore marine plan area play an important part in local and regional economies. As well as port related employment, by bringing together groups

of related businesses within and around the estate, ports create a cluster effect supporting economic growth by encouraging innovation and the creation and development of new business opportunities.

307. Through the National Policy Statement for Ports (3.4.16), the government has declared a compelling need for the provision of significant and sustainable additional long-term port capacity to enable economic growth in both local and regional economies. This includes proposals in support of the development of offshore renewable energy, the provision of facilities to accommodate long-term growth, encouragement of coastal shipping, and ensuring effective competition between ports (3.3.1 and 3.5.1).

308. Shipping activity in the north west marine plan areas is linked to recent industrial and economic growth of areas including the automotive industry, renewable energy and the process industries.

309. Shipping connections to global markets and the links between the North West and Ireland are part of the essential character of the north west marine plan areas. Shipping routes within the Irish Sea comprise of north-south routes along the Irish Sea and connecting routes to Ireland. Most notable are Holyhead and Liverpool to Dublin, Heysham and Liverpool to the Isle of Man and Belfast.

310. Short sea shipping in the north west plan areas is focused on the major docks and ports of Liverpool, Birkenhead, Manchester and Heysham, with smaller operations based in coastal towns such as Whitehaven, Workington, Silloth, Barrow and Garston (this is not an exhaustive list).

311. New activities in the north west marine plan areas should afford protection to safe and competitive shipping, particularly where high density navigation routes, strategically important navigation routes and / or passenger ferry services are identified.

312. The Marine Policy Statement (3.4.7 and 2.3.1.1) states that 'marine plan authorities and decision-makers should have regard to and seek to minimise any negative impacts on shipping activity, freedom of navigation and navigational safety and make sure that their decisions are in compliance with international maritime law. The National Policy Statement for Renewable Energy Infrastructure (2.6.161) states that Nationally Significant Infrastructure Projects should not be '... grant[ed] development consent in relation to the construction or extension of an offshore wind farm... [if] interference with the use of recognised sea lanes essential to international navigation is likely to be caused by the development'.

313. Vessel diversions, which may arise from direct displacement by permanent or non-permanent development or activities, are likely to have a negative impact on the industry for example increasing operational costs due to increased use of fuel. Additionally, requirements to reduce sulphur emissions may lead to an increase in sea transport costs, reducing competitiveness of short sea shipping and potentially affecting income for ports. See the government's Clean Air Strategy 2019 (5.1), the 25 Year Environment Plan (chapter 4) and the National Policy Statement for Ports (5.7.3).

Policy NW-PS-1 Ports, harbours and shipping

Only proposals demonstrating compatibility with current activity and future opportunity for sustainable expansion of port and harbour activities will be supported.

Proposals that may have a significant adverse impact upon current activity and future opportunity for expansion of port and harbour activities must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts
d) if it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding.

Policy aim

314. Ports and harbours are essential to realise economic and social benefits for the marine plan areas and the UK. NW-PS-1 makes sure proposals do not restrict current port and harbour activity or future growth, enabling long-term strategic decisions, and supporting competitive and efficient port and shipping operations. Policy NW-PS-1 applies to the inshore marine plan area only.

315. NW-PS-1 provides clarity on how the economic interests of ports and harbours should be protected and makes sure new development does not restrict current activities or future growth. This policy protects the efficiency and resilience of continuing port operations, and further port development (Marine Policy Statement 3.4.7). Support for the sustainable development of ports (increase in shipping activity) is supported by the Marine Policy Statement (3.4.10). This policy also complements and supports the National Policy Statement for Ports, setting provisions for port growth in the context of the management and development of other activities. Policy NW-PS-1 supports the government policy for ports (National Policy Statement for Ports 3.3). It is recognised that although not all ports are able, or wish to grow physically, there will remain a need to be commercially viable through adaptation, change, and diversification. Also recognised is the need to ensure safe navigation both within and in the approaches to ports, both at the present time and into the future. This policy supports continued port maintenance and repairs, diversification and other sustainable port development which contribute to long-term economic growth and prosperity.

How will this policy be implemented?

Proponents

316. Proposals should demonstrate that they will, in order of preference, avoid, minimise or mitigate significant adverse impact upon current activity and future opportunity for expansion of port and harbour activities. Proposals cannot proceed to b) unless they have first demonstrated why they cannot meet a) and likewise cannot proceed to c) unless they have first demonstrated why they cannot meet a) and b). Where it is not possible to mitigate significant adverse impacts, proposals should state the case for

proceeding, d), including how the proposal supports the North West Marine Plan vision, objectives and other plan policies. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

317. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that results in the change of authorisation or authorisation conditions, and that is subject to management by public authorities.

318. Proposals should demonstrate that they have considered the resilience of ports and harbours to changing markets and international needs. Proposals that significantly impact on port capacity (present or future) must demonstrate how they will avoid, minimise or mitigate such impacts, or show how the benefits of the proposal will outweigh any harm.

319. Proposals should demonstrate that relevant ports and harbours have been consulted and their current activities and future growth considered irrespective of what the local status of the port is. As this policy may apply more widely than Statutory Harbour Areas, proposals should identify all ports and harbours that may be affected and engage with them early in proposal development. This should include the matters listed in these plans but may also include other considerations such as anchorages and approach channels.

Decision-makers

320. Public authorities should ensure that proposals demonstrate that they will, in order of preference, avoid, minimise or mitigate significant adverse impact upon current activity and future opportunity for expansion of port and harbour activities.

321. Proposals cannot proceed to b) unless they have first demonstrated why a) cannot be met, c) unless they have demonstrated b) cannot be met and d) unless they have demonstrated that c) cannot be met.

322. Decision-makers will have regard to a range of relevant considerations including compliance with legislation, regulations and environmental assessment.

323. Figure 9 outlines important areas where this policy should be applied. It includes navigational approaches, harbour administrative areas and anchoring areas. This should not be considered definitive. For example, in understanding where future port or harbour use may need to be accommodated, developments and other activities should also have regard to access and approach channels into ports.

324. Figure 9 should not be considered in isolation and any interpretation is subject to review with neighbouring port or harbour authorities to make sure navigation channels are considered in their entirety. This is necessary as navigation channels are maintained by licenced and natural processes. It may be that areas maintained by natural processes are subject to capital and maintenance dredging in the future

as port requirements are identified. Where they exist, port and harbour master plans and their descriptions of future development should be referred to.

325. Figure 9 can also be used to identify potential future development as it shows existing licenced dredging and disposal areas, which can indicate future capital dredging and thereby port development. Please visit the Explore Marine Plans digital service for up-to-date versions of these maps.

Policy NW-PS-2 Ports, harbours and shipping

Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance must not be authorised within or encroaching upon International Maritime Organization routeing systems unless there are exceptional circumstances.

Policy aim

326. Within the north west marine plan areas there are International Maritime Organization routeing systems which are essential for shipping activity, freedom of navigation and navigational safety. NW-PS-2 confirms that proposals that compromise these important navigation routes should not be authorised. NW-PS-2 enables and supports safe, profitable and efficient marine businesses.

327. NW-PS-2 specifies that developments should not be authorised where use of International Maritime Organization routeing systems may be compromised. Authorisation of proposals that impact upon use of International Maritime Organization routeing systems are very rare. Policy NW-PS-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

328. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that results in the change of authorisation or authorisation conditions, and that is subject to management by public authorities.

329. This policy will apply to proposals requiring static infrastructure that may have a presence at the sea surface and / or may reduce under-keel clearance to the extent that it will impact on vessel traffic. The areas involved are beyond the intertidal area and outside port and harbour authority limits and include activities that may encroach upon buffer zones around International Maritime Organisation routes.

330. This policy recognises existing designations for navigation whilst acknowledging the ability to co-locate with many sea bed related and non-permanent activities.

331. Proposals should demonstrate that they have consulted and are in agreement with the Maritime and Coastguard Agency to define ‘significant’ reduction of under-keel clearance in relation to their proposal during the scoping process.

332. Mid water structures may also impose restrictions on navigation. Development of such structures or the intent to do so within International Maritime Organization routeing systems in the north west marine plan areas have not been identified.

333. This policy does not preclude non-permanent static sea surface infrastructure for example jack-up vessels, which are subject to operational requirements such as notifications to mariners to ensure safe operation. The policy does not discount International Maritime Organization routeing and reporting systems changing in the future.

Decision-makers

334. The policy will mainly be implemented by the Marine Management Organisation. Other government departments may also implement this policy, as per the Planning Act 2008, including, but not limited to, the Maritime and Coastguard Agency and Trinity House.

335. Figure 9 shows the areas where NW-PS-2 policy applies.

Policy NW-PS-3 Ports, harbours and shipping

Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance which encroaches upon high density navigation routes, strategically important navigation routes, or that pose a risk to the viability of passenger services, must not be authorised unless there are exceptional circumstances.

Policy aim

336. The north west marine plan areas are very busy with respect to high density navigation routes, strategically important navigation routes and passenger services. NW-PS-3 confirms that proposals that pose a risk to safe navigation or the viability of these routes and services should not be authorised. NW-PS-3 aims to protect these routes and services by enabling and promoting safe, profitable and efficient marine businesses.

337. NW-PS-3 focuses on minimising negative impacts on shipping activity, protecting the economic interests of ports, shipping and the UK economy overall, affording protection to the areas used by high intensities of traffic (Marine Policy Statement (3.4.2)). It also gives effect to provisions in the National Planning Policy Framework (Section 37) which aims to encourage sustainable transport. Policy NW-PS-3 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

338. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that results in the change of authorisation or authorisation conditions, and that is subject to management by public authorities.

339. This policy will apply to all proposals requiring static sea surface infrastructure or above surface structures that may encroach upon high density navigation routes, strategically important navigation routes or that may cause a risk to the viability of passenger ferry services. For example, infrastructure at the sea surface and / or below/above that reduces under-keel or overhead clearance. This approach recognises the ability to co-locate with sea bed located and non-permanent activities.

340. This policy should be implemented in high density navigation routes or strategically important navigation routes that begin on the landward side at the boundaries of harbour administrative areas and / or areas within International Maritime Organization routeing systems. This does not include non-routine traffic such as fishing vessels, military vessels, tugs, dredgers and recreational vessels. Each proposal will be treated on its own merits, with measures such as navigational risk assessments undertaken as required.

341. Proposals should:

- be compatible with the need to maintain space for safe navigation, avoiding adverse impacts
- anticipate and provide for future safe navigational requirements where evidence and / or stakeholder input allows
- account for impacts upon navigation in combination with other existing and proposed activities

342. Proposals should demonstrate that they have consulted harbour and other navigation authorities (including Trinity House), port operators, public authorities (including the Maritime and Coastguard Agency), and commercial shipping representation (including the UK Chamber of Shipping). Where a proposal may impede navigation or expected growth they should also consult with other relevant navigation and shipping representatives.

Decision-makers

343. The policy will mainly be implemented by the Marine Management Organisation. Other government departments may also implement this policy, such as the Department for Business, Energy and Industrial Strategy in the case of energy related Nationally Significant Infrastructure Projects where marine plans are a consideration (Planning Act 2008 and National Policy Statement for Renewable Energy Infrastructure (EN‑3)).

344. Figure 9 shows high density navigation routes and passenger services in the north west inshore marine plan area. Figure 10 shows the economic value of shipping routes.

Policy NW-PS-4 Ports, harbours and shipping

Proposals promoting or facilitating sustainable coastal and / or short sea shipping as an alternative to road, rail or air transport will be supported where appropriate.

Policy aim

345. Short sea shipping provides a sustainable alternative for the transport of goods. NW-PS-4 aims to support sustainable coastal or short sea shipping where appropriate as an alternative to road, rail or air methods. Policy NW-PS-4 applies to the inshore and offshore marine plan areas.

346. Short sea shipping is important as a means of both distributing goods brought into ports by growing numbers of ultra large container ships and through direct movements of smaller bulk materials. Policy NW-PS-4 supports the government policy for ports (National Policy Statement for Ports 3.3.5, 3.1.4 and 3.4.14). The short sea shipping market is expected to grow as a sustainable alternative to the transport of goods by road or rail, providing a flexible and specialised service. There are however, a number of factors to consider in what is a price sensitive market (see, for example, Clean Maritime Plan paragraph 98). In particular the relative lower costs of road transport, time constraints on delivery of goods and the availability of government subsidies.

347. NW-PS-4 encourages short sea shipping as a sustainable alternative to road, rail or air transport, lowering CO_2 emissions and reducing road congestion. Bulk volumes are moved quickly with a reduction in administrative burden and increased efficiency through economies of scale. Short sea routes also allow the transhipment of cargo from large vessels landing into major European ports to the UK, reducing costs, improving reliability and allowing smaller ports to expand through the establishment of increased numbers of short sea shipping routes where suitable.

348. The types of cargo currently carried by short sea shipping in the north west plan areas include (but is not limited to):

- landing of marine aggregates and fisheries products
- materials to support fabrication and storage of renewable energy components, waste and recycling management as well as bioenergy centres
- transport of cargo (including bulks, vehicles and roll-on roll-off units) and passengers

How will this policy be implemented?

Proponents

349. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that results in the change of authorisation or authorisation conditions, and that is subject to management by public authorities.

350. Proposals that promote short sea shipping will be supported where appropriate and provided they comply with all other relevant legal and environmental regulations, and all other relevant legislation.

351. It is likely that the primary driver of this policy will be from the ports and harbour sector when considering expanding operations or increasing capacity of trade into

ports. This is an enabling policy designed to apply to all ports and harbours to facilitate growth without giving an advantage to any one port over another. All proposals should demonstrate that all relevant ports, wharfs and harbours, and port master plans have been considered. As this policy may apply more widely than Statutory Harbour Areas, proposals should identify all ports and harbours that may be affected and engage with them early in proposal development. This should include the matters listed in these plans but may also include other considerations such as safeguarding anchorages which may be restricted through port expansion. Consideration of necessary terrestrial infrastructure requirements will be required, through reference to the relevant local planning authority local plan.

352. This policy provides support to the efficiency and resilience of continuing port operations, and further port development (Marine Policy Statement (3.4.7)). This policy also complements the National Policy Statement for Ports, setting provisions for port growth in the context of the management and development of other activities including the growth of short sea shipping.

Decision-makers

353. Decision-makers will take have regard to of a range of relevant considerations including compliance with legislation, regulations and environmental assessment.

354. Figure 9 outlines important areas where this policy should be applied. It includes navigational approaches, harbour administrative areas and anchoring areas. This should not be considered definitive. For example, in understanding where future port or harbour growth in short sea shipping may need to be accommodated, developments and other activities should also have regard to access and approach channels into ports.

355. Figures 11 and 12 highlight short sea shipping routes in the north west inshore marine plan area.

Signposting

356. Legislation which relates to and may support the implementation of these policies includes:

- Harbours Act 1964
- Merchant Shipping Act 1995
- Planning Act 2008

357. Guidance and other materials which relate to and may support the implementation of these policies include:

- 25 Year Environment Plan
- Clean Air Strategy 2019
- Clean Growth Strategy
- Clean Maritime Plan
- Maritime 2050
- Maritime and Coastguard Agency - Offshore Renewable Energy Installations: impact on shipping

- National Planning Policy Framework

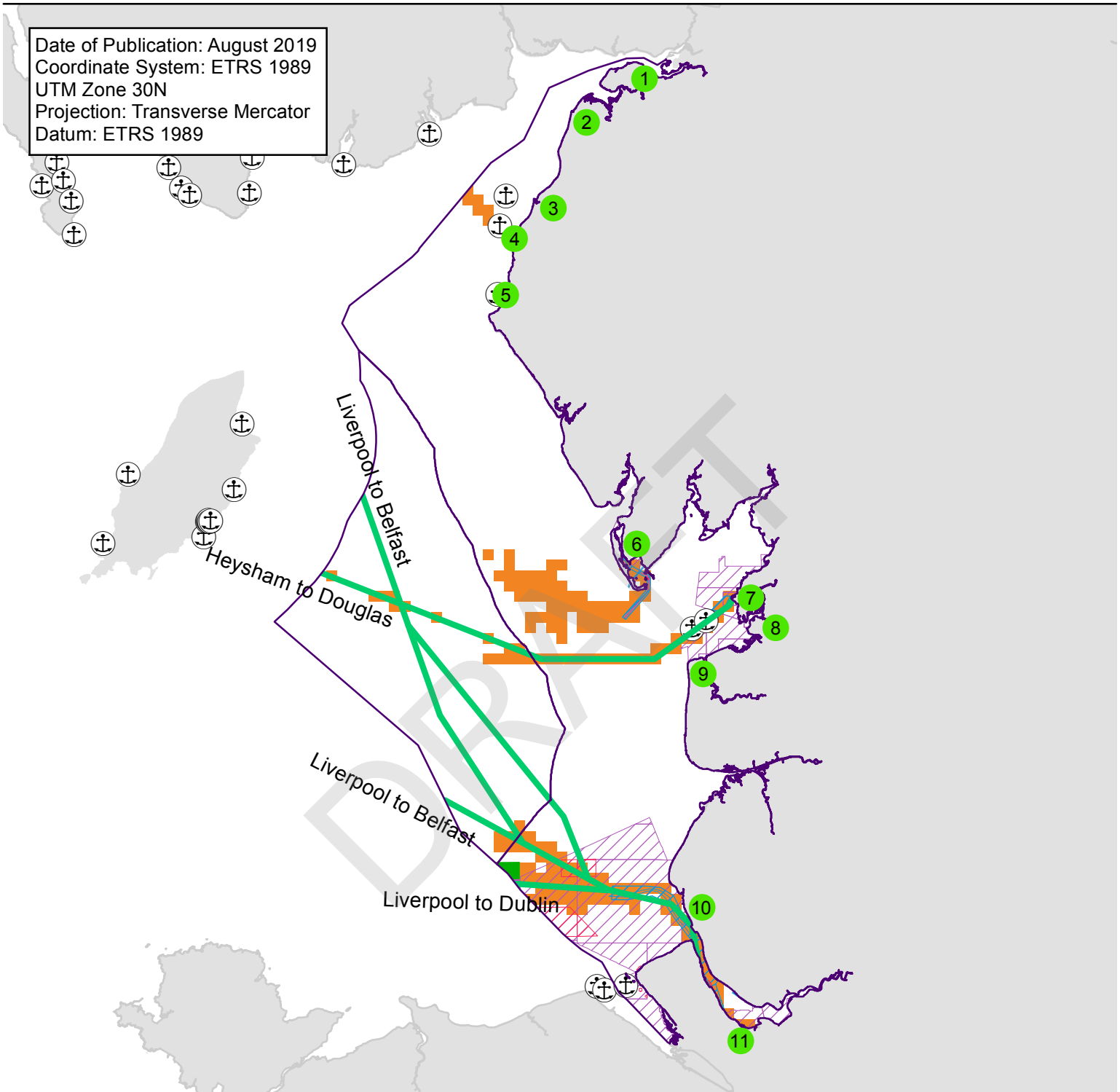
- National Policy Statement for Ports
- National Policy Statement for Renewable Energy Infrastructure
- Nautical and Offshore Renewables Liaison Group advice on under-keel clearance
- Relevant port and harbour master plans
- Transport Infrastructure for our Global Future – Department for Transport 2017
- UK maritime and shipping statistics

358. Existing measures which support the implementation of these policies include:

- International Maritime Organisation Global Integrated Shipping Information System

Marine Management Organisation

Figure 9 | Ports and Shipping



North West Marine Plan Areas
Anchorage area
Anchoring Area
Harbour Administrative Areas
Navigational Approaches
High Density Navigation Routes
Vessel Transit within IMO Routeing Systems
IMO Routeing Systems
Passenger Ferry Services

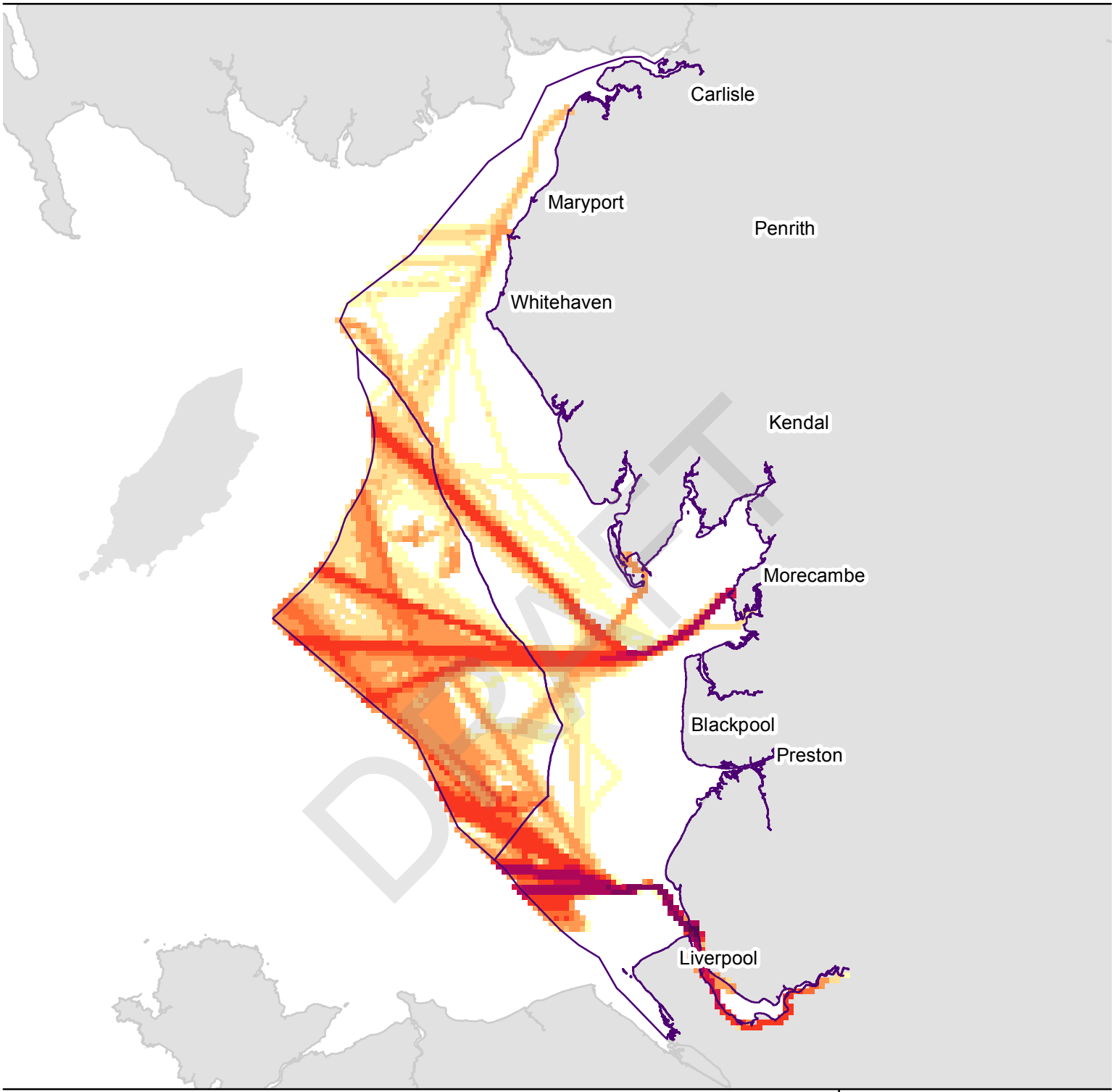
Policy map
This map is to be used for reference only.

Ports

1 Port Carlisle
2 Silloth
3 Maryport
4 Workington
5 Whitehaven
6 Barrow-in-Furness
7 Heysham
8 Glasson Dock
9 Fleetwood
10 Seaforth
11 Ellesmere Port

Marine Management Organisation

Figure 10 | Economic Value of Shipping Routes



North West Marine Plan Areas

Weekly Shipping Value Scaled (£)

<100K	1M - 5M	50M - 100M	>1Bn
100K - 500K	5M - 10M	100M - 500M	
500K - 1M	10M - 50M	500M - 1Bn	

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Figure 11 | Short Sea Shipping Routes

AIS Ship type groups (STG) 1, 2 and 6

Indicative map
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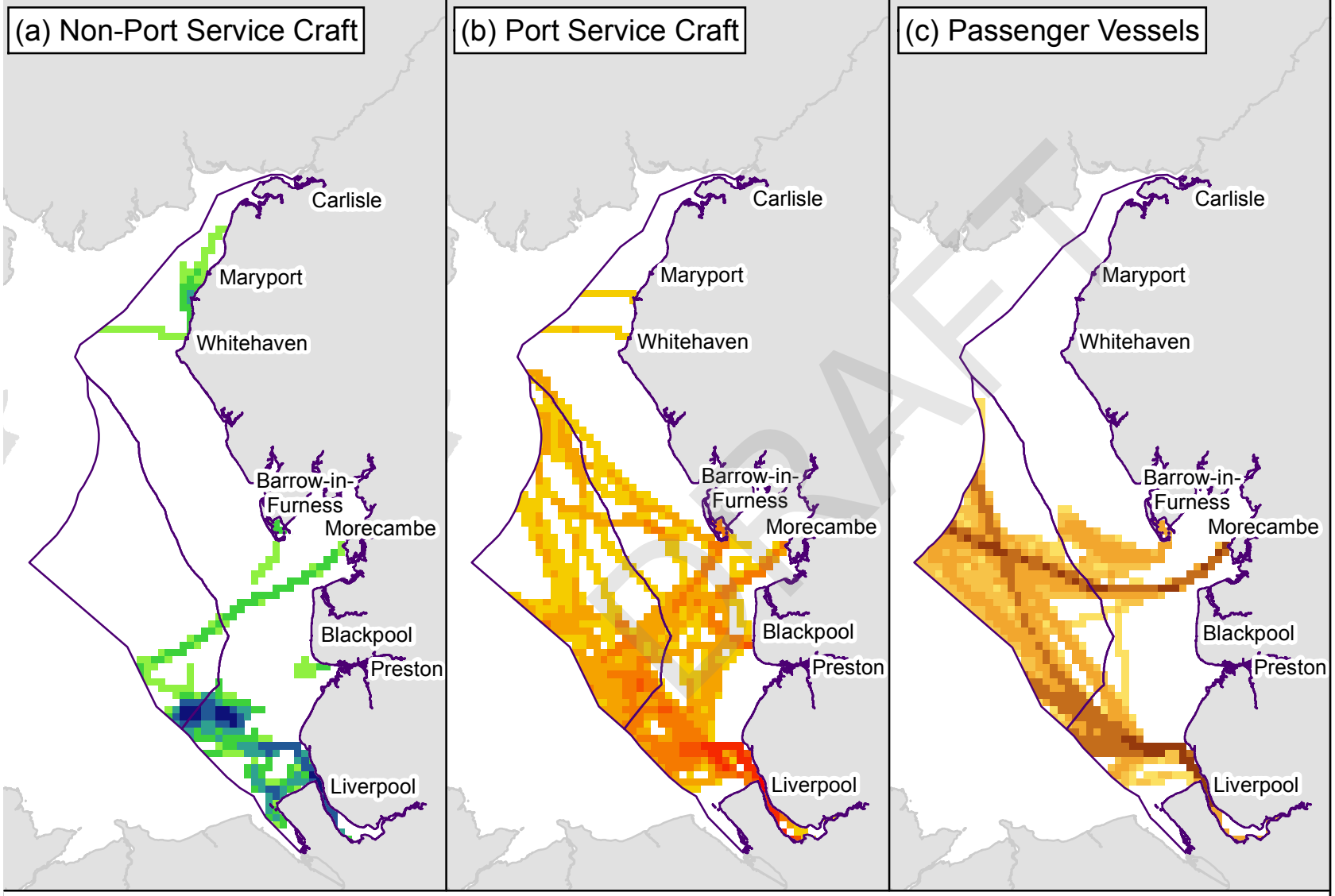

North West Marine Plan Areas

No. Vessels (Annual Average Estimated - AIS Density 2015)

Non-Port Service Craft

- 0 < 5
- 5 < 23
- 23 < 110
- 110 < 515
- 515 < 2422

Port Service Craft

- 0 < 4
- 4 < 25
- 25 < 137
- 137 < 759
- 759 < 4193
- 4193 < 23162

Passenger Vessels

- 0 < 4
- 4 < 30
- 30 < 207
- 207 < 1411
- 1411 < 9614
- 9614 < 65503

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Marine Management Organisation

Figure 12 | Short Sea Shipping Routes

AIS Ship type groups (STG) 7, 8 and 10

Indicative map
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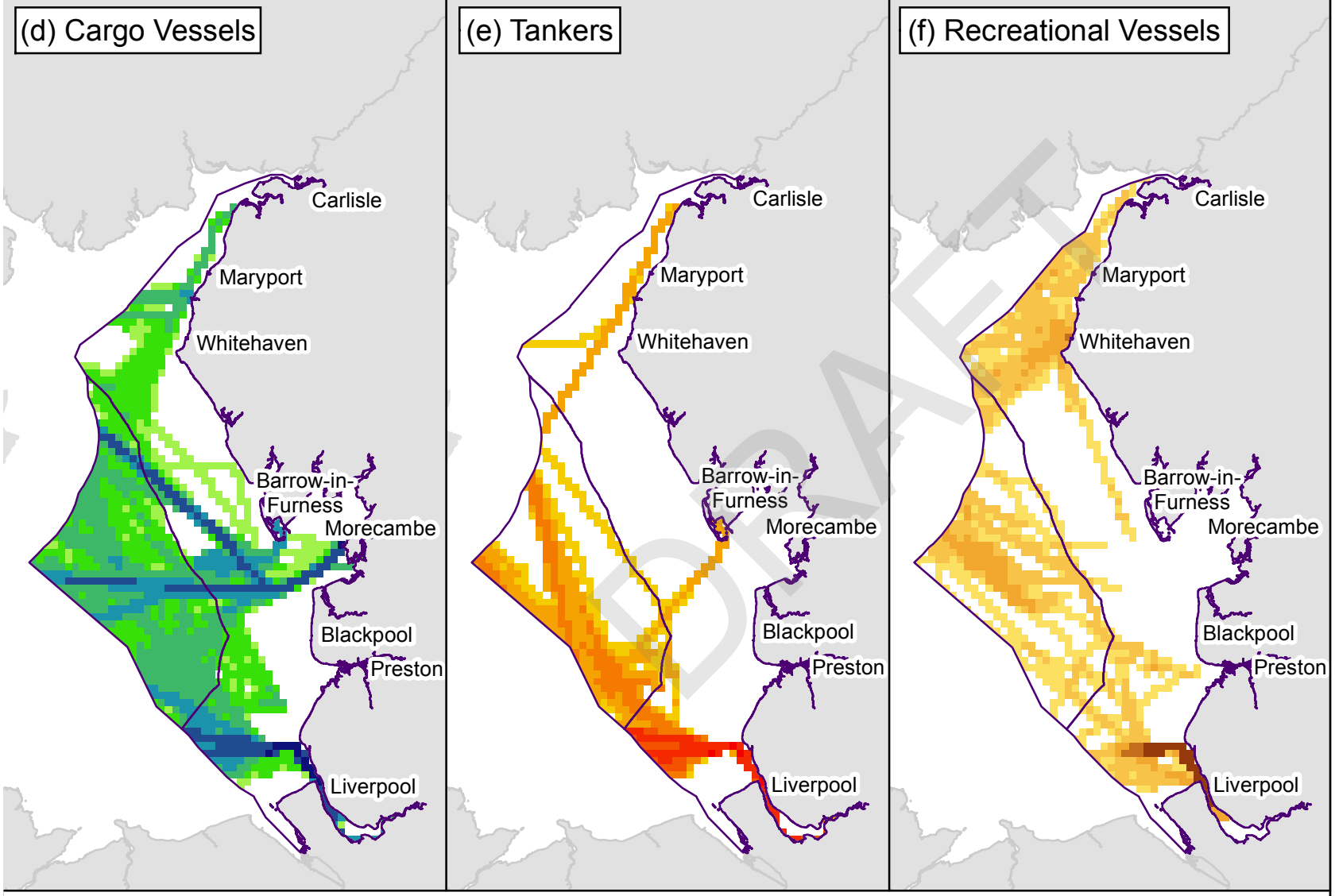

North West Marine Plan Areas

No. Vessels (Annual Average Estimated - AIS Density 2015)

Cargo Vessels

- 0 < 9
- 9 < 42
- 42 < 193
- 193 < 894
- 894 < 4127
- 4127 < 19045

Tankers

- 0 < 4
- 4 < 22
- 22 < 104
- 104 < 496
- 496 < 2357
- 2357 < 11206

Recreational Vessels

- 0 < 4
- 4 < 28
- 28 < 174
- 174 < 1082
- 1082 < 6739
- 6739 < 41964

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5.9 Renewables

Policy Code	Policy Wording
NW-REN-1	Proposals that enable the provision of renewable energy technologies and associated supply chains, will be supported.
NW-REN-2	Proposals for new activity within in areas held under a lease or an agreement for lease for renewable energy generation should not be authorised, unless it is demonstrated that the proposed development or activity will not reduce the ability to construct, operate or decommission the existing or planned energy generation project.
NW-WIND-1	Proposals for offshore wind inside areas of identified potential will be supported

What are renewables?

359. **Offshore renewable energy** is currently dominated by fixed foundation offshore wind. There are a number of technologies, and associated supply chains, at various stages of the development lifecycle within the English marine area that could achieve commercial scale deployment within the 20 year vision of the North West Marine Plan.

360. Offshore wind is the use of wind turbines constructed in bodies of water to harvest wind energy to generate electricity. The Crown Estate owns almost the entire seabed out to 12 nautical miles and has powers to lease areas in the United Kingdom (with the exception of Scotland) Exclusive Economic Zone to generate electricity from wind. It has run a number of offshore wind leasing rounds using its powers under the Energy Act 2004. Round 1 and 2 were leased in December 2000 and July 2003 respectively. In 2009 The Crown Estate invited developers to bid for exclusive rights to develop Offshore Wind Farms in nine zones around the United Kingdom. Projects have then entered the planning process within the Round 3 zones. Within the North West Marine Plan Area there are three operational Round 1 sites (Barrow, Ormonde and Burbo Bank), three Round 2 sites (Walney 1, Walney 2 and West of Duddon Sands) and three extensions (Burbo Bank, Walney 3 and Walney 4).

361. The Crown Estate also leases areas for demonstration projects. These developments are usually small scale and aim to allow manufacturers to test and prove new wind farm technologies. The aim of these demonstration projects is to help to reduce costs to the offshore wind industry.

362. Although not currently commercially deployed floating wind is an emerging technology that is currently undertaking small scale testing within UK waters.

363. Tidal stream devices capture the kinetic energy embodied in fast flowing tidal streams to generate electrical energy. The best sites are mostly where tidal currents are increased by the funnelling effect of the local coastal topography, such as the space between mainland and islands. Tidal stream devices have been prototyped, but none have been commercially deployed in the north west.

364. Tidal range captures the potential energy available from the rise and fall of the tides in locations where there is a large tidal range. Electrical energy can be generated from both ebb and flow tides by creating an impoundment wall in which large turbines (typically bulb turbines which are used in river hydro-power installations) are installed. There are currently no tidal range energy generating stations in the north west.

365. Wave energy is captured by devices on or below the sea surface that use the energy inherent in waves to generate electricity. Energy generation is dependent on wave height, speed and length. A range of different technologies have been proposed, however commercial deployment has not yet occurred in the north west.

Why are renewables important?

366. The government's Clean Growth Strategy sets out an ambition to reduce emissions from the power sector to zero by 2050 and to grow renewables and nuclear to over 80% of electricity generation. The UK has committed to reducing greenhouse gas emissions to net zero by 2050. The Offshore Wind Sector Deal seeks to maximise the wider benefits of offshore wind with an ambition to build up to 30 GW of offshore wind by 2030. The Sector Deal also seeks to boost investment in the wider supply chain, with an increase to 60% UK content by 2030.

367. The Marine Policy Statement (3.3.5) requires marine planning to take account of preferred areas for development of different energy sources and their generation and distribution infrastructure. In England, consent for offshore wind energy projects are granted by the Marine Management Organisation (projects <100 MW) and the Secretary of State's Representative for the Department of Business, Energy and Industrial Strategy (projects >100 MW). Developers also require a seabed lease from The Crown Estate.

368. More information on the leasing and consenting process for renewable energy can be found in the National Policy Statement for Energy Infrastructure EN-1, EN-3 and EN-5. These documents provide the primary basis for decision-making in relation to Offshore Wind Farms over 100 MWs including assessment of impacts on biodiversity, other activities and social receptors on land and offshore.

369. The UK supply chain plays an important role in developing technology, driving down associated costs of infrastructure and realising the economic and social benefits of renewable energy to the UK economy. The Marine Policy Statement (3.3.19) states that 'Expansion of the offshore wind [energy] supply is likely to require significant investment in new high value manufacturing capability with potential to regenerate local and national economies and provide employment'. The value of supply chains to cost reduction is identified in the Clean Growth Strategy.

370. The Electricity Market Reform recognises the role of Nationally Significant Infrastructure Projects in influencing supply chains and encourages greater competition and diversification in the supply chain by identifying important tender dates for all projects over 300 MW through a supply chain plan.

Policy NW-REN-1 Renewables

Proposals that enable the provision of renewable energy technologies and associated supply chains, will be supported.

Policy aim

371. Supply chains play an important role in developing technology, reducing associated costs of infrastructure and realising the economic and social benefits of renewable energy to the UK economy. NW-REN-1 recognises the importance of the supply chain within the lifecycle of renewable energy projects. NW-REN-1 enables public authorities to support proposals that will reduce costs, ensuring that businesses are operating competitively and with a long term strategy. Policy NW-REN-1applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

372. Proposals should demonstrate that they will contribute to the development or creation of supply chains associated with renewable energy. For example, the development of blade manufacturing plants or the provision of facilities or services to test emerging technologies.

373. The Marine Management Organisation report 'Maximising the socio-economic benefits of marine planning for English coastal communities' identifies and highlights areas of coastal challenge typology that could benefit from renewable energy development. Coastal typologies differentiate between different types (or categories) of coastal area on the basis of their socio-economic characteristics. Although every coastal community has a unique combination of characteristics, the typology helps group together those areas with similar characteristics on important indicators, for which particular planning developments and policy initiatives may be appropriate. Typologies identified within the north west inshore marine plan area are a probable good fit for energy development including B1 structural shifters, B2 new towns and ports and B3 striving communities.

374. Proposals could include community owned installations and should ensure that local needs and resource availability have been assessed.

375. The above is dependent on the ability of the location to capture wider elements of the supply chain processes within the local economy. Appropriate technology is also dependent on resource availability (Figure 13) and should be implemented in accordance with requirements identified in local plans. Numerous sub-national policy documents offer differing levels of support for renewable energy and associated industries, including the Blackpool Local Plan, South Lakeland Local Plan and Liverpool Local Plan.

376. Proposals will still be required to be in compliance with relevant legislation and regulations including Habitat Regulations Assessment, Environmental Impact Assessment and with relevant National Policy Statements.

Decision-makers

377. Decision makers should ensure that support is given to proposals demonstrating that they enable the provision of the renewable energy technologies and associated supply chains.

378. A demonstration of this may include, but is not limited to:

- assessment of local needs and resource availability
- evidence of a contribution to, or development of, supply chains associated with renewable energy
- provision of test facilities for emerging technologies

379. Proposals will still be required to be in compliance with relevant legislation and regulations including Habitat Regulations Assessment, Environmental Impact Assessment and National Policy Statements for Energy Infrastructure.

380. Figure 13 shows areas of identified high potential for offshore wind, based on technical feasibility considerations and additional constraints analysis. See NW-WIND-1 policy for further details on the methodology this mapping is based on.

381. Figure 14 shows areas identified as under lease or agreement for lease for renewable energy generation in the north west marine plan areas

Policy NW-REN-2 Renewables

Proposals for new activity within in areas held under a lease or an agreement for lease for renewable energy generation should not be authorised, unless it is demonstrated that the proposed development or activity will not reduce the ability to construct, operate or decommission the existing or planned energy generation project.

Policy aim

382. Renewable energy technologies contribute to the diversification and decarbonisation of the electricity grid. NW-REN-2 provides protection to areas identified for energy developments from other activities that could affect the sites ability to generate energy. It enables the development of safe, profitable and efficient marine businesses. Policy NW-REN-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

383. Areas identified in Figure 14 have already received either a lease or agreement for lease. Any new activities within these areas are required to demonstrate that they will not reduce the areas' ability to construct, operate or decommission the planned energy generation project in a safe, profitable and efficient manner. Supporting evidence to demonstrate this could include, but is not limited to:

- evidenced justification that the proposed activity will be compatible with the form of renewable energy generation for which the lease or agreement for lease have been granted.
- evidence showing the footprint of the proposal will not have a negative impact on the renewable energy sites ability to generate energy
- undertaking the conflicting activity during periods of no energy generation with the permission of the rights holder
- consultation with all relevant stakeholders, asset and land owners (frequently The Crown Estate in England)

384. Activities more likely to impact upon an areas ability to generate renewable energy include, but are not limited to, hard infrastructure that is installed at any point through the water column either on or under the sea bed.

Decision-makers

385. Decision makers should consider the location of activities against Figure 14 to determine whether the proposal has correctly identified the policy as applicable.

386. Where proposals are within areas identified in Figure 14 (and the policy is therefore applicable), consideration should be given as to whether the proposal demonstrates compatibility with renewable energy generation. This means that the new proposal will not reduce the areas' ability to construct, operate or decommission the planned energy generation project in a safe, profitable and efficient manner. Supporting evidence to demonstrate this could include, but is not limited to:

- an evidenced justification that the proposed activity will be compatible with the form of renewable energy generation for which a lease or agreement for lease has been granted.
- evidence showing the footprint of the proposal will not have a negative impact on the renewable energy sites ability to generate energy
- undertaking the conflicting activity during periods of no energy generation with the permission of the rights holder
- evidence of pre-application consultation with relevant public authorities or project developers

387. Figure 13 shows areas identified as under lease or agreement for lease for energy generation in the north west marine plan areas. This data is subject to review as new projects move through the consenting process

388. Figure 14 shows areas of identified high potential for future offshore wind. This data is subject to review as new technologies and new information regarding technical feasibility and constraints becomes available.

Policy NW-WIND-1 Renewables

Proposals for offshore wind inside areas of identified potential will be supported.

Policy aim

389. Offshore wind is the current favoured offshore renewable energy generating technology in the UK. NW-WIND-1 highlights areas of lower constraint for offshore wind energy generation and indicates potential future areas for leasing. NW-WIND-1 supports the identification of future leasing rounds and provides a level of certainty for other activities as to where future development may occur.

390. Figure 13 identifies the portion of the plan area that has high potential for future development of offshore wind. The report Marine Management Organisation 1210 'Offshore Wind Resource Mapping Methodology' outlines the methodology used in 2016 to define areas that at the time of analysis were relatively cost effective and less constrained for the development of fixed foundation offshore wind. This policy is in place to facilitate the identification of sites for future offshore wind development. The dataset supporting this policy reflects the current understanding of areas with high potential, incorporating the original constraints analysis (see methodology report). These spatial areas will be updated, as required, based on improved understanding of constraints and technical advancements, including new technologies. Policy NW-WIND-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

391. Applicants with proposals for offshore wind should identify whether they are inside an area of identified potential. To do so, consideration against Figure 13 should be given.

392. Applicants should consider consulting The Crown Estate for site specific enquires or the Department for Business, Energy and Industrial Strategy for queries on Contracts for Difference or other funding mechanisms.

393. Proposals will still be required to be in compliance with relevant legislation and regulations including Habitat Regulations Assessment, Environmental Impact Assessment and with relevant National Policy Statements for Energy Infrastructure . Prospective applicants should consider consulting Natural England and / or the Joint Nature Conservation Council regarding potential compatibility of planned proposals with marine and coastal conservation objectives.

Decision-makers

394. This policy will be applied by public authorities to ensure that the large potential for offshore wind farms and the ambitions of government for renewable energy are realised.

395. Decision-makers should support proposals for the development of offshore wind farms and any supporting projects, including associated infrastructure, inside areas

identified as potential for offshore wind (see Figure 13 for resource location). However this does not preclude the possibility that it may be appropriate to support a proposal for a project located outside this area.

396. This does not preclude other activities from applying for seabed leases in this area (the area identified by the polygon is not exclusively for offshore wind)

397. Public authorities should work in conjunction with the offshore wind farm developer, the Department for Business Energy and Industrial Strategy's Secretary of State (who will determine offshore wind farm proposals over the 100 MWs threshold[35]) and/or the Planning Inspectorate.

398. Proposals will still be required to be in compliance with relevant legislation and regulations including Habitat Regulations Assessment, Environmental Impact Assessment and National Policy Statements for Energy Infrastructure.

399. Figure 13 shows areas of future potential offshore wind.

Signposting

400. Legislation which relates to and may support the implementation of these policies includes:

- The Climate Change Act 2008
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- The Promotion of the Use of Energy from Renewable Sources Regulations 2011
- The Renewable Transport Fuel Obligations Order 2007

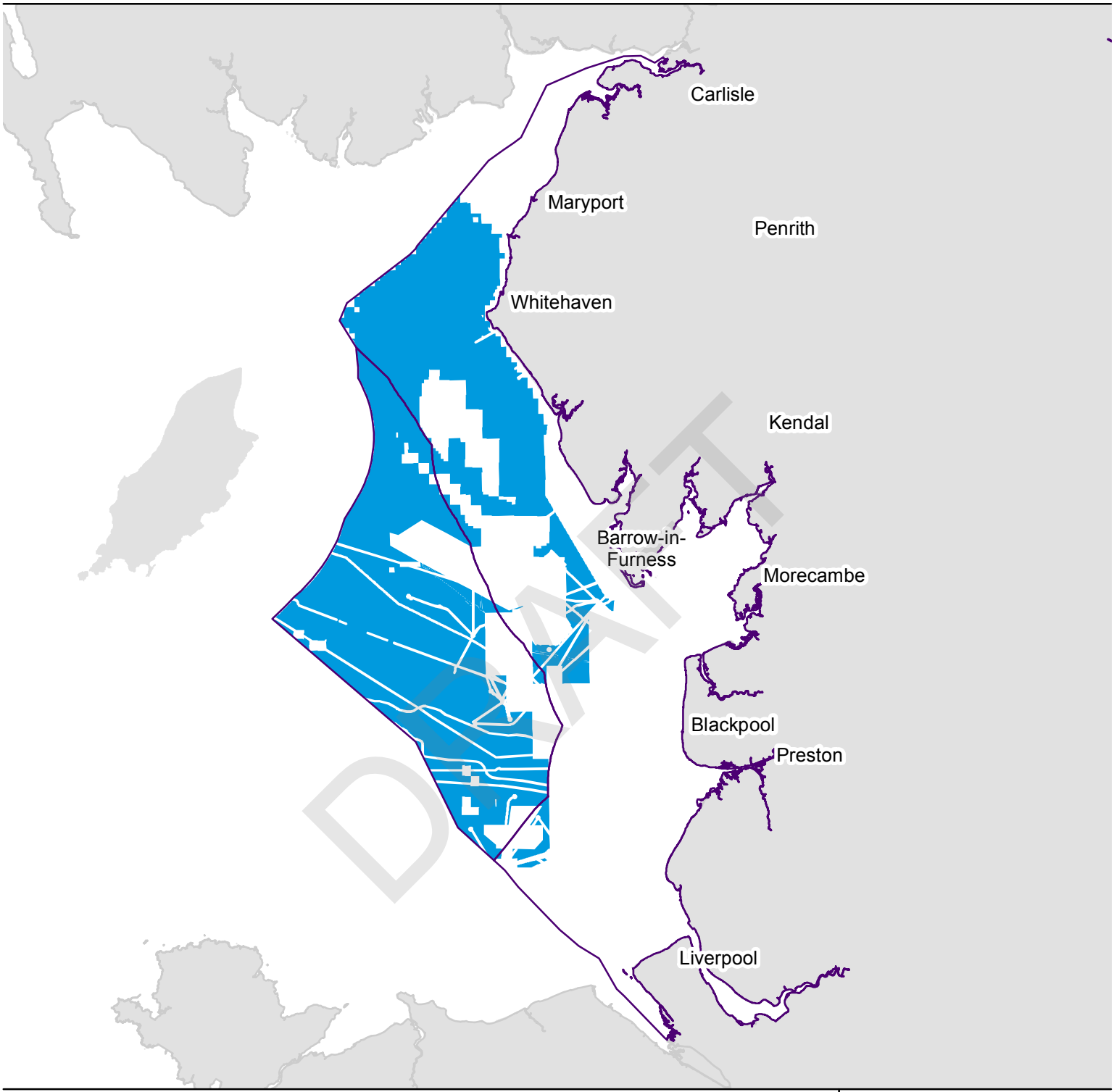
401. Existing measures which support the implementation of these policies include:

- Electricity Market Reform
- National Planning Policy Framework
- National Policy Statements for Energy Infrastructure EN-1 and EN-3
- Industrial Strategy
- Clean Growth Strategy
- Offshore Energy SEA3

[35] Planning Act 2008

Marine Management Organisation

Figure 13 | Offshore Wind Future Resource Potential



North West Marine Plan Areas

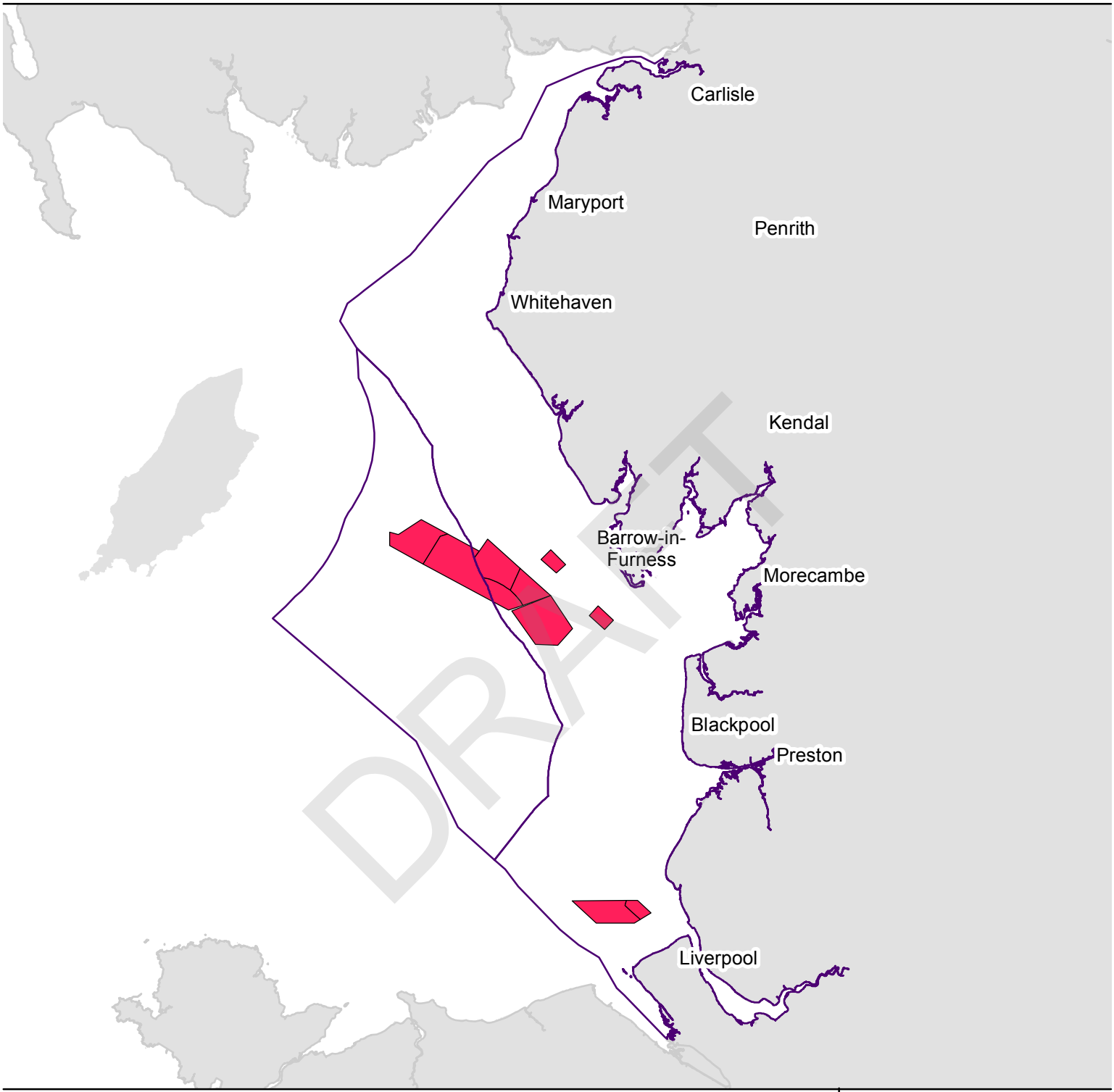
Characterisation Areas

Policy map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

Marine Management Organisation

Figure 14 | Areas under Lease Agreement for Renewable Energy Generation



- North West Marine Plan Areas
- Tidal Lease Areas
- Wave Lease Areas
- Wind Lease Areas

Policy map
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Ensuring a strong, healthy and just society

5.10 Heritage assets

Policy Code	Policy Wording
NW-HER-1	Proposals that demonstrate they will conserve and enhance elements contributing to the significance of heritage assets will be supported. Proposals unable to conserve and enhance elements contributing to the significance of heritage assets will only be supported if they demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate harm to those elements contributing to the significance of heritage assets d) if it is not possible to mitigate, then the public benefits for proceeding with the proposal must outweigh the harm to the significance of heritage assets.

What are heritage assets?

402. **Heritage assets** are the aspects of the historic environment such as buildings, monuments or landscapes that have a degree of significance meriting consideration in decision-making.

403. The Marine Policy Statement (2.6.6.1). states that 'The historic environment includes all aspects of an area that are the result of an interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged'.

404. Some heritage assets have a level of interest that justifies statutory designation, the purpose of which is to ensure that they are protected and conserved for the benefit of this and future generations. In the English marine area, designated heritage assets include:

- items listed under the Planning (Listed Buildings and Conservation Areas) Act 1990
- protected places and controlled sites designated under the Protection of Military Remains Act 1986
- restricted areas designated under the Protection of Wrecks Act 1973
- scheduled monuments designated under the Ancient Monuments and Archaeological Areas Act 1979

405. The settings of assets may also be important to the asset and its significance. Historic England also maintains a list of registered battlefields.

406. The Marine Policy Statement (2.6.6.5) further states that, 'Many heritage assets with archaeological interest in these areas are not currently designated as scheduled monuments or protected wreck sites but are demonstrably of equivalent significance. The absence of designation for such assets does not necessarily indicate lower significance and the marine plan authority should consider them subject to the same

policy principles as designated heritage assets (including those outlined) based on information and advice from the relevant regulator and advisors.'

407. It goes on to state (2.6.6.8) 'The marine plan authority, working with the relevant regulator and advisors, should take account of the desirability of sustaining and enhancing the significance of heritage assets and should adopt a general presumption in favour of the conservation of designated heritage assets within an appropriate setting. The more significant the asset, the greater should be the presumption in favour of its conservation. Substantial loss or harm to designated assets should be exceptional, and should not be permitted unless it can be demonstrated that the harm or loss is necessary in order to deliver social, economic or environmental benefits that outweigh the harm or loss.'

Why are heritage assets important?

408. The north west marine plan areas have many significant cultural assets. Many of these are protected through existing statutory designations. However, some have little protection despite their contribution to the character of the north west marine plan areas and tourism economy which makes them especially worthy of consideration by developers and decision-makers.

409. Heritage assets provide many social benefits for coastal communities, such as improved health (mental and physical) and well-being and an increased sense of place. An increased understanding and awareness of the historic environment, its heritage assets and culture can provide benefits to conservation management and the quality of life, health and well-being of coastal communities.

410. Historic wrecks are spread widely across the north west marine plan areas and are mapped in more detail in the inshore marine plan area. Wreck sites are more prevalent in the approaches to the Mersey and Ribble estuaries and Morecambe Bay. There are currently no protected wrecks in the north west plan areas, therefore, proposals in these areas should have greater consideration of the significance of undiscovered or undesignated wrecks.

411. Piel Castle, located on Piel Island in the shallow waters to the west of Morecambe Bay, has protected the harbour approach since the 14th century. Assets like these are important for their setting and should be protected from damage caused by footfall and other sources of disturbance.

412. At Formby Point, coastal erosion of the foreshore has revealed preserved human, animal and wading bird footprints dating from the Mesolithic Period (7,000–5,000 years ago). Proposals for access and tourism and recreation activities in these areas should, therefore, give greater consideration to their adverse impacts on such assets.

413. The River Mersey, with its historic waterfront (designated as a World Heritage Site) and its diverse maritime history, is at the heart of Liverpool's strong sense of place and its importance as a tourist destination.

Policy NW-HER-1 Heritage assets

Proposals that demonstrate they will conserve and enhance elements contributing to the significance of heritage assets will be supported.

Proposals unable to conserve and enhance elements contributing to the significance of heritage assets will only be supported if they demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate harm to those elements contributing to the significance of heritage assets
d) if it is not possible to mitigate, then the public benefits for proceeding with the proposal must outweigh the harm to the significance of heritage assets.

Policy aim

414. The aim of this policy is to conserve and enhance marine and coastal heritage assets through considering the potential for harm to elements that contribute to their significance. This consideration will not be limited to designated assets and extends to those undesignated assets that are, or have the potential to become, significant. It will make sure that assets are considered in the decision-making process and make provisions for those assets that are discovered during the course of developments. Policy NW-HER-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

415. A Historic Seascape Characterisation (HSC) of the north west marine plan areas has been carried out by Historic England, part of a national HSC database. This characterisation mapped and described the areas' historic cultural influences and contributed to the North West Seascape Assessment (MMO1134).

Proponents

416. Proposals must demonstrate that they will, in order of preference:

- avoid (through alternative locations)
- minimise (the scale of the proposal), or
- mitigate (through innovative engineering techniques) harm to the elements that contribute to the significance of heritage assets. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) etc.

417. Where it is not possible to mitigate harm to elements that contribute to the significance of heritage assets, proposals must state how the public benefits for proceeding with the proposal outweigh the harm. This can include how the proposal supports the North West Marine Plan vision, objectives and other plan policies.

418. Designated heritage assets should be conserved and enhanced in accordance with statutory purposes. Proposals should consider the potential impact on heritage assets taking into account the risk of damage to, or degradation of, assets.

419. Proposals should, therefore, seek to avoid locations where heritage assets may be located. Where such locations cannot be avoided, proposals should seek to minimise harm including through the use of less invasive construction techniques and in consultation with Historic England. Historic England and / or the local authority may seek to catalogue assets as appropriate for the Historic Environment Record. If proposals are unable to avoid or minimise harm they must demonstrate how it is intended to mitigate the harm through their location or cataloguing of assets in consultation with Historic England and / or the local authority responsible for the Historic Environment Record.

420. The public benefits for proceeding with the proposal must outweigh the harm to elements that contribute to the significance of the heritage asset. In assessing public benefits relevant tests set out in the National Planning Policy Framework should be considered. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

Decision-makers

421. Decision makers should consult with the relevant regulators and advisors, local authorities and other bodies (such as local civic societies) to make sure that heritage assets, with cultural, social or economic value are considered in the decision-making process.

422. Public authorities should consider evidence for the level of significance of a heritage asset, including information and advice from relevant regulators and advisors and how they are managed.

423. Decision makers should consider all heritage assets, including those that are not designated or have been newly identified during development, in line with information and advice from Historic England with the aim of avoiding, minimising or mitigating possible harm.

424. Public authorities should take into account the historic character of the north west marine plan areas, with particular attention paid to the landscapes, seascapes and groupings of assets that give it a distinctive identity. Further information can be obtained from NW-SCP-1, a related policy.

425. In examining and determining applications for Nationally Significant Infrastructure Projects, examining authorities and the Secretary of State for The Ministry of Housing, Communities and Local Government must have regard to this policy for Nationally Significant Infrastructure Projects that may have significant adverse impacts on elements contributing to the significance of heritage assets.

426. Sites designated under the 1973, 1979 and 1986 Acts are subject to consent processes that are determined by the Secretary of State. Sites designated under the 1990 Act are subject to consent processes that are determined by the relevant local planning authority. These processes do not form part of the marine planning system but operate in parallel to it.

427. Designated wreck sites can be found at Figure 15. It should be noted that Figure 15 does not include all wreck data for the north west marine plan areas as such data is incomplete, especially for the offshore area. Further information can be obtained from Historic England and the United Kingdom Hydrographic Office.

Signposting

428. Legislation which relates to and may support the implementation of this policy includes:

- Protection of Wrecks Act 1973
- The Ancient Monuments and Archaeological Areas Act 1979
- The Protection of Military Remains Act 1986
- The Planning (Listed Buildings and Conservation Areas) Act 1990
- National Heritage Act 2002

429. Guidance and other materials which relate to and may support the implementation of this policy include:

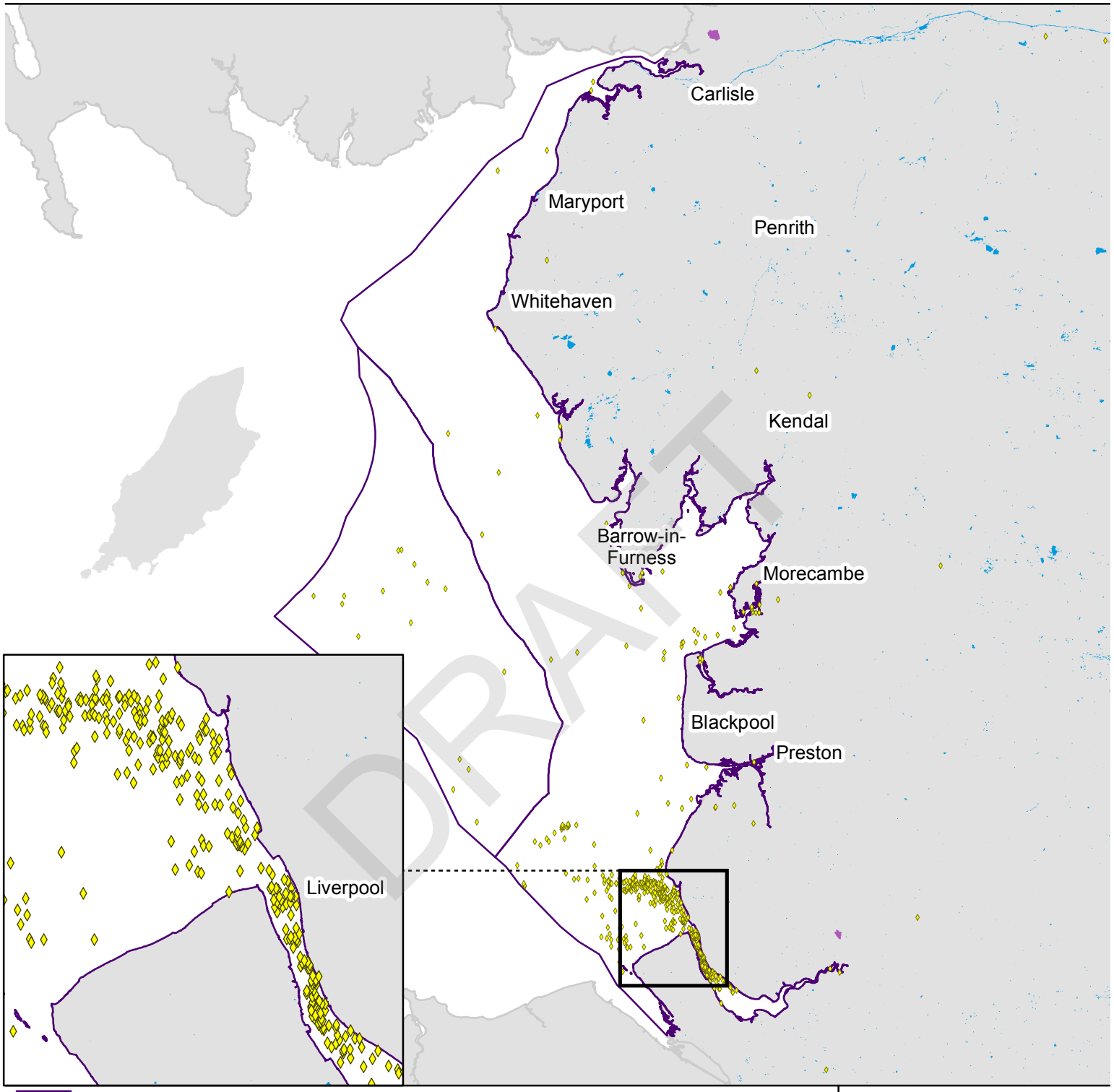
- An Approach to Seascape Characterisation
- Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate)
- Historic England guidance for users of the marine environment, which should be considered by those undertaking activities that may impact upon the historic environment:
  - Conservation Principles
  - Managing Significance in Decision-Taking in the Historic Environment
  - Marine Licensing and England's Historic Environment
  - The Setting of Heritage Assets (2nd Edition)
- Historic Landscape Characterisation
- Historic Seascape Characterisation
- North West Seascape Assessment (Approach to Visual Resource Mapping)

430. Existing measures which support the implementation of this policy include:

- Historic England protecting heritage assets
- Historic England Ships and Boats Selection Guide
- Historic Environment Records provide detailed information on historic assets at a local level
- Coastal Revival Fund

Marine Management Organisation

Figure 15 | Historic Environment



North West Marine Plan Areas
Protected Wreck Sites and War Graves
Registered Battlefields
Scheduled Ancient Monuments
MOD Military Protected Wrecks
Historically Significant Shipwrecks

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

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5.11 Seascape and landscape

Policy Code	Policy Wording
NW-SCP-1	Proposals that may have a significant adverse impact upon the seascapes and landscapes of an area should only be supported if they demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate d) if it is not possible to mitigate, the public benefits for proceeding with the proposal must outweigh significant adverse impacts to the seascapes and landscapes of an area. Where possible, proposals should demonstrate that they have considered how highly the seascapes and landscapes of an area is valued, its quality, and the areas potential for change. In addition, the scale and design of the proposal should be compatible with its surroundings, and not have a significant adverse impact on the seascapes and landscapes of an area.

What is seascape and landscape?

431. The Marine Policy Statement (2.6.5.1) states that, 'There is no legal definition for seascape in the UK but the European Landscape Convention defines **landscape** as "an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors. In the context of this document, references to seascape should be taken as meaning landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other'.

432. **Seascape** can be broken down into its constituent parts of visual resource and marine character. Visual resource can be interpreted primarily as views of the coast and sea from the land. Views from the sea to land, and from sea to sea are also relevant. In addition to the European Landscape Convention definition, seascape character includes a combination of characteristics above the surface, within the water column and on or below the seabed.

Why are seascape and landscape important?

433. The Marine Policy Statement (2.6.5.2) states that 'When developing Marine Plans, marine plan authorities should consider at a strategic level visual, cultural, historical and archaeological impacts not just for those coastal areas that are particularly important for seascape, but for all coastal areas, liaising with terrestrial planning authorities as necessary. In addition, any wider social and economic impacts of a development or activity on coastal landscapes and seascapes should be considered'

434. The Marine Policy Statement goes on to state (2.6.5.3) that 'In considering the impact of an activity or development on seascape, the marine plan authority should

take into account existing character and quality, how highly it is valued and its capacity to accommodate change specific to any development.'

435. Seascape has been shaped by natural and cultural processes and is understood in people's minds by combining with their own personal interests to create feelings of a place's distinctiveness. People attach strong values to seascape which vary with their many differing perspectives. Seascape reflects people's personal connectivity with the coast and marine areas.

436. Views from the north west marine plan areas are famous for their proximity to Scotland, Wales, Isle of Man and the Irish Sea. The Lake District National Park, iconic for its tranquillity overlooks the Solway Firth with vistas towards Scotland and the Isle of Man. Likewise, this area of sea is highly visible from land, including in views from the fells of the south-western Lake District National Park. International designations reflect the importance of the intertidal habitats, including sand dunes, vegetated shingle, salt marsh and lagoons supporting a rich birdlife. Hadrian's Wall terminates at Bowness-on-Solway which is recognised as part of the Frontiers of the Roman Empire World Heritage Site. The legacy of nuclear power generation at Sellafield from the 1950s to the early 21st century associates this area as England's 'Energy Coast' and there are opportunities for energy production from new technologies. A major international port for several hundred years, Liverpool suffered a decline in the 1970s, but remains an important trade hub in the area. A major tourist destination is the seaside town of Blackpool. Blackpool has a number prominent landmarks such as its tower, piers and illuminations.

437. Seascape provides many social benefits for coastal communities, such as improved health (mental and physical) and well-being and an increased sense of place.

438. New development such as increased access, diversification towards the tourist industry or a new coastal path – provides opportunities for those visiting the coast to enjoy and appreciate its seascape and landscape.

Policy NW-SCP-1 Seascape and landscape

Proposals that may have a significant adverse impact upon the seascapes and landscapes of an area should only be supported if they demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate
d) if it is not possible to mitigate, the public benefits for proceeding with the proposal must outweigh significant adverse impacts to the seascapes and landscapes of an area.

Where possible, proposals should demonstrate that they have considered how highly the seascapes and landscapes of an area is valued, its quality, and the areas potential for change. In addition, the scale and design of the proposal should be compatible with its surroundings, and not have a significant adverse impact on the seascapes and landscapes of an area.

Policy aim

439. Seascapes and landscapes are important due to the prevalence of protected landscapes, their distinctiveness and their association with tourism and recreation activities, well-being and sense of place. NW-SCP-1 ensures that proposals should only be supported if they manage impacts on the seascapes and landscapes. NW-SCP-1 adds clarity to existing national policy by identifying the visual resource and important characteristics of the north west marine plan areas, enabling these policies to be better supported. Policy NW-SCP-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

440. NW-SCP-1 ensures that seascapes and landscapes are considered in decisions for proposals on developments, activities or management measures in the north west inshore and offshore marine plan areas. Decisions should aim to avoid, minimise or mitigate potential significant adverse effects to the seascapes or landscapes of an area. This policy adds clarity to existing national policy National Planning Policy Framework (Section 164) and the Marine Policy Statement (2.6.5.1) by identifying the visual resource and key characteristics of the north west inshore an offshore marine plan areas.

441. In a study carried out for the Marine Management Organisation, the North West Seascape Assessment described and mapped the visual resource and marine character of the north west marine plan areas. The North West Seascape Assessment is available to assist decision makers and others when considering proposals.

Proponents

442. Proposals must demonstrate that they will, in order of preference, avoid, minimise, mitigate significant adverse impacts on the seascapes and landscapes of an area, or, if it is not possible to mitigate, state the public benefits for proceeding with the

proposal which must outweigh significant adverse impacts to the seascapes and landscapes of an area.

- avoid – through alternative locations
- minimise – minimising the scale of the proposal
- mitigate – innovative engineering high quality design and being compatible with its surroundings

443. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) etc.

444. Where it is not possible to mitigate significant adverse impacts, proposals should state the public benefits for proceeding with the proposal which must outweigh significant adverse impacts to the seascapes and landscapes of an area.

445. There are a range of statutory policies and measures already in place to take into account nationally designated areas and their setting, such as National Parks, Areas of Outstanding Natural Beauty and World Heritage Sites.

446. When preparing proposals in the marine area applicants should demonstrate that they have complied with these statutory measures and aim not to detract from the special qualities of landscape designations.

447. Proposals should therefore seek to avoid locations where significant adverse impacts on the seascapes and landscapes of an area may occur. Where such locations cannot be avoided, proposals should seek to minimise harm including through considering design that reflects local landscape character with particular regard to scale, siting, materials and colour.

448. Where it is not possible to minimise or mitigate adverse impacts, proposals should state the case for proceeding, including how the proposal supports the North West Marine Plan vision, objectives and other plan policies.

449. The public benefits for proceeding with the proposal must outweigh the significant adverse impacts on the seascapes and landscapes of an area. In assessing public benefits in relation to proposals that may result in significant adverse impacts on the seascapes and landscapes of an area relevant tests set out in the National Planning Policy Framework should be considered. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

450. Outside of designated areas and their setting, where it is not possible to avoid, minimise or mitigate significant adverse impacts, proposals must demonstrate the public benefits for proceeding. For example, how the proposal supports the North West Marine Plan vision, objectives and complies with other plan policies. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material planning considerations to be taken into account by the decision-maker which may include, for example, other plans.

Decision-makers

451. Decision Makers should consider is a proposal has sought to avoid locations where significant adverse impacts on the seascapes and landscapes of an area may occur. Where such locations cannot be avoided, decision makers should consider how the significant adverse impacts on the seascapes and landscapes of an area has been minimised or mitigated.

452. Where it is not possible to minimise or mitigate adverse impacts, decision makers should consider the case for proceeding, including how the proposal supports the North West Marine Plan vision, objectives and other plan policies. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker.

453. In examining and determining applications for Nationally Significant Infrastructure Projects, examining authorities and the secretary of state for The Ministry of Housing, Communities and Local Government, Department for Transport, and the Department for Environment, Food and& Rural Affairs and Local Government must have regard to this policy for Nationally Significant Infrastructure Projects that may have significant adverse impacts on seascapes and landscapes.

454. Decision makers should consult with the relevant regulators and advisors, local authorities and other bodies (such as local civic societies) to make sure that seascapes and landscapes, with cultural, social or economic value are considered in the decision- making process.

455. Decision makers should consider a proposal's impact on seascapes and landscapes, taking into account views to and from the sea, existing marine character and quality, how highly it is valued and its capacity to accommodate change specific to any proposal.

456. Consideration of potential impacts should take into account visibility, prevailing weather conditions, angle of views and the temporal or permanent nature of a structure, including its scale, design or proposed activity.

457. On a case-by-case basis decision makers should asses if a proposal has considered how highly the seascapes and landscapes of an area is valued, its quality and the area's potential for change.

458. In a study carried out for the Marine Management Organisation, the Seascape Sensitivity Methodology describes how decisions should be made in relation to an areas quality, how highly it is valued and its capacity to accommodate change

459. Figure 16 shows protected landscapes.

460. Figure 17 shows marine character areas.

461. Figure 18 shows the visual resource and marine character of the north west inshore marine plan area.

462. The following evidence may support the implementation of this policy:

- North West Seascape Assessment
- *Seascape Sensitivity Methodology [holding place – update Spring 2020]*
- Historic Seascape Characterisation
- Historic Landscape Characterisation

Signposting

463. Legislation which relates to and may support the implementation of this policy includes:

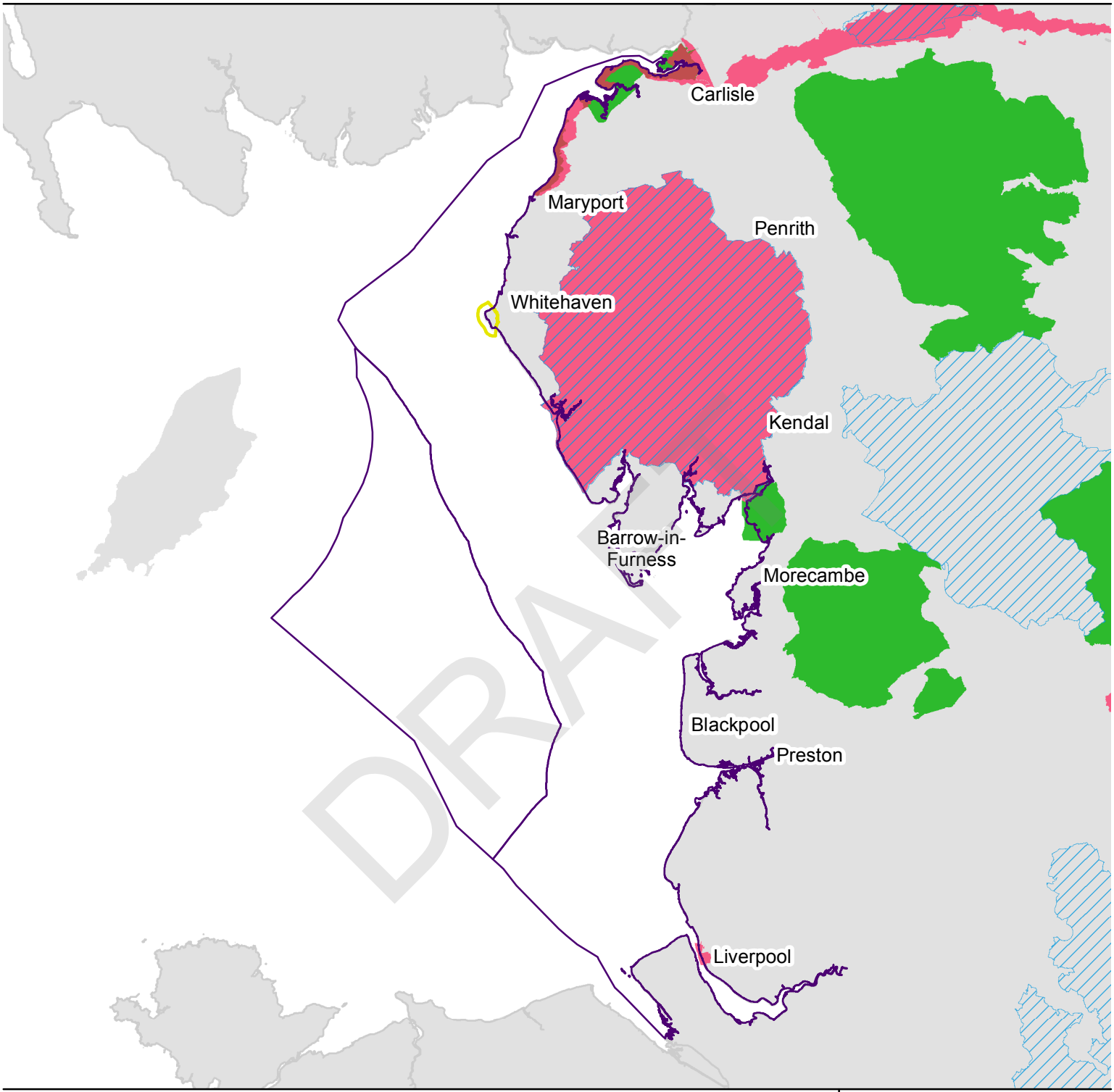
- European Landscape Convention

464. Guidance and other materials which relate to and may support the implementation of this policy include:

- An Approach to Seascape Characterisation
- North West Seascape Assessment (NW-SCP-1) (Approach to Visual Resource Mapping)
- Areas of Outstanding Natural Beauty
- Heritage Coasts
- National Parks
- World Heritage Sites UK
- The Setting of Heritage Assets (2nd Edition)

Marine Management Organisation

Figure 16 | Protected Landscapes



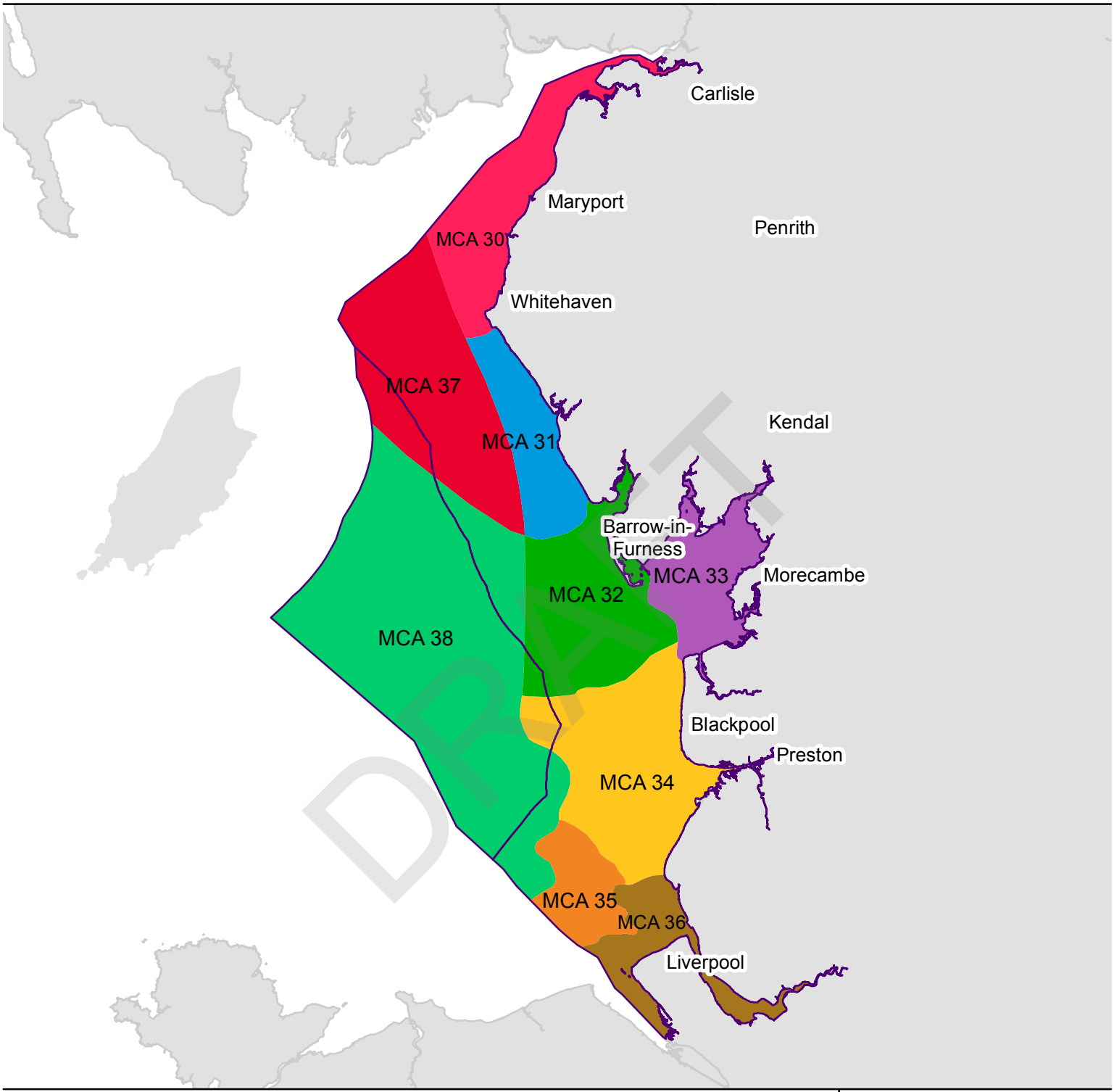
- North West Marine Plan Areas
- Heritage Coast
- National Parks
- World Heritage Sites
- Areas of Outstanding Natural Beauty

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

Marine Management Organisation

Figure 17 | Marine Character Areas



North West Marine Plan Areas

Marine Character Areas

- 30: Solway Firth (England)
- 31: St Bees to Haverigg Coastal Waters
- 32: Walney Coastal Waters and Duddon Estuary
- 33: Morecambe Bay
- 34: Blackpool Coastal Waters and Ribble Estuary
- 35: Inner Liverpool Bay
- 36: Dee and Mersey Estuaries and Coastal Waters
- 37: Irish Sea North (England)
- 38: Irish Sea South (England)

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

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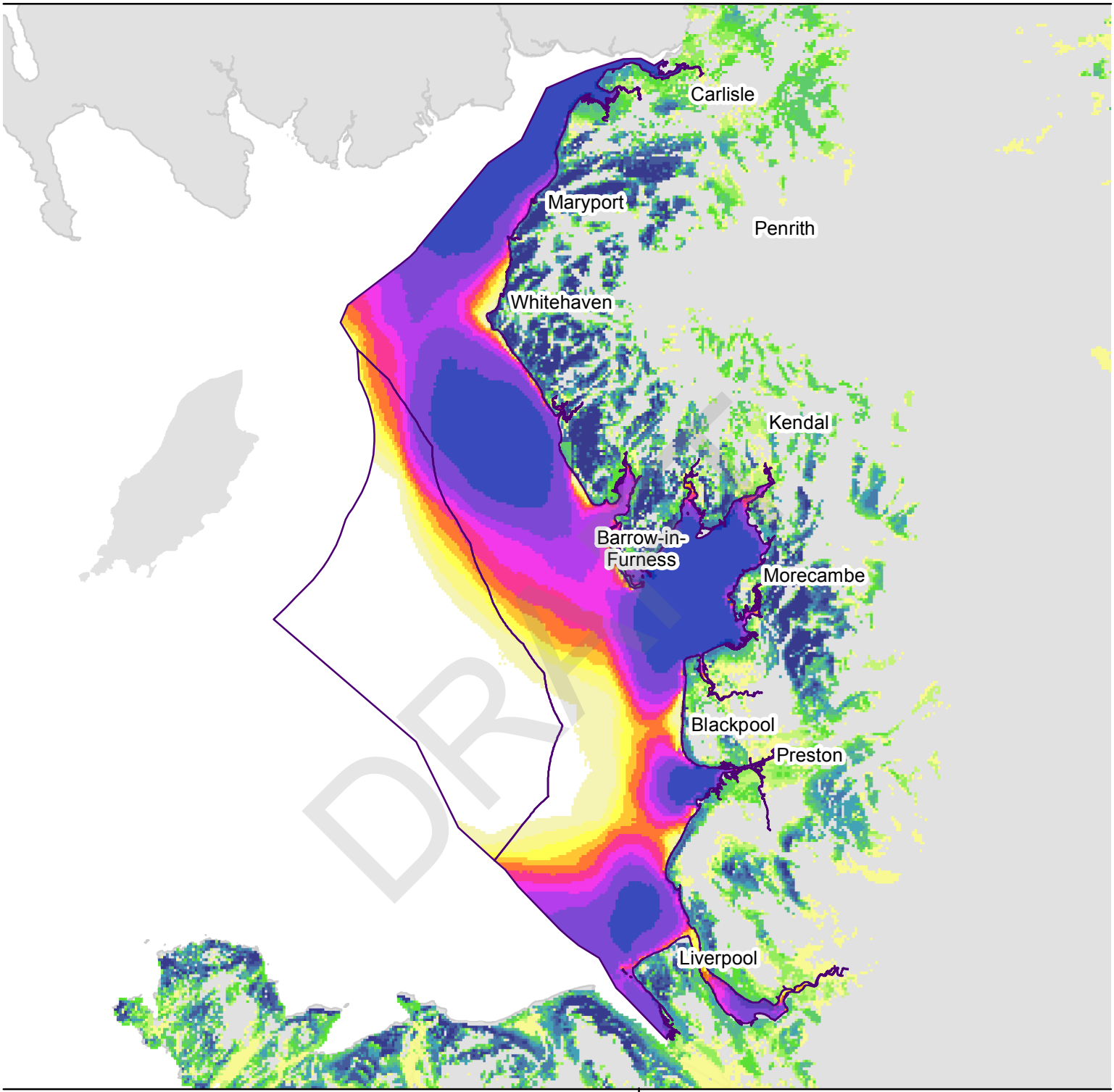
Marine Management Organisation

Figure 18 | Visual Resource Mapping



North West Marine Plan Areas

Visibility of Sea from Land

Percentile %

- 0 - 10 (lowest visibility)
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 90
- 90 - 100 (highest visibility)

Land with Sea Views

Percentile %

- 0 - 10 (lowest visibility)
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 90
- 90 - 100 (highest visibility)

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

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Datum: ETRS 1989

5.12 Fisheries

Policy Code	Policy Wording
NW-FISH-1	Proposals supporting a sustainable fishing industry, including the industry's diversification, should be supported.
NW-FISH-2	Proposals that enhance access for fishing activities should be supported. Proposals that may have significant adverse impacts on access for fishing activities, must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts d) if it is not possible to mitigate the significant adverse impacts, proposals should state the case for proceeding.
NW-FISH-3	Proposals enhancing essential fish habitat, including spawning, nursery and feeding grounds, and migratory routes should be supported. If proposals cannot enhance essential fish habitat, they must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impact on essential fish habitat, including spawning, nursery and feeding grounds, and migration routes.

What are fisheries?

465. **Fisheries** refers to the wild capture of finfish and shellfish; commercial fishing uses a variety of mobile and static gear, vessels and locations. A sustainable fishing industry provides benefits to coastal communities and contributes to UK food security.

466. A **sustainable fishing industry** is reliant on many factors, including environmental, social and economic. For example, environmental factors include healthy fish stocks, and appropriate weather and sea conditions to allow fishing. Social factors include a supply of labour to work on vessels and in the subsequent supply chains, and customers to purchase the fish. Economically, the industry's operating costs need to be affordable to allow fishing to continue into the future. A sustainable fishing industry can also be achieved through providing a diverse and wide range of fish and shellfish.

467. **Diversification** facilitates adaptation to change and is one way the fishing industry can increase its sustainability, response to changing markets and resilience to climate change. Diversification includes changes within the fishing sector, for example new fishing techniques and gear that alter how or what species are targeted, or within the processing and fish value chain for example direct sales, or marketing that adds value to fish products. Diversification also includes the industry undertaking multiple activities; for example, in addition to generating income from

fishing, complementary activities such as tourism, can represent diversification into other sectors. Climate change resilience refers to the ability of the fishing industry to withstand and recover from the effects of climate change, and so support its sustainability. Enhancing resilience includes considering the diversification of fishing techniques and gear used, the type of vessels and also shoreside infrastructure. Fisheries are also dependent on a healthy ecosystem to provide habitats and support for fish. Environmental resilience is therefore part of ensuring resilience of the fishing industry.

468. **Access** for fisheries includes physical access to resource sites and the wider ability to undertake activities, including travel to and from shoreside facilities (such as processing, storage and distribution) and onward sale to the customer. Enhancing access refers to developments that make it more efficient for the operation of the fishing sector. For example, a new port or marina could include additional berthing or landing infrastructure for the fishing sector to use for unloading their catch and mooring vessels. Access to fishing opportunities relies on vessels being able to safely and efficiently navigate to and from their home port. Reduced or prevented access may result from physical obstruction, for example: the presence of structures at sea or on the sea floor, closed areas resulting from other uses, and loss of access through transit restrictions or poor provisioning of berthing or landing infrastructure.

469. **Essential fish habitats** are all areas of inter-tidal and sub-tidal water, seabed, riverbed, and the associated water column necessary to fish and shellfish for spawning, breeding, feeding or growth to maturity. Essential fish habitats also encompass migration routes, such as estuaries or channels that connect essential fish habitats throughout their life cycle. These habitats enhance breeding success, survival and growth of fish, and ultimately increase stock yields.

Why are fisheries important?

470. **Fisheries** (including shellfisheries) are important to the north west marine plan areas, as they provide employment in communities where alternative opportunities may be limited. Within the north west marine plan areas there are several commercial fishing ports and areas that support historic shellfisheries. A variety of species (eg whelks, scallops, nephrops, brill and plaice) are caught in the north west marine plan areas, using static and mobile gears. Up-to-date landing values for these areas can be found in the UK sea fisheries annual statistics report.

471. The ability to maintain a viable sustainable fleet of smaller fishing vessels operating in the north west marine plan areas is important for the future of traditional fishing communities in this area. The importance of smaller vessels is highlighted in MMO 1127: Futures analysis for the North East, North West, South East and South West marine plan areas. Increases in unsettled weather under predicted climate change scenarios represent an operational challenge for such smaller vessels, while restricted ranges limit the ability of a fleet from a particular port to adjust to stock distribution changes.

472. Climate change is expected to increase storminess and water temperatures. Unsettled weather and increased storminess (for example increased wave heights,

strong winds) reduces the number of days at which vessels can safely operate at sea, particularly during winter months when storms are more prevalent. Water temperature increases may alter the distribution and movement of fish species, meaning some species that an industry relies on may reduce in numbers, whilst different species may become more prevalent. Some challenges often present a greater risk for smaller vessels, who are less able to fish in stormy seas. Smaller vessels are also more restricted in the distance they can travel, meaning they are less able to adapt to changes in fish distributions than larger vessels with a greater range.

473. **Diversification** of the fishing industry, and its promotion, can help support sustainability of the fishing industry in the north west marine plan areas by allowing flexibility for businesses to expand into other sectors. Diversifying into other sectors (for example fishing for alternative species, or expanding into other sectors such as tourism) can help support a core fishing industry to continue operating into the future, ensuring the fishing industry remains part of the local identity and culture in the north west marine plan areas.

474. Encouraging the local fishing industry's diversification and adaption to climate change can help promote its sustainability. Climate change has significant potential to affect the sustainability of fisheries in the north west marine plan areas. This includes altering the availability and growth rates of specific fish populations as they redistribute according to temperature preferences. Climate change may also present new opportunities, especially for species in which growth or distribution is currently limited by temperature, and result in loss of some existing fisheries. Climate change may also significantly alter the location of essential habitat, particularly spawning, nursery and feeding areas due to environmental and oceanographic change. The Marine Climate Change Impacts Partnership describes evidence relating to changes in UK fisheries, including scallop and nephrops (important commercial species in the north west marine plan areas). This evidence indicated that nephrops displayed some resilience to increasing acidity. For scallops, the impact of acidification on populations is more uncertain.

475. **Access for fisheries activities** is important because the fisheries sector is reliant on safe access to seek out, fish and land their catch. Once onshore, processing and logistics businesses in the north west ensure the distribution and supply of fish and shellfish to local, national and international markets. These businesses are reliant on access to a transport network.

476. Fishing activity is highly linked to the distribution of fish stocks, displacement of fishing activities can affect access to these stocks, efficiency of commercial fisheries and industry sustainability. Proposals that reduce or prevent access to fishing sites may displace fishing activity. Displacement could require fishing to take place over a larger area at a greater cost to the sector. Small vessels are particularly vulnerable to displacement and loss of access as the range of smaller vessels is less than for larger vessels. As such, if reduced access requires vessels to take a lengthy alternative route (for example to land their catch), due to their limited range this may prohibit smaller vessels' activity if the alternative route is beyond their range. For

smaller vessels, the changes to travel distances resulting from displacement can mean the loss of any viable industry. Displacement can also increase pressure on other fishing grounds, specific stock components like juveniles, or increase environmental impacts, particularly if displacement is to suboptimal grounds, or previously unfished areas.

477. **Essential fish habitats** are important because healthy, productive fish populations rely upon essential fish habitats. It is healthy, productive fish populations which underpin a sustainable fishing industry. Essential fish habitats are necessary for spawning, breeding, feeding, and the survival of early life stage and subsequent growth of fish to maturity. These habitats enhance breeding success, survival and growth of fish, and ultimately increase stock yields. Many commercial fish species spend their early years in inshore areas, migrating into offshore waters when they reach adulthood and only returning inshore again to spawn. Nursery areas are places with suitable food and environmental conditions for juvenile fish, which often require different food and conditions to adults, and also provide shelter to protect them from predation. Protecting juvenile fish in these distinct nursery areas increases the chance of survival to adulthood, when they are able to reproduce and contribute to future populations which enhances harvestable offshore stocks of fish.

478. Proposals can adversely impact the availability or quality of essential fish habitats and fish stock sustainability through removal, change to hydrodynamic regimes, pollution or numerous other mechanisms.

479. The Marine Policy Statement (3.8.7 and 3.9.2) recognises the national importance of fisheries and identifies the value of a prosperous, efficient and effective sustainable fishing industry in providing 'social, cultural and economic benefits to often fragile coastal communities' including reduction in emigration and maintenance of traditions, culture and identity. Fish and shellfish are an important part in the delivery of UK food security. Supporting a sustainable fishing industry and enhancing access for fishing activities will contribute to the Seafood 2040 Strategic Framework. The Department for Environment, Food and Rural Affairs 25 Year Environment Plan recognises the importance of 'providing sustainability for fisheries and ensuring food security while upholding social and cultural well-being'.

480. Enhancement of essential fish habitat contributes to the UK programme of measures to achieve Good Environmental Status in UK waters under The Marine Strategy Regulations 2010 by contributing to the preservation of biological diversity (descriptor 1) and by having important consequences for sea floor integrity (descriptor 6), wider elements of marine food webs (descriptor 4) and the commercial resources they sustain (descriptor 3). Commitments to achieving Good Environmental Status are reinforced in the in the Department for Environment, Food and Rural Affairs 25 Year Environment Plan which also encourages the use of 'resources from nature more sustainably and efficiently'. The National Planning Policy Framework includes commitments to conserving and enhancing the natural environment by 'minimising impacts on and providing net gains for biodiversity'. Supporting the long-term existence of the fisheries sector through support of stock recruitment contributes to the aims of the Marine Policy Statement (3.8.1).

Policy NW-FISH-1 Fisheries

Proposals supporting a sustainable fishing industry, including the industry's diversification, should be supported.

Policy aim

481. Commercial fisheries can be affected by changes to fish abundance, growth, distribution or behaviour. NW-FISH-1 supports long-term strategic proposals that enable the fishing industry to diversify or build in resilience to manage climate change risks and maximise opportunities for sustainable use of marine resources. Policy NW-FISH-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

482. Applicants with proposals that maintain or support sustainable fishing and the industry's diversification are encouraged.

483. Within the early stages of proposal development applicants could consult with the fishing industry to enable understanding of industry requirements, and identify where they can support its sustainability. Support could include, for example, providing the flexibility and opportunity for the fishing industry to diversify into other business areas or supporting the industry to adapt to the impacts of climate change, so it is more resilient to challenges such as increased storminess reducing fishing opportunities, and lack of alternative employment. Applicants could also consider the potential for scoping sustainability accreditation.

484. Inclusion of support for the sustainable fishing industry and / or the fishing industry's diversification does not indicate that approval of the proposal will follow by default. Approval will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans. Proposals must still comply with requirements under relevant legislation (including, but not limited to, the Marine and Coastal Access Act 2009).

Decision-makers

485. Decision-makers should approve proposals that demonstrate support for the sustainable fishing industry and / or the fishing industry's diversification. Proposals must still comply with requirements under relevant legislation (including, but not limited to the The Conservation of Habitats and Species Regulations 2017[36], The Conservation of Offshore Marine Habitats and Species Regulations 2017[37], the Marine and Coastal Access Act 2009). Inclusion of support for the sustainable fishing industry and / or the fishing industry's diversification does not indicate that approval of the proposal will follow by default. Approval will also depend on other material

[36] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[37] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

considerations to be taken into account by the decision-maker which may include, for example, other plans.

486. Decision-makers should assess whether the implications and impacts of proposals support fishing industry sustainability, including its diversification and resilience to the effects of climate change. Local planning authorities must have regard to NW-FISH-1 in the development of their local plans in supporting a sustainable fishing industry and / or the fishing industry's diversification.

487. Factors that decision-makers should take account of include, but are not limited to, how proposals could:

- benefit or support infrastructure provision, including onshore processing facilities for novel species that move into the north west marine plan areas with changing sea temperature
- bring complementary skills or employment opportunities, or open up opportunities outside of the fishing industry, for example as guard ship vessels, undertaking surveys or within the tourism sector
- contribute towards local plans and employment strategies
- support technological advances
- support the industry's ability to adapt by avoiding significant adverse impacts on where fishing can occur

488. In examining and determining proposals for Nationally Significant Infrastructure Projects, examining authorities and the relevant secretary of state should support Nationally Significant Infrastructure Projects that support a sustainable fishing industry and / or fishing industry diversification.

489. The north west marine plan areas include borders with Scottish, Northern Irish, Manx and Welsh marine areas. The inshore plan area stretches from the Scottish border (Solway Firth) to the Welsh border (River Dee). This includes 1,280 km of coastline and 4,900 km2 of sea. The offshore plan area extends from 12 nm to the limit of the Exclusive Economic Zone, representing 2,200 km2 of sea.

490. Commercial fishing activity occurs across the north west marine plan areas. There are a number of specific areas that support historic shellfisheries, including:

- Dee
- Duddon Estuary
- Morecambe Bay
- Ribble
- Solway
- Wirral

491. There are also several commercial fishing ports in the north west marine plan areas, including:

- Barrow
- Fleetwood
- Lancaster

- Liverpool
- Maryport
- Preston
- Runcorn
- Workington
- Whitehaven

492. Climate change projections predict warming seas and increased acidification around the UK. These predicted changes may result in changes to spatial distribution of fisheries, although it is challenging to say exactly what fisheries will be affected and in what way in the north west marine plan areas.

Policy NW-FISH-2 Fisheries

Proposals that enhance access for fishing activities should be supported.

Proposals that may have significant adverse impacts on access for fishing activities must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts
d) if it is not possible to mitigate the significant adverse impacts, proposals should state the case for proceeding.

Policy aim

493. A sustainable fishing industry provides benefits to coastal communities and contribute to UK food security. These activities are restricted in where they can operate, making the access to these activities vulnerable. NW-FISH-2 supports enhanced access for sustainable fishing activities and seeks to limit significant adverse impacts to access for fishing activities, enabling continued marine resource use and generating prosperous, resilient and cohesive coastal communities. Significant adverse impacts on access resulting in displacement of effort can have negative impacts, including: increasing pressure on other fishing grounds and / or conflict with existing fishing activity, displacement to suboptimal grounds, and increasing environmental impacts, particularly in previously unfished locations. This policy covers not only fishing activity, but also the transit routes to and from sites and any berthing/beaching or landing/loading points, enabling continued marine resource use and generating resilient and cohesive coastal communities. Policy NW-FISH-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

494. NW-FISH-2 seeks to support access to fishing activities and ensures considerations are made of the impacts upon fisheries from other marine activities. Proposals that enhance access to fishing activities may also indirectly increase recreational access to the marine environment. Limiting disturbance from enhanced access is important to help support the conservation objectives of European sites, in accordance with

The Conservation of Habitats and Species Regulations 2017[38] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[39].

495. A Habitat Regulations Assessment must be conducted when proposals that enhance access may lead to a likely significant effect on the protected features of European sites. Where disturbance from increased access is a consideration of the conservation objectives of a European site, an Appropriate Assessment will be required.

Proponents

496. Potential applicants cover a range of sectors that could enhance access to, or have significant adverse impacts on, access to fishing activities, including (but not limited to):

- aquaculture
- marine aggregate extraction
- new renewable energy infrastructure
- ports and fishing (capital dredging)
- subsea cabling
- tourism and recreation

497. Proposals that demonstrate how they enhance access for fishing activities are encouraged. Opportunities to enhance access can include co-location, for example developing shared use of landing facilities available to fishing where none were previously present, generating increases in the economic and social potential of such facilities for the local community. Proposals should include proportionate supporting information, illustrating how they will enhance access for fisheries.

498. Proposals will identify potential significant adverse impacts on access to fishing activities. Significant adverse impacts on access includes the loss of access resulting from a proposal that blocks transit routes to and from an area, and also the loss of access to the area where the proposal is located. The Explore Marine Plans digital service provides data layers which indicate fishing vessel activity. These data layers should be used to guide assessment of whether a proposal may have a significant adverse impact on access for fishing activities. Additional sources of information may be required, including data on smaller vessels. Additionally, areas fished in the future may be different to areas fished in the past, given the mobile nature of fish populations, and anticipated changes to the extent and distribution of fish populations resulting from climate change. As such, proposals must provide suitable alternative assessment of impacts as outlined above.

499. Where fishing activities occur, proposals should demonstrate that they have assessed the extent to which these activities could operate in the vicinity of the same footprint proposed by the development and considered opportunities to enhance

[38] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[39] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

access. Proposals that may have significant adverse impacts on access for fishing activities must demonstrate that they will, in order of preference, avoid, minimise and mitigate significant adverse impacts on fishing activities. An assessment of developments or activities here should not proceed to (b) minimise and (c) mitigate unless they have first demonstrated why they cannot avoid significant adverse impacts on existing access for fishing activities.

500. Measures implemented to avoid, minimise and mitigate significant adverse impacts will vary depending on the proposed activity. Applicants should consult the fishing industry when deciding on measures to implement.

501. Avoidance of significant adverse impacts will require, for example, proposals to demonstrate an understanding of the fishing sector's navigation routes (eg for unloading, processing and transporting fish), or an understanding of the seasonality of different fisheries. In order to avoid and minimise significant adverse impacts on fishing activities, proposals which involve construction at sea should include consultation with the fishing sector, to identify the most appropriate navigation routes for construction vessels to and from the site being developed, or to identify the most appropriate time of year for the works to occur.

502. Minimisation could include, for example:

- co-location, the development of co-existence and fisheries liaison plans is one example of how this may be achieved (see also NW-CO-1)
- demonstration within proposals of how the development would minimise physical obstruction to current and planned shoreside fishing processing and distribution activities

503. Mitigation could include, for example:

- identification and / or provision of reasonable alternative access options
- providing other benefits to the fishing industry and community that will be affected by significant adverse impacts to access (eg training, provision of facilities)

504. Proposals that cannot avoid, minimise and mitigate significant adverse impacts should not be supported unless they can demonstrate that the benefit of the proposal will outweigh significant adverse impacts to access for fishing activities. Where it is not possible to mitigate significant adverse impacts, proposals should state the case for proceeding, in addition to setting out how the proposal supports the North West Marine Plan vision, objectives and other plan policies. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

505. Applicants should determine whether there is potential for significant displacement of commercial fishing from proposed activities, and whether (if co-existence is unlikely) the appropriate measures to reduce displacement have been proposed.

Decision-makers

506. Decision-makers should support marine activities and land-based activities if they enhance access for fishing activities, providing they are in accordance with requirements under relevant legislation.

507. In other public authority strategic plan-making and policy-drafting activities, decision-makers should have regard to NW-FISH-2, unless material consideration indicates otherwise.

508. Decision-makers must assess potential significant adverse impacts (direct and indirect, permanent and temporary, as well as cumulative effects) on access to fishing activities. Significant adverse impacts may include restricting access to areas where fishing activities take place, reducing the length of the season within which fishing may take place or any actual physical impact. Decision-makers must also assess potential significant displacement impacts on fishing activities.

509. In determining a proposal, decision-makers will take account of a range of relevant considerations including compliance with legislation, regulations and environmental assessment. Decision-makers must have regard to evidence of consultation with the fishing industry, the outcome of those discussions and any mitigation required.

510. Decision-makers should consider whether there is potential for significant displacement of commercial fishing from proposed activities, and whether (if co-existence is unlikely) the appropriate measures to reduce displacement have been proposed.

511. In examining and determining proposals for Nationally Significant Infrastructure Projects, examining authorities and the relevant secretary of state must have regard to this policy for Nationally Significant Infrastructure Projects that may have significant adverse impacts on access to fishing activities.

512. Fishing activity occurs across the north west marine plan areas. There are a number of specific areas that support historic shellfisheries, including (but not limited to):

- Dee
- Duddon Estuary
- Morecambe Bay
- Ribble
- Solway
- Wirral

513. There are also several commercial fishing ports in the north west marine plan areas, including (but not limited to):

- Barrow
- Fleetwood
- Lancaster
- Liverpool
- Maryport

- Preston
- Runcorn
- Workington
- Whitehaven

514. The fisheries sectors are reliant on safe and effective sites to land their catch. Once onshore, processing and logistics businesses in the North West ensure the distribution and supply of fish and shellfish to local, national and international markets. These businesses are reliant on an efficient transport network

Policy NW-FISH-3 Fisheries

Proposals enhancing essential fish habitat, including spawning, nursery and feeding grounds, and migratory routes should be supported.

If proposals cannot enhance essential fish habitat, they must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impact on essential fish habitat, including spawning, nursery and feeding grounds, and migration routes.

Policy aim

515. Sustainable fish populations rely upon specific habitats throughout their life. NW-FISH-3 recognises that the protection of habitats and the services they provide can enhance fish populations, supporting the long-term existence of the fisheries and contributing to Good Environmental Status as detailed in the Marine Strategy Part One. NW-FISH-3 enables sustainable use of marine resources within environmental limits, alongside productive fisheries, by requiring proposals to manage impacts on these habitats. Policy NW-FISH-3 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

516. Applicants and decision-makers should refer to Figure 19 for spawning areas and Figure 20 for nursery grounds in the north west marine plan areas. It is important to note that the map does not show all the species relevant to this policy, due to limited evidence. Furthermore, essential fish habitat is not always fixed to the same area. It is important for applicants and decision-makers to use the best available evidence in proposals and during decision-making.

Proponents

517. Potential applicants cover a range of sectors that could enhance, or have significant adverse impacts on, essential fish habitat, including (but not limited to):

- aquaculture
- marine aggregate extraction
- new renewable energy infrastructure
- ports and fishing (capital dredging)

- subsea cabling
- tourism and recreation

518. Proposals that show how essential fish habitat including spawning, nursery grounds, feeding grounds and migratory routes will be enhanced are encouraged.

519. Enhancement refers to measures taken which have a positive impact. Such measures can include (but are not limited to) improving or creating new habitat such as estuarine sediments, upstream habitat, river restoration, intertidal habitat, natural flood management, or the improvement or creation of fish passages. Where positive impacts have been identified, proposals must also assess adverse impacts in line with relevant legislation. Enhancement is not a substitute for avoidance, minimisation or mitigation measures.

520. If proposals cannot enhance essential fish habitat they must demonstrate that they will in order of preference avoid, minimise and mitigate the significant adverse impacts upon essential fish habitat. An assessment of developments or activities here should not proceed to (b) minimise and (c) mitigate unless they have first demonstrated why they cannot avoid significant adverse impacts to existing essential fish habitats.

521. Examples of avoidance, minimisation and mitigation include careful analysis of alternatives, design stipulations, and 'best management practices':

    - avoidance of significant adverse impacts could be temporal or spatial, ie the proposed activity could take place in a different area or at a different time to avoid significant adverse impacts on essential fish habitat; requiring the applicant to demonstrate an understanding of the location and seasonal importance of essential fish habitat
    - minimisation of significant adverse impacts could involve reducing the spatial extent of a proposed activity therefore reducing the area of impact; temporal minimisation could involve operational activities only taking place within essential fish habitat at times of year when they are less sensitive to impacts, for example outside of spawning season
    - mitigation of significant adverse impacts could involve the use of soft infrastructure solutions and innovative design to change the source of impact and reduce the area of impact

522. Inclusion of this information does not indicate that approval of the proposal will follow by default. Approval will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

523. Proposals are still required to be in compliance with relevant legislation and regulations including, but not limited to The Conservation of Habitats and Species Regulations 2017[40], The Conservation of Offshore Marine Habitats and Species

[40] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Regulations 2017[41], Marine and Coastal Access Act 2009, and other national legislation.

524. Additional indicative information can be used, including but not limited to:

- Environment Agency estuarine and migratory fisheries surveys.
- regular fisheries surveys and reports undertaken by the Centre for Environment, Fisheries and Aquaculture Science (at the resolution of sub-rectangles of ICES statistical rectangles).
- the location of areas closed due to a high abundance of juvenile fish, either seasonal or 'real-time' closures, to be found on the Marine Management Organisation's website; further essential fish habitat maps or updates may become available through the Marine Management Organisation's Explore Marine Plans digital service.

Decision-makers

525. Decision-makers should authorise proposals or confirm decisions which relate to the enhancement of essential fish habitat, providing proposals are in compliance with requirements under relevant legislation.

526. Decision-makers must ensure that assessment of essential fish habitat for all finfish and shellfish species are included during project level assessments. This includes fully marine species, and those species with a marine element to their lifecycle, for example: salmon, trout and eel, where proposals could impact on migration routes and associated habitat during the transition from marine to freshwater or vice-versa.

527. Decision-makers could refer to Figure 19 for spawning areas and Figure 20 for nursery grounds in the north west marine plan areas. It is important to note that the map does not show all the species relevant to this policy, due to limited evidence. It is important for decision-makers to use the best available evidence, they should review data collected for Environmental Impact Assessments as information will be current and at a more appropriate resolution than the data in Figures 19 and 20. For decision-makers to accurately assess any proposals impact on essential fish habitats they must also consider a wider range of best available evidence and consultation with the local Inshore Fisheries and Conservation Authority and other relevant bodies.

528. As essential fish habitats often co-occur in coastal and priority habitats, decision-makers should apply policy NW-FISH-3 in conjunction with the policies NW-BIO-1 and NW-BIO-3.

529. In examining and determining proposals for Nationally Significant Infrastructure Projects, examining authorities and the relevant secretary of state must have regard to this policy for Nationally Significant Infrastructure Projects that may have significant adverse impacts on essential fish habitat.

[41] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

530. Figure 21 shows modelled data with essential fish habitat.

531. The North West Marine Plan areas contain a number of both inshore and offshore Marine Protected areas (MPA), Marine Conservation Zones (MCZ) and Sites of Significant Scientific Interest (SSSI). Inshore protected areas range from the Solway Firth and Allonby Bay, to the Cumbria Coast and Wyre Lune, and as far as the Ribble and Dee Estuaries. These areas are the habitats to variety of native wild flora and fauna species, protecting a number of these species in their juvenile and breeding stages of development. The Solway Firth, for example, is an important nursery ground for bass, pollack and some flatfish species. Estuaries are especially important for the growth and development of juvenile fish. Estuaries are highly-productive and offer a range of smaller prey that young fish can feed on, they also provide cover from predators, the open seas and storms.

532. The North Western Inshore Fisheries and Conservation Authority have designated an area around Heysham as a bass nursery area. Other species are protected by local byelaws designed to protect them in specific geographic areas

Signposting

533. Legislation which relates to and may support the implementation of these policies includes:

- The Conservation of Habitats and Species Regulations 2017[42]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[43]
- Marine Works (Environmental Impact Assessment) Regulations 2007
- Local IFCA byelaws
- Marine Management Organisation marine conservation byelaws
- The Marine Strategy Regulations 2010

534. Guidance and other materials which relate to and may support the implementation of these policies include:

- Department for Environment, Food and Rural Affairs 25 Year Environment Plan
- good practice guidelines promoting co-existence (eg Fisheries Liaison with Offshore Wind and Wet Renewables Group: Recommendations for Fisheries Liaison, Best Practice Guidance for Offshore Renewables Developers; European Subsea Cables Association, Fishing Liaison Guidelines)
- MGN 543 Safety of navigation: Offshore renewable energy installations
- recent industry information (eg Seafish Kingfisher Bulletin)
- Seafood 2040 Strategic Framework

535. Existing measures which support the implementation of these policies include:

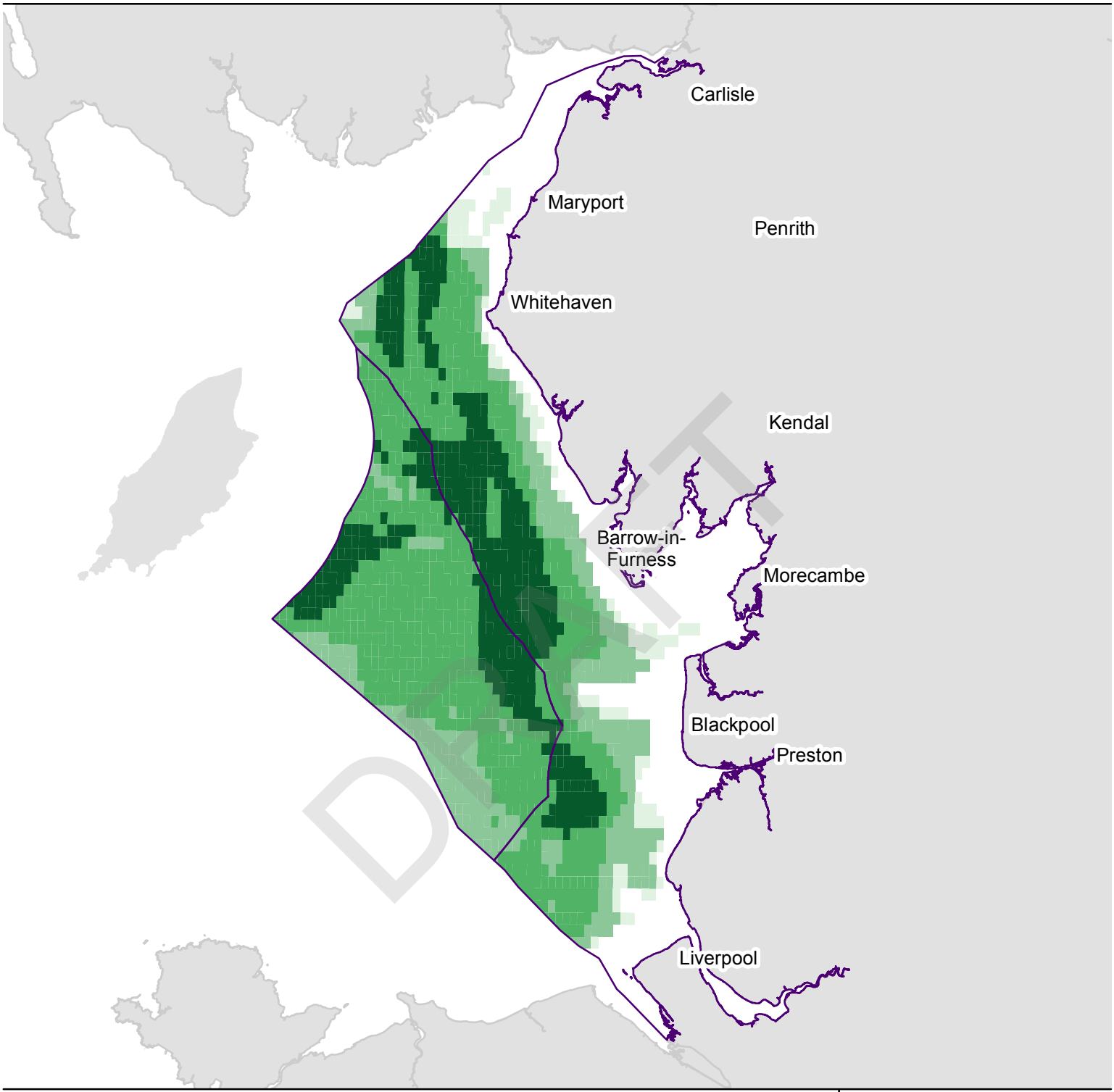
[42] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[43] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

- co-existence and Fisheries Liaison Plans (voluntary or required)
- international maritime law, and in particular the United Nations Convention on the Law of the Sea, in relation to safe navigation
- MGN 543 Offshore Renewable Energy Installations Safety Response
- North Western Inshore Fisheries Conservation Authority
- National Planning Policy Framework
- other management plans and landscape designations including (but not limited to): National parks, Areas of Outstanding Natural Beauty, Heritage Coasts, neighbourhood management plans and coastal partnership plans.
- Scottish National Marine Plan
- Welsh National Marine Plan

Marine Management Organisation

Figure 19 | Essential Fish Habitats

Spawning Hotspots



North West Marine Plan Areas

Number of Spawning Species Hotspots

- 1 - 2
- 3 - 5
- 6 - 7
- 8 - 12

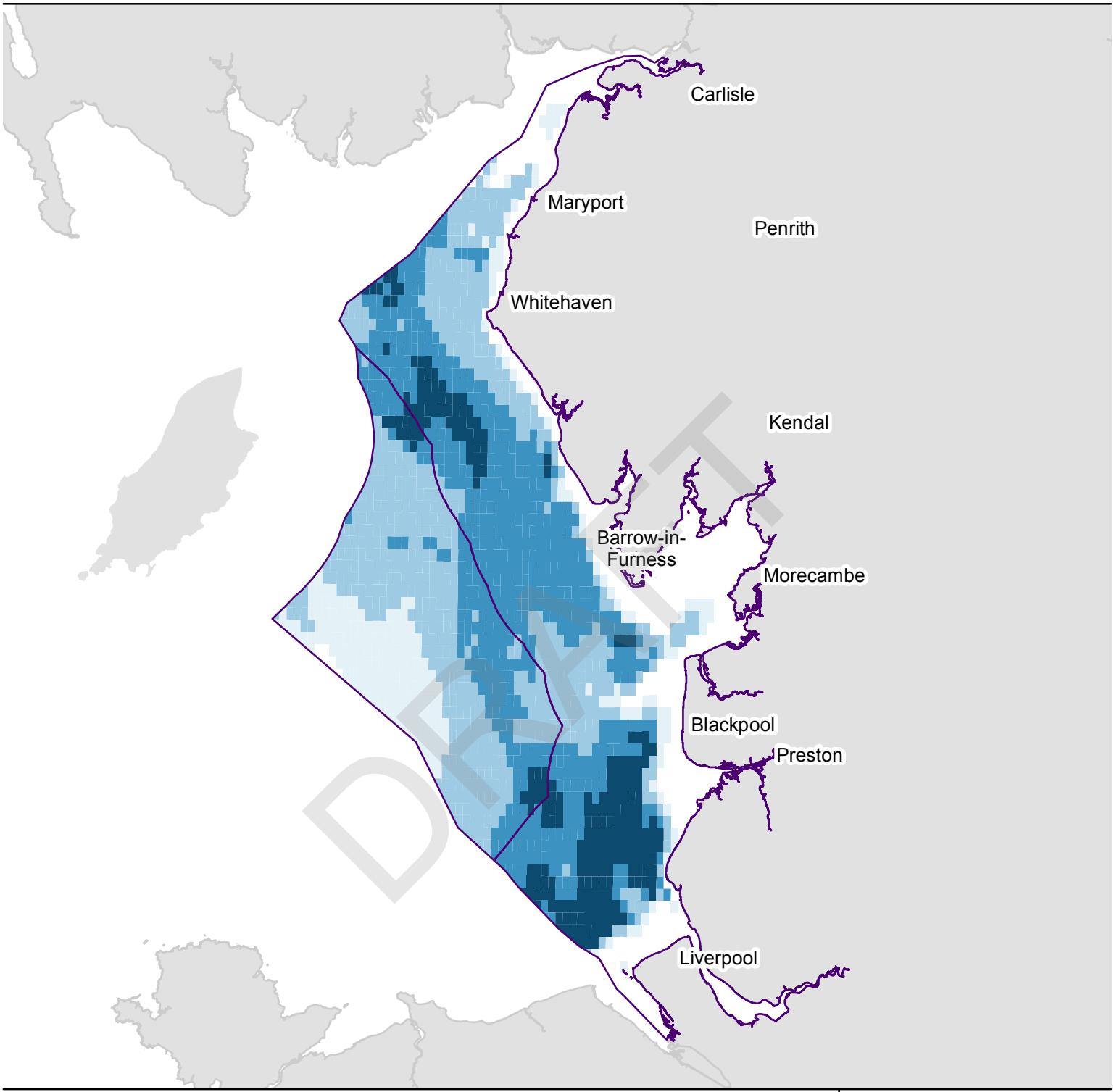
Policy map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

Marine Management Organisation

Figure 20 | Essential Fish Habitats

Juvenile Hotspots



North West Marine Plan Areas

Number of Juvenile Species Hotspots

- 1 - 2
- 3 - 5
- 6 - 7
- 8 - 12

Policy map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

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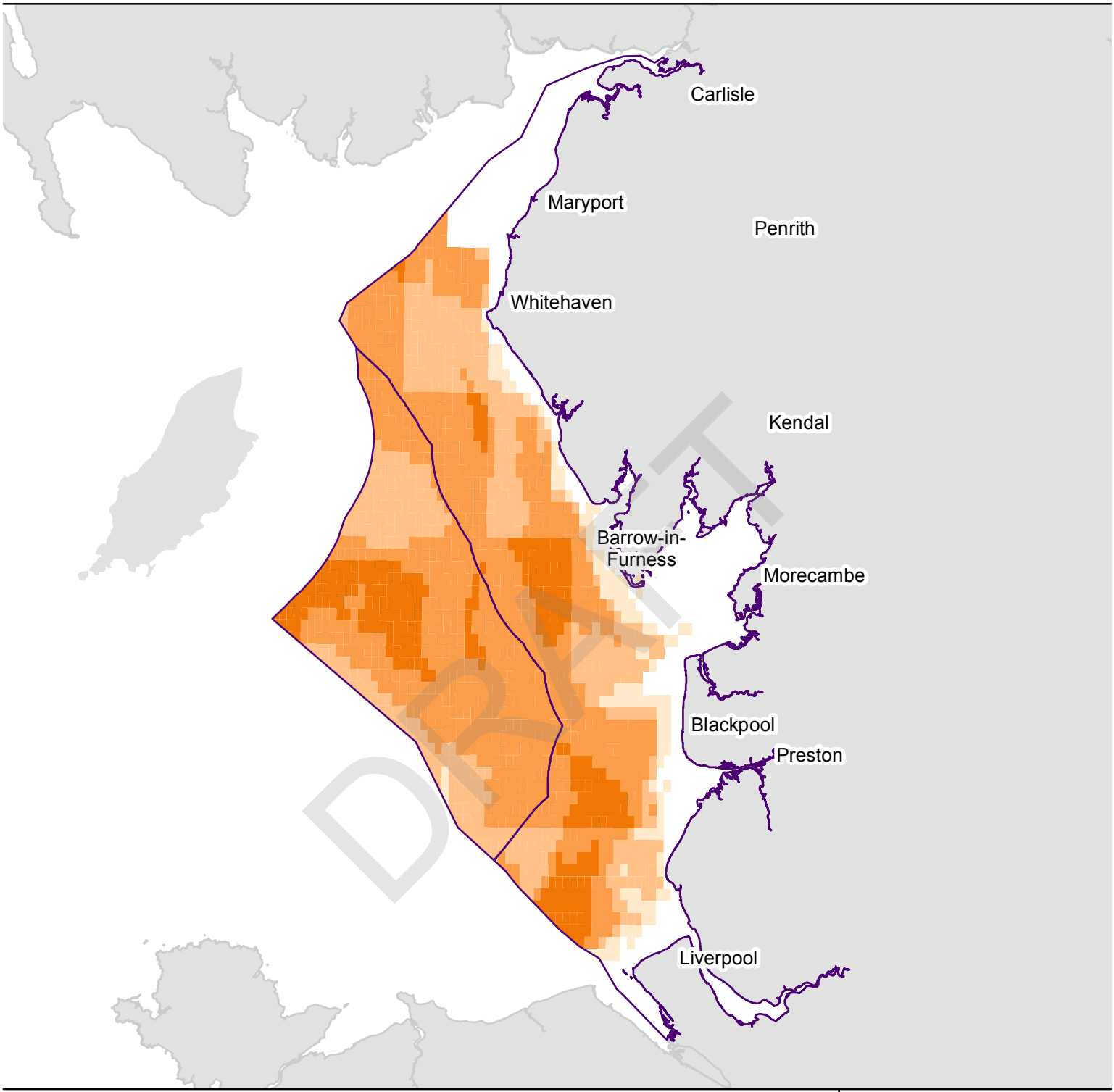
Marine Management Organisation

Figure 21 | Essential Fish Habitats

Adult Hotspots



North West Marine Plan Areas

Number of Adult Species Hotspots

- 1 - 3
- 4 - 5
- 6 - 7
- 8 - 14

Policy map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

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Projection: Transverse Mercator
Datum: ETRS 1989

5.13 Employment

Policy Code	Policy Wording
NW-EMP-1	Proposals that result in a net increase to marine related employment will be supported, particularly where they meet one or more of the following: i) create employment in areas identified as the most deprived, or ii) support and are aligned with local skills strategies and the skills available in and adjacent to the north west marine plan area, or iii) create a diversity of opportunities, or iv) implement new technologies.

What is employment?

536. A **net increase in employment** is the additional employment benefit achieved by developments or activities, after accounting for any negative impacts on other activities or developments, especially where employment can be accessed by those in localities close to the north west marine plan areas.

537. **Marine related employment** refers to both direct employment, through new or existing marine activities (including offshore wind energy and fisheries), and indirect employment, through supporting industries (such as manufacturing and port services). The influence of marine activities on employment may extend beyond the coast into communities not traditionally associated with marine employment through increased visitors numbers, seasonal employment or industries that support marine activities.

538. Areas identified as **most deprived** as shown by the governments Indices of Deprivation. The data can be used to directly compare the ranks of different small areas in England. If a small area's rank is closer to 1 than that of another area, it is more deprived.

539. **Skills strategies** address skills issues inhibiting sustainable economic growth, whilst also helping inform negotiations with government to secure support for activities which develop required skills. They run parallel to existing education and training guidance (for example Liverpool City Region Skills Plan). Existing skills strategies do not necessarily take account of the opportunities for employment and skills development presented by marine activities. Marine planning can highlight where existing skills for particular marine developments can be/or are being developed, signalling to public authorities the most appropriate sites to maximise local economic benefit.

540. A **diversity of opportunities** encourage proposals to provide new employment opportunities not necessarily typical for a coastal area. In doing so they should also look to provide training so that local communities have chance to fill those positions.

541. Where the policy refers to **implementing new technology** it aims to encourage investment in new technologies that would have a direct or indirect positive effect on

marine related employment. For example, investment in advances in Aquaculture, Ports and Shipping or floating offshore wind.

Why is employment important?

542. The Marine Management Organisation's Futures analysis for the North East, North West, South East and South West marine plan areas (MMO1127) suggests the north west marine plan areas have potential for tidal lagoon power generation. Development of this sector could lead to an increase in demand for marine aggregates, technical skills, new technologies and, ultimately, an increase in associated employment within the industry.

543. The report also highlights that a significant proportion of the economic activity in the north west marine plan areas is linked to ports. There are a range of assets including an offshore training centre, enterprise zones

544. Increased spatial pressures from housing and other land use changes can force market locations such as a renewable energy training facilities out of the north west marine plan areas, removing economic and employment benefits. Appropriately planned and sited development and associated supply chains can help encourage investment and stimulate demand for marine products and services. In turn, investment can create job opportunities which bring primary and secondary socio-economic benefits through improved levels of employment and spending of wages, which may be particularly important to areas currently experiencing deprivation.

545. Various communities rely on the economic benefits of marine activities. There is significant employment reliant upon offshore energy and the oil and gas industries. Ports and shipping and fisheries remain important for communities along the coast and there is significant tourism related employment in the north west marine plans around area's such as Liverpool, Blackpool and smaller towns along the picturesque coastline through Morecambe Bay, past the Lake District National Park and up to the Solway Firth and the border with Scotland.

546. Tourism and recreation related employment can often be very seasonal, peaking in the summer months however other marine activities such as shipping continue throughout the year. Fisheries, both commercial and recreation, and the associated employment may follow seasonal trends in stocks and breeding cycles.

547. The Marine Policy Statement (2.5.3) highlights employment benefits not only from current interests such as fishing and port activity, but also the role of emerging industries such as the renewable energy sector. It also highlights the role of the marine ecosystem in providing economic and social benefits, both nationally and for local communities (2.5.5). National plans such as the Plan for Growth highlight the need to increase employment and re-structure it away from the public sector. Employment also has social benefits, as those in work benefit from improved health and well-being. This approach supports government aspirations such as those set out in the 25 Year Environment Plan, Clean Growth Strategy and the Education and Employment Strategy.

548. This policy adds value to existing national policy for example ambitions in HM Government (2011) Marine Policy Statement (2.5.3) and (2017) Industrial Strategy. It encourages public authorities to consider the additional employment benefits of a proposal and it allows further consideration of the potential for these employment opportunities to be transferred to areas close to the north west marine plan areas.

Policy NW-EMP-1 Employment

Proposals that result in a net increase to marine related employment will be supported, particularly where they meet one or more of the following:

i. create employment in areas identified as the most deprived, or
ii. support and are aligned with local skills strategies and the skills available in and adjacent to the north west marine plan area, or
iii. create a diversity of opportunities, or
iv. implement new technologies.

Policy aim

549. The OECD Employment and Skills Strategies in England highlights how the UK governments aim is to ensure that everyone is able to take advantage of a return to economic growth and the opportunities that come with that. The creation of quality jobs is central to this aim and NW-EMP-1 supports proposals that provide a net increase in marine related employment.

550. It encourages proposals to focus on areas identified as the most deprived, evidence of alignment with local skills strategies, a diversification of opportunities and the implementation of new technologies. In addition, NW-EMP-1 seeks public authorities to consider the employment benefits of a proposal and how the required skills equate to those of the plan area. Policy NW-EMP-1 applies to the inshore and offshore north west marine plan areas.

How will this policy be implemented?

551. Proposals and decision makers can use the Marine Management Organisation report Maximising the socio-economic benefits of marine planning for English coastal communities, to understand the employment and skill needs and social issues of areas within, and bordering, the north west marine plan areas, and consider them in decision-making, alongside other relevant information.

Proponents

552. Proposals that demonstrate where opportunities to develop skills can be identified for new and existing marine activities within the north west marine plan areas will be supported. Demonstration should be proportional to the size of the proposal. Proposals that are not of sufficient size to meet the policy requirements should indicate this in their application as a reason for not complying with policy NW-EMP-1. For example, proposals by small/medium enterprises to support the development and generation of renewable energy may lead to a net increase in employment, but may be unable to source labour from the local labour pool and thus increase skills in the local area.

553. Proposals that demonstrate that they will contribute to a net increase in marine related employment will be supported.

554. The Marine Policy Statement (2.5.2) has a presumption in favour of sustainable development and states, 'Properly planned developments can provide environmental and social benefits as well as drive economic development'. This means that, although there is a presumption in favour of economic benefits, proposals should not be approved if there are compelling environmental or social reasons not to do so. This policy applies to all new proposals, be they for continuation of existing interests or relating to new activity.

Decision-makers

555. Where proposals indicate a net increase in marine related employment, particularly where this aligns with i), ii), iii) or iv), public authorities should authorise such proposals as long as they are in compliance with the rest of the North West Marine Plan as well as other relevant material considerations.

556. Public authorities should consider adverse impacts on employment and skills development opportunities when exercising their functions, including decision-making. Public authorities should also consider cumulative, combined or synergistic effects which their activities, authorisations or consents may have on marine related employment. Public authorities should make decisions in line with local skills strategies.

557. The Marine Policy Statement (2.4) recognises the importance of compatibility with existing developments and activities. The Marine Policy Statement as well as the vision of the north west marine plan areas may not always fit with projects that bring employment opportunities. Employment is not the only consideration in decision-making and should be used appropriately. For some projects direct employment impact may be minimal, but indirect employment impact may be significant (enabling economic activity rather than generate economic benefit itself), or they may achieve other outcomes, such as environmental or social benefits; these should also be considered.

558. In examining and determining applications for Nationally Significant Infrastructure Projects, examining authorities and the Secretary of State for the Ministry of Housing, Communities and Local Government must have regard to this policy for Nationally Significant Infrastructure Projects that may have significant adverse impacts on the development of skills related to marine activities.

559. Public Authorities should take into account marine activities with specific regard to related employment and skills in proposals and activities within the north west marine plan areas.

560. Marine activities and employment happen throughout the north west marine plan areas. The marine plan areas encompass areas historically important for tourism, recreation and fisheries. The fishing fleet in the north west has a larger proportion of over-15 metre vessel activity than other marine plan areas. The area also supports major offshore wind energy generation, oil and gas production and Nuclear Power

facilities. There is significant ports and shipping activity in the region as well as busy ferry links to The Republic of Ireland and the Isle of Man.

Signposting

561. Guidance and other materials which relate to and may support the implementation of this policy include:

- HM Government Export Strategy
- MMO 1127: Futures Analysis
- North West- Long term economic plan
- Marine Management Organisation Strategic Scoping Report 2013
- Maximising the socio-economic benefits of marine planning for English coastal communities
- OECD- Employment and Skills Strategies in England
- 25 Year Environment Plan
- Clean Growth Strategy
- Industrial Strategy
- Education and Employment Strategy

5.14 Climate change resilience and adaptation

Policy Code	Policy Wording
NW-CC-1	Proposals which enhance habitats that provide flood defence or carbon sequestration will be supported. Proposals that may have significant adverse impacts on habitats that provide a flood defence or carbon sequestration ecosystem service must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts, or, as a last resort, d) compensate and deliver environmental net gains in line with and where required in current legislation and policy.
NW-CC-2	Proposals in the north west marine plan areas should demonstrate for the lifetime of the project that they are resilient to the impacts of climate change and coastal change.
NW-CC-3	Proposals in the north west marine plan areas and adjacent marine plan areas that are likely to have significant adverse impacts on coastal change should not be supported. Proposals that may have significant adverse impacts on climate change adaptation measures outside of the proposed project areas must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate the significant adverse impacts upon these climate change adaptation measures.

What is climate change resilience and adaptation?

562. **Resilience** to climate change in relation to proposals is the ability of a proposal to respond to changes in climate so that it retains much of its original function and form, such as absorbing stresses including sea level rise and maintain function in the face of external stresses imposed upon it by climate change[44,45].

563. **Coastal change** is defined as 'physical changes to the shoreline, for example erosion, coastal landslip, permanent inundation and coastal accretion' (Marine Policy Statement (2.6.8.1)).

564. **Coastal narrowing (or coastal squeeze)** is one form of coastal habitat loss, where intertidal habitat is lost due to the high water mark being fixed by a defence or structure (ie the high water mark residing against a hard structure such as a seawall) and the low water mark migrating landwards in response to sea level rise[46].

[44] Resilience: The emergence of a perspective for social–ecological systems analyses Carl Folke
[45] IEMA Environmental Impact Assessment guide to climate change resilience and adaptation
[46] Defining Coastal Squeeze: A discussion (2013)

565. **Climate change adaptation measures** help developments or activities to reduce or protect against the impact of climate change (Marine Policy Statement (2.6.7)). Terrestrial planning policy in the National Planning Policy Framework sets out how adaptation measures may be engineered, or may allow a proposals to work with natural processes. Engineered options include relocation of a development, reinforcement of existing dune structures or building a storm surge barrier. All of these adaptation measures increase a proposal's ability to cope with the adverse impacts of climate change. The North West Marine Plan aims to support these measures and not impede terrestrial adaptation and flood defence measures. A range of suggested adaptation methods is set out by the International Panel on Climate Change (IPCC).

566. **Ecosystem services** are the benefits people obtain from ecosystems[47]. The classification of ecosystem services adopted by the Millennium Ecosystem Assessment categorises services as follows: provisioning, regulating, cultural and supporting services. Flood defence and carbon sequestration services (the process of capturing carbon dioxide from the environment) are regulating services.

567. Habitats such as saltmarshes, sand dunes, seagrass beds and mudflats, provide a variety of ecosystem services. Saltmarshes and mudflats play an important natural role in protecting the coast from flood events, by reducing wave energy and buffering flood waters. Well-developed sand dune systems act to stabilise sediments, therefore reducing coastal erosion.

568. The habitats that provide these ecosystem services also provide a natural carbon sequestration service. Saltmarsh habitat is one of the most productive ecosystems in the world and as such can sequester a large amount of carbon. Importantly due to the anoxic (without oxygen) nature of this habitat, the carbon is often shifted from the short term to the long term carbon cycle. This capability is a valuable asset of many of the world's ecosystems[48]. Seagrass beds are also considered to be an important carbon sink and sediment stabilising habitat within the marine environment[49].

Why is climate change resilience and adaptation important?

569. Climate change resilience and adaptation are important given the impacts of climate change on the marine environment are wide ranging. Climate Change impacts include, but are not limited to; sea level rise, coastal flooding, increased storminess and rising sea temperatures.

570. Climate change adaptation measures help to reduce proposals' vulnerability and that of other developments and activities to the adverse impacts of climate change within the north west marine plan areas. The links made to terrestrial measures such as

[47] UK National Ecosystem Assessment (2011) Chapter 12 Marine
[48] Nalini S. Rao, et al (2015) Global values of coastal ecosystem services: A spatial economic analysis of shoreline protection values and Barbier, E.B. et al (2011) The value of estuarine and coastal ecosystem services. *Ecological Monographs* 81: 169 – 193
[49] James W. Fourqurean, et Al (2012) Seagrass ecosystems as a globally significant carbon stock Nature Geoscience volume 5, pages 505–509 (2012) and Barbier, E.B. et al (2011) The value of estuarine and coastal ecosystem services. *Ecological Monographs* 81: 169 – 193

flood defence help to align new proposals to fit with existing measures that help local areas adapt to climate change.

571. Successful adaptation to climate change will improve the resilience of developments, activities and ecosystems within the north west marine plan areas. It will make sure proposals properly consider, and where required, build-in resilience to the effects of climate change. It will also make sure proposals do not compromise other developments, activities and ecosystems in meeting the challenges of climate change.

572. Coastal change is an important issue in the north west inshore marine plan area because a large proportion of the coastline is subject to, or vulnerable to change. Coastal change can impact on the people, assets and resources (including natural flood defences such as saltmarsh) in, or dependent on, the north west inshore marine plan area. Shoreline management plans identify what is at risk of coastal change and flooding such as property and nature conservation. Marine plans play an important part in the management of coastal change, including ensuring decisions in the marine areas avoid exacerbating detrimental coastal change and do not compromise, and preferably complement, existing measures. The effects of coastal change processes impact the north west inshore plan area due to sea level rise, changes in waves, wind and tide, which alter dominant coastal processes influencing landforms.

573. A range of existing plans including local plans contain assessments and measures to address coastal change. There is one shoreline management plan that is relevant to the north west inshore marine plan area, which includes projections of coastal change over three epochs (20, 50 and 100 years), and how management can respond to these impacts. NW-CC-3 complements these plans, particularly for locations identified as Coastal Change Management Areas. These are identified in local authority local plans as areas likely to be affected by coastal change (physical change to the shoreline through erosion, coastal landslip permanent inundation or coastal accretion). NW-CC-3 ensures that marine based proposals do not have significant adverse impacts on coastal change. NW-CC-3 also coordinates related cross-boundary issues from marine plan area to marine plan area, or from the sea to land ensuring that cross boundary proposals are properly planned. Collaborative working within catchment partnerships or flood risk management groups will help to provide this coordination.

574. Healthy marine ecosystems ensure their own resilience to the effects of climate change, and provide natural resilience for coastal communities. Carbon sequestration by natural habitats is important for the natural carbon cycle and provides a natural carbon sink. NW-CC-1 enables these habitats to continue to provide these valuable ecosystem services. Potential future residential and industrial development within and adjacent to the north west inshore plan area could conflict with habitats and species important for these two regulatory ecosystem services. Parts of mudflat and salt marsh habitats in the north west inshore marine plan area are considered in poor condition and declining (Marine Policy Statement (2.6.7.3)). Effective management of marine ecosystems can be considered a climate change

adaptation measure necessary to deal with the potential impacts of climate change. Preventing significant adverse impacts of proposals on habitats that provide natural flood defences can also reduce the need for additional artificial and costly flood defences[50].

575. These policies give effect to the Marine Policy Statement and support climate change adaptation measures. They also respond to the requirements set out in the 25 Year Environment Plan, which has targets focussing on reducing the risks of harm from environmental hazards and mitigating and adapting to climate change. Furthermore, policies will aid in the achievement of Good Environmental Status under the Marine Strategy Part One and contribute to the UK's high level marine objectives for living within environmental limits.

576. Alongside this, the Clean Growth Strategy sets out a range of approaches to decarbonise the UK while growing the economy. The 25 Year Environment Plan and the Clean Growth Strategy work together to set out a framework for mitigating climate change, and the policies are linked to the ambitions in both strategies.

577. The policies also align with the guiding framework for terrestrial planning in England, the National Planning Policy Framework in respect of managing coastal change and planning for climate change.

Policy NW-CC-1 Climate change resilience and adaptation

Proposals which enhance habitats that provide flood defence or carbon sequestration will be supported.

Proposals that may have significant adverse impacts on habitats that provide a flood defence or carbon sequestration ecosystem service must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts, or, as a last resort
d) compensate and deliver environmental net gains in line with and where required in current legislation and policy.

Policy aim

578. Habitats that provide flood defence and carbon sequestration contribute to natural resilience for coastal communities that are vulnerable to coastal erosion and change. NW-CC-1 requires proposals to manage impacts, enabling these important habitats to continue to provide this valuable service. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate for significant adverse impacts, will not be supported.

579. NW-CC-1 applies to the inshore and offshore marine plan areas.

[50] UK Climate Change Risk Assessment Report

How will this policy be implemented?

580. Saltmarsh, sand dunes, seagrass beds and mudflats exist in the north west inshore marine plan area. Please see the habitats and species layers on the Explore Marine Plans digital service for their distribution. Applicants and public authorities must take into account where relevant, all current publically available evidence relating to habitats providing relevant ecosystem services.

Proponents

581. Where proposals enhance the size and / or extent of functioning habitats that provide a flood defence or carbon sequestration service they should be supported.

582. Proposals must demonstrate that they have considered available evidence and identified any significant adverse impacts on habitats that provide flood defence and / or carbon sequestration ecosystem services.

583. Proposals should identify and describe habitats within the immediate vicinity and determine whether those habitats provide carbon sequestration or flood defence ecosystem services.

584. Proposals must demonstrate that they will, in order of preference, avoid, minimise, mitigate, or, as a last resort, compensate for significant adverse impacts on habitats that provide a flood defence or carbon sequestration ecosystem service. For example:

- avoid – through alternative locations
- minimise – minimising the size of structures or the amount of time work is undertaken to make sure natural processes can continue
- mitigate – innovative engineering design, sediment bypassing to avoid sediment loss or reductions to the overall size and scope of a project
- compensate - compensation will be considered on a case-by-case basis by decision-makers for significant adverse impacts that cannot be avoided, minimised or mitigated. Compensation will only be acceptable when in line with the provision present in primary legislation and regulations.

585. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) etc.

586. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

587. The Explore Marine Plans digital service contains information showing habitats of conservation importance and species and habitats that are particularly threatened, rare, or declining. The information also indicates the location of several habitats highlighted within this policy - coastal saltmarsh and seagrass bed habitats. The absence of evidence does not mean absence of habitats that provide flood defence and carbon sequestration ecosystem services.

588. Additional proposal specific evidence may be required. Where new evidence emerges that improves or changes the evidence provided here, this must be taken into account in applying the policy.

Proposals are required to be in compliance with relevant legislation and regulations including The Conservation of Habitats and Species Regulations 2017[51], The Conservation of Offshore and Marine Habitats and Species Regulations 2017[52], The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[53], The Marine Works (Environmental Impact Assessment) Regulations 2007, The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and National Policy Statements where they apply. Proposals within European sites will require additional assessment measures.

Decision-makers

589. Public authorities must apply this policy where the best available evidence indicates that it is appropriate to do so.

590. Public authorities must apply this policy proportionally for proposals that will interact with habitats that provide the listed ecosystem services (flood defence and carbon sequestration).

591. Public authorities must request required information where it is judged that this policy has not been sufficiently addressed before proceeding. For example, inadequate information has been provided to make an informed assessment.

Policy NW-CC-2 Climate change resilience and adaptation

Proposals in the north west marine plan areas should demonstrate for the lifetime of the project that they are resilient to the impacts of climate change and coastal change.

Policy aim

592. The effects of climate change are wide ranging and can included sea level rise, coastal flooding and rising sea temperatures. NW-CC-2 adds provision to enable enhanced resilience of developments, activities and ecosystems within the north west marine plan areas to the effects of climate change and coastal change.

593. NW-CC-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

594. Any development or proposal that is located on, or around high water mean springs is potentially at risk of flooding or other adverse impacts of climate change. As sea levels rise, it may cause high water mean springs to advance inland in certain

[51] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[52] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[53] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018

locations. To identify where these areas are more at risk, these have been mapped by the Environment Agency and are available through their flood map for planning. This map also contains information showing existing flood defences which may inform the location of developments or proposals to benefit from those defences. Some of these areas are already protected by existing measures through terrestrial planning, which includes Coastal Change Management Areas outlined in local plans. The North West Marine Plan aims to support these existing measures and not impede existing adaptation and flood defence measures whilst ensuring that new proposals fit effectively with the existing measures.

Proponents

595. This policy is of interest to those developing proposals in the north west marine plan areas such as energy installations and wharfs. Proposals should demonstrate that they are resilient to the effects of climate change for the lifetime of the proposal.

596. Proposals should demonstrate that they have consulted with public authorities[54] on matters identified in this policy at the earliest opportunity, particularly in relation to considering how proposals avoid adverse impacts upon existing adaptation measures.

597. Proposals by risk management authorities that relate to the requirements of Flood and Coastal Erosion Risk Management strategies are likely to meet the requirements of this policy through their obligations under the Flood and Water Management Act 2010. Climate change projections should be considered to make sure the design and operation of a given marine activity and / or proposed management measure (such as a marine protected areas designation) are resilient as possible to the effects of climate change, such as coastal change and flooding.

598. The Environment Agency must be consulted on any development in coastal areas with a greater than 0.5% chance of flooding. To identify these areas, proposals should refer to the Environment Agency's flood map for planning.

Decision-makers

599. NW-CC-2 is of interest to public authorities making decisions that affect the north west marine plan areas directly, including local planning authorities and those authorities granting permits or licenses for activity in those areas.

600. Public authorities should request relevant information before proceeding further, if it is judged that a proposal has not provided the required information. For example where inadequate information has been provided to make an informed assessment.

[54] Public authorities are likely to include but not limited to; The Environment Agency, local authorities, Regional Flood and Coastal Committees

Policy NW-CC-3 Climate change resilience and adaptation

Proposals in the north west marine plan areas and adjacent marine plan areas that are likely to have significant adverse impact on coastal change should not be supported.

Proposals that may have significant adverse impacts on climate change adaptation measures outside of the proposed project areas must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate the significant adverse impacts upon these climate change adaptation measures.

Policy aim

601. Large areas of the north west inshore marine plan area coastline are subject to or vulnerable to change. NW-CC-3 makes sure proposals do not exacerbate coastal change, enabling communities to be more resilient and able to adapt better to coastal erosion and flood risk where identified. NW-CC-3 also supports proposals that do not compromise existing adaptation measures, which will enable improvement of the resilience of coastal communities to coastal erosion and flood risk. Proposals that cannot avoid, minimise and mitigate significant adverse will not be supported.

602. NW-CC-3 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

603. NW-CC-3 is relevant to public authorities with an interest in coastal protection or flood risk management as well as those developing proposals that may have an effect on coastal change.

604. NW-CC-3 recognises changes to the coastline (for example managed realignment) can be beneficial for flood risk management, communities and biodiversity. It does not therefore look to restrain coastal defence or flood risk management proposals that will stabilise, reinforce or purposefully alter the coastline with the express aim of reducing vulnerability to coastal change.

605. There are existing measures through terrestrial planning that identify potential areas of risk, which include Coastal Change Management Areas outlined in local plans. The North West Marine Plan aims to support these existing measures and not impede existing adaptation and flood defence measures whilst ensuring that new proposals fit effectively with the existing measures.

Proponents

606. Proposals should demonstrate they have consulted with relevant public authorities on matters identified in this policy at the earliest opportunity, particularly in relation to

considering how proposals avoid adverse impacts upon existing adaptation measures[55] [56] [57]. Specifically the Environment Agency, Local Authorities, Catchment Partnerships, relevant Coast Protection Authorities, IFCAs, coastal groups and / or lead local flood authorities. Consultation should be carried out at the earliest opportunity, particularly in relation to considering how proposals might help support existing coastal adaptation policies.

607. Proposals should demonstrate they have taken into account existing plans such as; shoreline management plans, estuary management plans and other local level plans including coastal change management areas, local flood risk management plans and strategies as well as beach management plans where applicable.

608. Proposals by risk management authorities that relate to the requirements of Flood and Coastal Erosion Risk Management strategies are likely to meet the requirements of this policy through their obligations under The Flood and Water Management Act 2010. Wider improvements to resilience could be considered mitigating factors to demonstrate that certain coastal management schemes will not have an overall significant adverse impact on coastal change.

609. Proposals that are likely to be at risk from climate change and do not include appropriate adaptation measures to make them resilient, should identify existing measures that would currently provide resilience to any adverse impacts such as flood defences, providing resilience to any adverse impacts of climate change.

610. Proposals must demonstrate that they will, in order of preference, avoid, minimise or mitigate significant adverse impacts on climate change adaptation measures outside of the proposed project areas. For example:

- avoid – through alternative locations
- minimise – minimising the size of structures, offset carbon emissions from delivering the proposal, engineering green infrastructure into the proposal
- mitigate – innovative engineering design.

611. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) etc.

612. Inclusion of this information does not indicate that approval of the proposal will follow by default. This will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

Decision-makers

613. Public authorities should consider this policy when assessing proposals that are likely to have a significant adverse impact on coastal change. This may include large

[55] Coastal groups comprise all key partners in coastal management, principally those from the Environment Agency, maritime local authorities and port authorities.
[56] In two tier local government the district council remains responsible for coast protection, while flooding is managed by the county
[57] Management of Coastal change and flood risk management is the responsibility of the Environment Agency, lead local authorities and others as indicated by relevant Shoreline, Estuary or River Basin Management plans.

proposals such as those requiring an Environmental Impact Assessment or a strategic environmental assessment. This includes when a proposal affects the vulnerability of other users, or if change is on a scale of, or above, that of shoreline management plan units (where a coastal management decision has been taken).

614. Public authorities should not give consent for proposals which could cause significant adverse impacts to areas at risk, or those of high probability of coastal change.

615. Future proposals in the adjacent marine plan area may have potential significant adverse impacts on coastal change and consideration should be given on a case-by–case basis whether they should be supported.

616. In applying this policy the term adjacent is taken as to be close by, by the side of, or bordering on the marine plan areas.

Signposting

617. Legislation which relates to and may support the implementation of these policies includes:

- The Climate Change Act 2008
- The Conservation of Habitats and Species Regulations 2017[58]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[59]
- The Flood and Water Management Act 2010
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[60]
- The Marine Works (Environmental Impact Assessment) Regulations 2007
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

618. Guidance and other materials which relate to and may support the implementation of these policies include:

- 25 Year Environment Plan
- Coastal Change Management Areas
- Committee on Climate Change
- National flood and coastal risk management strategy for England
- National Planning Policy Framework
- RTPI guide on planning for climate change
- UK Climate Change Risk Assessment Report

[58] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[59] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[60] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018

- UK Climate Projections 18

619. Existing measures which support the implementation of these policies include:

- National Adaptation Programme
- National Policy Statements
- North West Shoreline Management Plan (Scottish Border to Great Orme's Head)

5.15 Carbon capture usage and storage

Policy Code	Policy Wording
NW-CCUS-1	Decommissioning Programmes for oil and gas facilities should demonstrate that they have considered the potential for re-use of infrastructure.
NW-CCUS-2	Carbon Capture Usage and Storage proposals incorporating the re-use of existing oil and gas infrastructure will be supported.

What is carbon capture, usage and storage?

620. Carbon capture, usage and storage is a technology that can prevent carbon dioxide emissions produced from the use of fossil fuels in electricity generation and industrial processes from entering the atmosphere and contributing to atmospheric climate change. The process involves:

- capturing carbon dioxide from industrial processes or electricity production
- transporting compressed (liquid) carbon dioxide by trunk pipeline or ship to a storage site
- safely and permanently storing the carbon dioxide in very deep subsurface rock formations; suitable storage sites include but are not limited to depleted oil and gas fields
- utilisation of the captured carbon dioxide in some instances

621. The storage of carbon dioxide is licensed through the Energy Act 2008.

622. The decommissioning **of offshore oil and gas installations and pipelines** on the United Kingdom Continental Shelf is controlled through the Petroleum Act 1998.

623. The responsibility for ensuring that the requirements of the Petroleum Act 1998 are complied with rests with the Offshore Petroleum Regulator for Environment and Decommissioning, which sits within the Department for Business, Energy and Industrial Strategy.

624. Owners of oil and gas installations and pipelines are required to decommission their offshore infrastructure at the end of a field's economic life. The Act requires owners to set out the measures to decommission disused installations and / or pipelines in a decommissioning programme. A decommissioning programme must identify all the items of equipment, infrastructure and materials that have been installed or drilled and describe the decommissioning solution for each.

625. The **re-use of oil and gas infrastructure** involves repurposing existing oil and gas infrastructure for an alternative use. The infrastructure referred to can broadly be grouped under either wells, trunk pipelines or platforms, which through re-use can facilitate the transport and storage of captured carbon dioxide.

626. If assets are identified as having potential for re-use (such as for carbon capture usage and storage), they might need to be maintained or preserved in a state that supports later re-use. These assets would, however, ultimately need to undergo decommissioning in accordance with the regulatory regime.

Why is carbon capture usage and storage important?

627. Carbon capture, usage and storage may be beneficial to the north west marine plan areas by supporting regional economic growth through creating new jobs and supporting new markets. It may also encourage investment in local and regional skills and infrastructure; The Potential Value of CCUS to the UK Economy estimates that for the whole UK, "the economy would be £30 billion per annum (approximately 1% of GDP) better off in 2050 and beyond if CCUS is fully integrated into the power and industrial sectors".

628. Carbon capture, usage and storage has the potential to contribute towards decarbonising the economy, helping the UK reach its emissions targets by 2050. It is regarded internationally as a key abatement technology for limiting the impact of climate change, helping to reduce the amount of carbon dioxide entering the atmosphere through the sequestration of carbon dioxide in geological formations. This can benefit the marine environment by reducing the drawdown of carbon dioxide into the ocean, thereby reducing ocean acidification.

629. The overarching National Policy Statement for Energy EN-1 states that 'all commercial scale (at or over 300 megawatts electrical output) combustion power stations (including gas, coal, oil or biomass) have to be constructed carbon capture ready' and that 'new coal-fired power stations are required to demonstrate carbon capture and storage on at least 300 Megawatts of the proposed generating capacity'.

630. The Marine Policy Statement (3.3.33) states that 'there are also possibilities to re-use existing infrastructure' to provide access to storage sites. EN-1 also states that 'initially, attention is likely to focus on depleted oil and gas fields'. The preservation and re-use of existing oil and gas infrastructure can deliver cost savings to carbon capture usage and storage projects, as the amount of new infrastructure to be installed can be reduced. Re-use can also be beneficial to oil and gas operators who might not need to decommission assets (if the carbon storage project becomes the primary duty holder with responsibility for decommissioning), thereby reducing costs. Re-use of infrastructure can extract more usage and therefore cost efficiency from individual assets, as well as reducing the environmental impacts and carbon footprint associated with new construction (Infrastructure Reuse and Decommissioning).

631. The United Kingdom offshore area is considered to be one of the most promising locations anywhere in the world to permanently store carbon dioxide (Marine Policy Statement (3.3.31)). The government's ambition is for the UK to become a global technology leader in carbon capture usage and storage with the Clean Growth Strategy, published in 2017, setting out the range of actions, domestically and internationally, needed to unlock its potential.

632. This was followed by The UK Carbon Capture Usage and Storage deployment pathway, which set out the next steps that industry and government need to take to enable the development of the first CCUS facility in the UK, commissioning from the mid-2020s, to achieve the government's ambition to have the option to deploy CCUS at scale during the 2030s, subject to costs coming down sufficiently.

Policy NW-CCUS-1 Carbon capture usage and storage

Decommissioning Programmes for oil and gas facilities should demonstrate that they have considered the potential for re-use of infrastructure.

Policy aim

633. The re-use of existing oil and gas infrastructure may bring cost savings to the existing owners and operators of these oil and gas assets. This policy encourages the consideration of infrastructure re-use by oil and gas operators prior to decommissioning. The policy notes that re-use is not always the most viable or realistic option for infrastructure, so asks that the potential be considered, and lists some of the factors that should be taken into account.

634. NW-CCUS-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

635. Carbon dioxide can only be safely stored where geology and infrastructure is suitable; this is reflected in the locations of existing oil and gas installations which have the same locational requirements. The Energy Technologies Institute have highlighted potential carbon dioxide storage sites in their Strategic UK CCS Appraisal, while CO_2 Stored illustrates potential storage sites in the UK offshore marine area.

636. Many of the major storage units for gas in the UK marine area are available in the eastern Irish Sea. The offshore regions are prioritised for storage as they are known to have suitable geology. Onshore oil and gas fields are likely to be too small to store the large amounts of carbon dioxide needed to reduce emissions.

637. The government ran a consultation on the Re Use of Oil and Gas Assets for CCUS Projects, which closed on 16 September 2019. This includes consulting on a list of pipelines and stores with potential for re use and on a policy framework. The government will carefully consider evidence provided in response to this consultation before outlining its final position at the end of 2019. Therefore the implementation text in the carbon capture usage and storage policies within the North West Marine Plan is not final and may be subject to changes in response to this work.

Proponents

638. Owners of oil and gas assets (operators) are required to decommission their offshore infrastructure at the end of a field's economic life, and the Petroleum Act 1998 requires owners to set out the measures to decommission disused assets in a decommissioning programme. A decommissioning programme must normally identify all the items of equipment, infrastructure and materials that have been installed or drilled and describe the decommissioning solution for each.

639. Operators can reach compliance with NW-CCUS-1 by demonstrating that they have considered the potential for re-use for each asset prior to applying to a decommissioning programme. The operator should consult with the Oil and Gas Authority for more information.

Decision-makers

640. The decommissioning of offshore oil and gas installations and pipelines on the United Kingdom Continental Shelf is controlled through the Petroleum Act 1998. The responsibility for ensuring that the requirements of the Petroleum Act 1998 are complied with rests with the Offshore Petroleum Regulator for Environment and Decommissioning which sits within the Department for Business, Energy and Industrial Strategy. They would approve any Decommissioning Programmes for oil and gas installations and pipelines as well as assessing any associated environmental permits.

Policy NW-CCUS-2 Carbon capture usage and storage

Carbon Capture Usage and Storage proposals incorporating the re-use of existing oil and gas infrastructure will be supported.

Policy aim

641. The re-use of oil and gas infrastructure can be economically beneficial for both oil and gas and carbon capture usage and storage operators. This policy encourages re-use by supporting new carbon capture usage and storage proposals that utilise still viable oil and gas infrastructure.

642. This policy does not mean proposals that do not incorporate the re-use of existing oil and gas infrastructure will be disadvantaged or rejected in the application process. Although the re-use of infrastructure can be beneficial, there are many complicated considerations to have regard to, and the suitability of each individual piece of infrastructure for re-use must be considered on a case-by-case basis.

643. NW-CCUS-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

644. This policy applies in any location where there are existing oil and gas assets that have reached the end of their commercial life for producing hydrocarbons.

645. The government ran a consultation on the Re Use of Oil and Gas Assets for CCUS Projects, which closed on 16 September 2019. This includes consulting on a list of pipelines and stores with potential for re use and on a policy framework. The government will carefully consider evidence provided in response to this consultation before outlining its final position at the end of 2019. Therefore the implementation text in the carbon capture usage and storage policies within the North West Marine Plan is not final and may be subject to changes in response to this work.

Proponents

646. Carbon capture usage and storage applicants should incorporate the re-use of existing oil and gas infrastructure to gain support, or demonstrate how infrastructure re-use has been considered in their proposals. Such consideration could include an assessment of the environmental and economic benefits of reusing existing infrastructure as opposed to installing new infrastructure, and why any given piece of infrastructure would be suitable for re-use in relation to the carbon store of interest

and the relevant onshore facilities. An assessment could also be conducted of other infrastructure within the vicinity of the project with analysis of the routeing options in terms of cost, and minimising disruption to other users of the sea and the environment. If existing infrastructure is unable to be used for a potential development then this should be detailed within the proposal, along with reasons.

647. In addition to applying for a licence, applicants must obtain a grant of the appropriate rights from The Crown Estate (or the Scottish Crown Estate in the territorial sea adjacent to Scotland, which is authorised by Scottish ministers).

Decision-makers

648. The Oil and Gas Authority is the licensing authority for certain offshore storage of carbon dioxide activities (under Chapter 3 (Storage of carbon dioxide) of the Energy Act 2008), approving and issuing storage permits and maintaining the carbon storage public register. Offshore storage within the territorial sea adjacent to Scotland is authorised by Scottish ministers.

649. When reviewing proposals, the decision-maker should ensure that carbon capture usage and storage projects demonstrate the potential for infrastructure co-location and re-use as early as possible, and that this has been detailed in proposals, as per the considerations listed in the section for applicants. The decision-maker should support all proposals that re-use oil and gas infrastructure as part of carbon capture usage and storage projects. Those that do not incorporate infrastructure re-use if unviable may still be supported, though not directly under this policy.

650. The Oil and Gas Authority may also be involved in discussing re-use options with the operators of offshore oil and gas infrastructure before decommissioning, including the development and use of facilities for the storage of carbon dioxide.

651. The Offshore Petroleum Regulator for Environment and Decommissioning, which sits within the Department for Business, Energy and Industrial Strategy (under the Energy Act 2010 and The Storage of Carbon Dioxide (Licensing etc.) Regulations 2010) would approve any Decommissioning Programmes for oil and gas installations and pipelines as well as assessing any associated environmental permits (Petroleum Act 1998).

Signposting

652. Guidance and other materials which relate to and may support the implementation of these policies includes:

- OGA Licensing & consents – Carbon storage
- OGA Licensing & consents – Gas storage and unloading
- Map of offshore infrastructure and potential carbon dioxide storage sites
- Oil and gas: decommissioning of offshore installations and pipelines
- UK carbon capture, usage and storage

653. Existing measures which support the implementation of these policies include:

- Industrial Strategy

- National Planning Policy Framework
- National Policy Statement for Energy EN-1
- Clean Growth Strategy
- The UK carbon capture, usage and storage (CCUS) deployment pathway: an action plan

Box 2: Construction of new offshore infrastructure for Carbon Capture Usage and Storage projects

The Marine Policy Statement (3.3.33) recognises the need for suitable locations that provide for the permanent storage of carbon dioxide. Section 3.3.32 also identifies that research and development projects may be proposed under the Carbon Storage Directive (Directive 2009/31/EC). The Energy Act 2008 provides for a licensing regime that governs the offshore storage of carbon dioxide. It forms part of the transposition into UK of the directive. The Storage of Carbon Dioxide (Licensing etc.) Regulations 2010 transpose many other requirements of the directive. Whilst no sites have currently been identified in the plan area, it is anticipated that new carbon, capture, usage and storage infrastructure will be developed within the 20 year vision of the marine plan area; and that "for storage to take place it will be necessary to install associated infrastructure such as pipelines and well-heads". The North West Marine Plan will therefore need to take into consideration future applications from carbon, capture, usage and storage projects of this nature.

5.16 Air quality

Policy Code	Policy Wording
NW-AIR-1	Proposals must assess their direct and indirect impacts upon local air quality and emissions of greenhouse gases and air pollutants. Where proposals are likely to result in air pollution or increased greenhouse gas emissions, they must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate air pollution and or greenhouse gas emissions in line with current national and local air quality objectives and legal requirements.

What is air quality?

654. **Air quality** is a measure of how polluted the air we breathe is. When air quality is poor, pollutants in the air may be hazardous to people, particularly those with lung or heart conditions. Air pollution also has direct impacts on the natural environment, contributing to climate change, reducing crop yields and polluting oceans. Improved air quality will directly benefit animals and habitats as well as human health.

655. **Air pollution** is defined as a mixture of gases and particles that have been emitted into the atmosphere by man-made processes. Many substances can pollute the air[61]. Some of these are very harmful and their sale and use is strictly regulated. Others are not immediately harmful, but are released in thousands or millions of tonnes per year nationally as by-products of transport, energy production, chemicals manufacture, domestic combustion and farming. When released into the air these substances have gradual but significant impacts on human health[62] and the environment (Clean Air Strategy 2019).

656. **Greenhouse gases** contribute towards climate change by trapping heat in the atmosphere. The main differences between air pollution and greenhouse gases is that air pollution effects our health and the health of the environment and greenhouse gases that have always been present in the atmosphere are now increasing due to human production, which in turn warms the planet at a faster rate.

657. Indirect air pollution including greenhouse gas emissions can result unintentionally from another activity, this can occur outside of a proposal's direct footprint. Indirect or unintended emissions, could occur as and when there is an interaction between marine transport (including shipping and fishing vessels) and another constraint upon that transport. For example, a proposal seeking to generate renewable energy might find a suitable location between the coast and fishing grounds. Construction may affect fishing activity causing vessels to navigate around the development,

[61] https://uk-air.defra.gov.uk/assets/documents/What_are_the_causes_of_Air_Pollution.pdf
[62] https://uk-air.defra.gov.uk/air-pollution/effects

resulting in an increase in fuel consumption and associated emissions. This would negate some of the benefit of the proposal in terms of low carbon energy generation, as well as affecting the economic viability of the fishing operation.

Why is air quality important?

658. Clean air is a basic requirement of a healthy environment for us all. Air quality has improved significantly in recent decades, but there are areas across some parts of our country where air pollution can accumulate, depending on prevailing weather conditions, to reach high concentrations that can affect people's health, particularly those with lung or heart conditions. While most areas of UK are compliant with existing statutory limit values, there are hotspots where nitrogen oxide concentrations exceed limits, requiring urgent action to control. A key pollutant – fine particulate matter which is produced from friction and combustion causes significant long term health impacts and UK has committed to action to reduce concentrations to reduce impacts on the nation's health. Ammonia, generally released from agriculture, has a significant effect on the environment through deposition of excess nitrogen.

659. Air pollution can negatively affect natural habitats, ecosystems and processes, and plants and animals. Serious environmental impacts of air pollution occur as a result of nitrogen deposition, acid deposition and direct toxic effects of pollutants in the air. (The state of the environment: air quality 2018).

660. Most evidenced areas of air pollution in the north west marine plan area are terrestrial based sources including from industry and areas of busy road traffic. The north west marine plan areas have several population centres close to the coasts, including Liverpool, Blackpool and Lancaster. Liverpool is the largest industrialised settlement, with several large ports. Road transport is a significant contribution of emissions to air pollution, so local authorities assess and review air quality in their area. If national air quality objectives[63] will not be achieved, local authorities must declare an Air Quality Management Area[64] and put together a Local Air Quality Action Plan for the area. Some of these air quality management areas can be coastal and require consideration by marine developments (Figure 22). Increased use of coastal shipping and rail can support a reduction in road traffic improving air quality in adjacent towns through reduced congestion. However shipping also contributes towards air pollution and greenhouse gas emissions.

661. The sectors where marine plans can have an impact on reducing air pollution in the north west marine plan areas are mainly but not exclusively:

- developments in the marine plan areas
- ports and shipping
- renewable energy

662. Major ports and their main uses in the north west inshore marine plan area include:

[63] https://uk-air.defra.gov.uk/assets/documents/National_air_quality_objectives.pdf
[64] https://uk-air.defra.gov.uk/aqma/?la_id=6

- Port of Liverpool – bulk, containers, energy and ferries to Isle of Man and Ireland
- Fleetwood – fishing
- Heysham – ferry to Isle of Man and freight
- Barrow – shipwork and energy sector
- Manchester - bulk liquids and dry bulk cargo

663. There are also numerous smaller ports servicing smaller vessels all along the inshore area. The Irish Sea is a busy shipping area and includes International Maritime Organisation (IMO) traffic separation schemes in the plan area near to the entrance to Liverpool and Mersey ports. Liverpool is ranked the 6th busiest port in the UK and has potential to double its capacity.

664. The variety of potential development within the north west marine plan areas has the ability to affect vessel transits. Without consideration of other users and existing activity, such as a variety of fishing grounds, important shipping and ferry routes and tourism and recreation activities, proposals may increase indirect or unintended emissions, resulting in adverse impacts on climate change.

665. The International Convention for the Prevention of Pollution from Ships (MARPOL Annex VI) first adopted in 1997, sets limits for progressive reductions in emissions from shipping. MARPOL Annex VI limits the main air pollutants contained in ships exhaust gas, including sulphur oxides and nitrous oxides, and prohibits deliberate emissions of ozone depleting substances.

666. Following on from the governments Clean Air Strategy 2019 and the Maritime 2050 strategy the Clean Maritime Plan 2019 was developed stating that major ports[65]must develop air quality strategies. Port Air Quality Strategies guidance was published alongside the Clean Maritime Plan. Major ports in the north west inshore marine plan area which are required to submit[66] and review air quality strategies are:

- Heysham
- Liverpool
- Manchester

667. The Clean Maritime Plan includes aims to:

- deliver clean growth opportunities from green shipping for the UK
- improve air quality on and around our waterways, ports and shipping lanes
- reduce greenhouse gas emissions from the maritime sector

668. The 25 Year Environment Plan set out the UK Governments targets for clean air and includes;

- clean air
- mitigating and adapting to climate change
- thriving plants and wildlife

[65] Any port handling cargo volumes of at least 1 million tonnes annually
[66] By July 2020

669. Alongside this, the Clean Growth Strategy sets out a range of approaches to decarbonise the UK while growing the economy. The 25 Year Environment Plan and the Clean Growth Strategy work together to set out a framework for mitigating climate change and this policy is linked to both of those requirements by reducing emissions which will mitigate climate change and reduce carbon. In addition the Committee on Climate Change sets out policy action to reduce emissions.

670. This policy is in line with the Marine Policy Statement (2.6.2 and 2.6.7) and the National Planning Policy Framework, promoting efficient and effective use of marine space and reduction of conflicts arising from unintended consequences of proposals, such as through displacement, as well as being in line with specific climate change policies.

Policy NW-AIR-1 Air Quality

Proposals must assess their direct and indirect impacts upon local air quality and emissions of greenhouse gases and air pollutants.

Where proposals are likely to result in additional local air pollution or increased emissions of greenhouse gas or air pollutants, they must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate air pollution or greenhouse gas emissions in line with current national and local air quality objectives and legal requirements.

Policy aim

671. Clean air is essential for life, health, the environment and the economy. Air pollution and greenhouse gas emissions must be reduced to protect health, habitats and species and reduce the impacts of climate change. NW-AIR-1 ensures that proposals consider and address where they may cause direct or indirect air pollution or greenhouse gas emissions and manage these accordingly.

672. Proposals that cannot avoid, minimise or mitigate air pollution and or greenhouse gas emissions in line with current national or local air quality objectives and legal requirements should not be supported.

673. Policy NW-AIR-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

674. This policy is of interest to those developing proposals in the north west inshore and offshore marine plan areas.

675. Proposals must demonstrate that they will, in order of preference, avoid, minimise or mitigate air pollution or greenhouse gas emissions in line with current national and local air quality objectives and legal requirements - proposals cannot proceed to (b) minimise unless they have first demonstrated why they cannot meet (a) avoid and so on. To achieve this, they should consider best available evidence and guidance to

avoid or reduce air pollution. Air pollution must be considered across the lifetime of the proposal including construction, operation and decommissioning phases.

676. Figure 22 shows the location of local Air Quality Management Areas in the north west.

677. Measures to reduce air pollution and or greenhouse gas emissions could include:

- avoid – taking measures to avoid siting the proposal in areas of busy use for vessel transit or near to coastal Air Quality Management Areas
- minimise – taking measures to monitor and reduce air pollution and emissions – using new technology and improved fuels
- mitigate – taking measures to monitor and mitigate air pollution or greenhouse gas emissions, as below examples may illustrate:
    - avoiding displacement of vessels transit routes
    - efficient service operation vessels
    - liquefied natural gas (LNG) power barges
    - low carbon investments
    - providing improved grid facilities to support port developments of shore-side energy
    - providing shore-side electrical power to replace ships' generators while in port (cold-ironing)
    - transport assessments and vehicle booking systems for ports
    - use of low emission technologies on water, road and rail transport
    - use renewable energy to charge vessels whilst in port
    - vessels switching to low carbon fuels

678. Where a proposal will result in or facilitate increased air pollution and or greenhouse gas emissions, the applicant should undertake an assessment of the impacts of the proposed project as part of the proposal. Direct and indirect air pollution and or greenhouse gas emissions must be considered. Cumulative impacts upon air quality must also be considered in line with NW-CE-1.

679. Proposals must demonstrate that they have considered the interaction between sectors, particularly in relation to indirect consequences on air pollution, such as, but not limited to:

- developments to increase coastal shipping – see NW-PS-4 (There is a modal shift towards Coastal Shipping from terrestrial haulage to reduce overall net air pollution)
- greater travelling distances of vessels from placement of new marine infrastructure resulting in increased fuel consumption and in turn air pollution
- indirectly increasing road or vessel transit
- port developments to attract more vessels – see all NW-PS policies

680. Ports should follow the National Policy Statement for Ports when considering air quality and emissions. Terrestrial developments should also consider the National Planning Policy Framework (para. 181).

681. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

Decision-makers

682. This policy is of interest to public authorities making decisions that affect the north west marine plan areas directly or indirectly including local planning authorities and those authorities granting permits or licenses for activity in those areas.

683. Decision-makers should only support proposals that incorporate measures to avoid, minimise or mitigate air pollution or greenhouse gas emissions in line with current national and local air quality objectives, whichever is the most stringent.

684. Figure 22 shows the location of local Air Quality Management Areas in the north west.

685. Decision makers should consider indirect or unintended emissions, resulting from proposals which can lead to adverse impacts on air quality and climate change. Decision makers should show commitment to policies that favour use of low emission technologies in associated water, road and rail transport.

686. Public authorities should determine on a case-by-case basis which proposals this policy should be applied to, considering the scope of activities and interests affected. The effects should be considered across the proposal's lifetime, so that air pollution including greenhouse gas emissions are considered across the commissioning, operational and decommissioning phases of the proposal rather than at a singular specific point in time. This may require monitoring of air quality or greenhouse gas emissions.

687. Public authorities should request relevant information before proceeding further if it is judged that a proposal has not provided the required information. For example, where inadequate information has been provided to make an informed assessment.

688. The north west has a large Air Quality Management Area in Liverpool and the surrounding area. There are also air quality concerns in Blackpool, Lancaster and busy road links between Liverpool and Manchester, which would need to be considered regarding any marine developments (Figure 22). As air quality monitoring of coastal and offshore areas improves it will become easier to identify areas of air quality concern within the marine plan areas themselves. As well as the impacts on human health from air pollution, it is important that potential impacts on marine protected areas are also considered.

Signposting

689. Legislation which relates to and may support the implementation of this policy includes:

- Climate Change Act 2008
- Environmental Protection Act 1990

- The Merchant Shipping (Prevention of Pollution by Sewage and Garbage from Ships) Regulations 2008[67]
- The Merchant Shipping (Prevention of Air Pollution from Ships) Regulations 2008[68]
- The Motor Fuel (Composition and Content) Regulations 1999[69]
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[70]

690. Guidance and other materials which relate to and may support the implementation of this policy include:

- 25 Year Environment Plan
- Air quality: explaining air pollution – at a glance
- Clean Air Strategy 2019
- Clean Growth Strategy
- Clean Maritime Plan 2019
- Committee on Climate Change
- Environmental ship index
- National Atmospheric Emissions Inventory
- National Policy Statement for Ports
- Marine Climate Change Impacts Partnership
- The Air Quality Strategy for England, Scotland, Wales and Northern Ireland
- Maritime 2050
- UK Air Information Resource
- UK Climate Projections 18
- World Port Sustainability Program

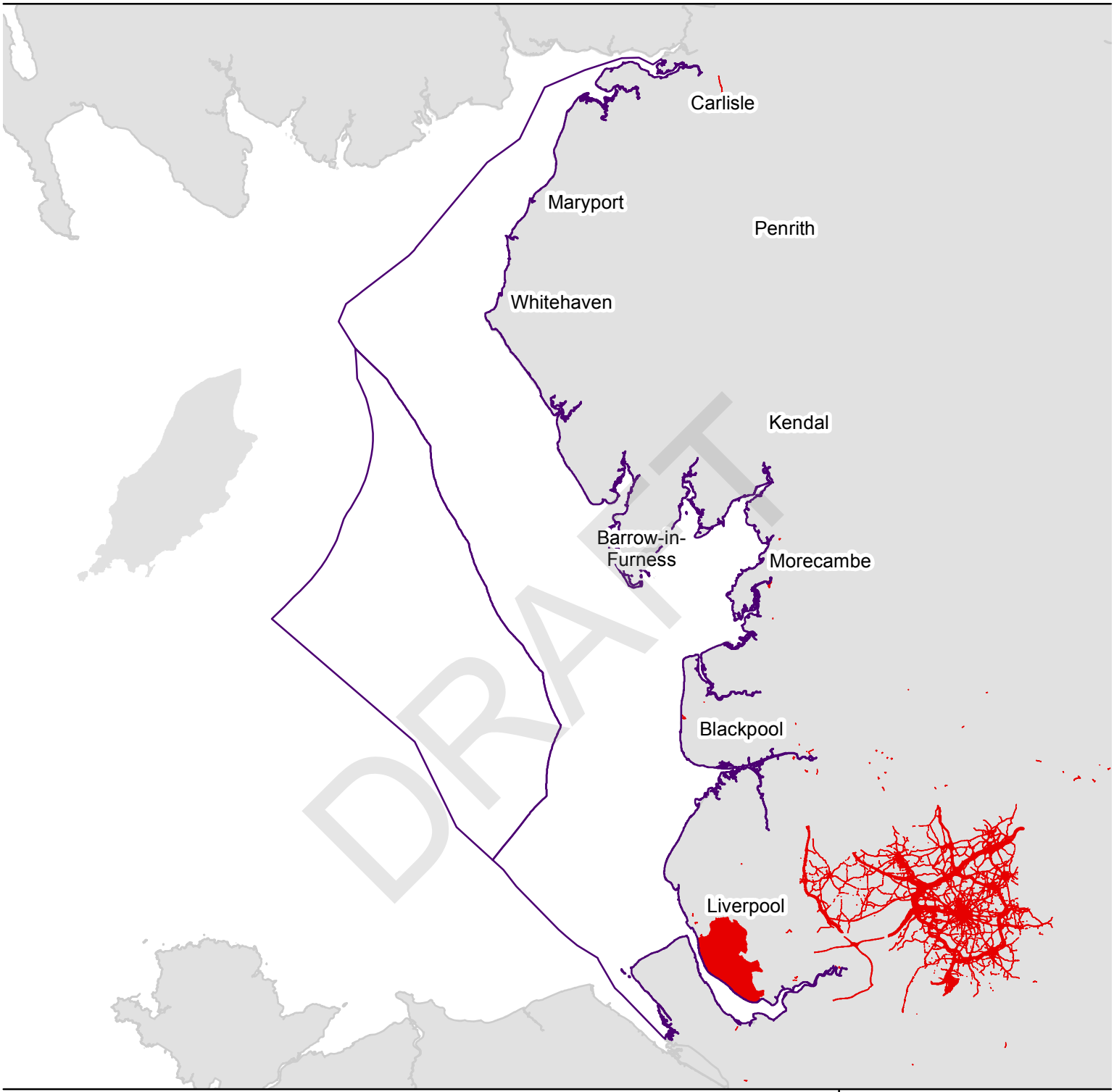
691. Existing measures which support the implementation of this policy include:

- Greater Manchester Air Quality Action Plan
- Let's clear the air Liverpool (Air quality plan)

[67] As amended by The Merchant Shipping (Prevention of Pollution by Sewage and Garbage from Ships) (Amendment) Regulations 2010
[68] As amended by The Merchant Shipping (Prevention of Air Pollution from Ships) (Miscellaneous Amendments) Regulations 2019
[69] As amended by The Motor Fuel (Composition and Content) (Amendment) Regulations 2015
[70] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018

Marine Management Organisation

Figure 22 | Air Quality Management Areas (AQMA)



North West Marine Plan Areas

Air Quality Management Areas (AQMA)

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
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5.17 Marine litter

Policy Code	Policy Wording
NW-ML-1	Public authorities must make adequate provision for the prevention, re-use, recycling and disposal of waste to reduce and prevent marine litter. Public authorities should aspire to undertake measures to remove marine litter within their jurisdiction.
NW-ML-2	Proposals that facilitate waste re-use or recycling to reduce or remove marine litter will be supported. Proposals that could potentially increase the amount of marine litter in the marine plan area, must include measures to: a) avoid b) minimise c) mitigate waste entering the marine environment.

What is marine litter?

692. **Marine litter** is any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment. Marine litter consists of items that have been made or used by people and deliberately discarded into the sea or rivers or on beaches; brought indirectly to the sea with rivers, sewage, storm water or winds; accidentally lost, including material lost at sea in bad weather (fishing gear, cargo); or deliberately left by people on beaches and shores (United Nations Environment Programme 'Marine Litter an Analytical overview').

693. **Waste** is defined as "any substance or object which the holder discards or intends or is required to discard". Solid waste in the marine environment is commonly referred to as marine litter. Marine litter includes processed food items and excludes seaweed, twigs or other biological debris which contribute to maintaining the local ecosystem.

694. The **waste hierarchy** ranks waste management options according to what is best for the environment in order of prevention, re-use, recycling, recovery then disposal. To dispose of waste correctly to avoid it becoming litter the waste hierarchy should be applied.

695. An increase in waste created by human use, the growing dependence upon plastics and poor waste management has led to a rise in litter in the marine environment. Though marine litter can come from both marine and land based sources, the Litter Strategy for England 2017 states that 'some 80% of man-made debris in the marine environment originated on land'. Supported by recent research and evidence the issue of marine litter has risen on the global platform and is being debated at many levels.

696. The lack of ownership of marine litter, means a collective responsibility needs to be applied. An aspiration of this policy is that Public Authorities will undertake measures

to remove marine litter within their jurisdiction. Effective avoidance and removal of marine litter requires a collaborative approach between public authorities, the private sector and the voluntary sector.

Why is marine litter important?

697. There are a number of negative impacts caused by marine litter in the north west marine plan areas including:

- clean up costs
- cost to tourism
- damage to vessels and structures
- impact on wildlife through entanglement and ingestion including mortality
- lost catch
- public safety
- the appearance of our coast and beaches
- transportation of invasive non-native species
- transferring toxic chemicals through the food chain

698. Marine litter is unsightly and can cause harm to marine wildlife through entanglement and ingestion, and through smothering of the seabed. Litter also causes economic effects through clean-up costs to local communities, lost tourism and costs to fishermen through lost catch and damaged gear. It can also pose a hazard to seafarers through fouling of ship propellers and it can provide a pathway for non-native species to spread to new areas. Reducing litter in rivers, estuaries and at the coast will aid in the overall reduction of marine litter

699. Specific data about the distribution and sources of marine litter is improving, however is not currently sufficient to give detailed spatial information about where marine litter occurs in the north west marine plan areas.

700. Limited data for the north west inshore marine plan area indicates the beaches in the north west have a higher than average concentration of food and drink packaging (Marine anthropogenic litter on British beaches: A 10-year nationwide assessment using citizen science data).

701. With an increase in housing development in the north west over the next 20 years, along with other coastal developments, tourism, increased access and recreational use will likely result in corresponding increases in waste and potentially litter levels in the north west marine plan areas.

702. A number of policies in the North West Marine Plan support activities that could also indirectly increase the amount of litter generated (NW-ACC-1, NW-EMP-1, NW-INF-1, NW-TR-1), therefore this policy demands that all proposals consider their contribution of marine litter and how they intend to address it.

703. Plastics are the main type of litter found both on beaches and offshore, including increasing quantities of microscopic pieces of plastics resulting from degradation of larger plastic products in the sea. These may act as a vector for transferring toxic chemicals to the food chain. There is, therefore, widespread recognition that current

and future measures to reduce marine and coastal litter will bring ecological, economic and social benefits (Marine Strategy Part One: UK updated assessment and Good Environmental Status).

704. This policy supports the intent of the Litter Strategy for England. The Litter Strategy makes particular reference to marine litter and the need to work together to 'reduce the amount of litter entering the marine environment and remove litter that is already there.' NW-ML-1 also supports the aims of the Resources and waste strategy for England by promoting improvements in waste management, re-use and recycling of waste to support a circular economy.

705. The Marine Strategy Regulations 2010 are part of a set of policies to help the UK meet our aim to achieve clean, healthy, safe, productive and biologically diverse oceans and seas. The updated Marine Strategy Part One describes good environmental status in 11 main points which cover all the important aspects of the marine ecosystem and all the main human pressures on them. From this a programme of measures for achieving good environmental status was developed in three parts. Marine planning was recognised in the Marine Strategy Part Three: UK programme of measures as a measure of addressing marine litter.

706. The Marine Strategy Regulations 2010 do not include transitional waters (estuaries, rias and rivers) and the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 does not address the issue of marine litter. Therefore marine plans are a tool to apply a consistent approach towards addressing marine litter issues across all of the English marine plan areas.

707. The discharge of litter into the sea is prohibited by the International Convention for the Prevention of Pollution from Ships (MARPOL Annex V) and the Environmental Protection Act 1990. The Maritime and Coastguard Agency provide guidance on the prevention of pollution and port waste management planning.

708. The 25 Year Environment Plan states that 'The UK is committed to leading efforts to protect the marine environment. To tackle marine pollution, we will pursue a sustainable, international and transboundary approach that prioritises reducing global reliance on plastics, increases economically viable recycling processes, and promotes maritime practices that prevent harmful matter entering the seas'.

Policy NW-ML-1 Marine Litter

Public authorities must make adequate provision for the prevention, re-use, recycling and disposal of waste to reduce and prevent marine litter.

Public authorities should aspire to undertake measures to remove marine litter within their jurisdiction.

Policy aim

709. Litter at sea often originates on land. Increase in development, access, recreation and tourism in the north west marine plan areas may result in increased litter, and an adverse impact on the environment on which these activities rely. Preventing marine litter through effective waste management is vital. Addressing marine litter along the

coastline is also an important step towards dealing with this problem. NW-ML-1 aims to reduce marine litter in both the inshore and offshore marine plan areas.

710. Policies NW-ML-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Decision-makers

711. Policy NW-ML-1 aligns with the Marine Policy Statement (2.5.9 - 2.5.14) and the Marine and Coastal Access Act 2009. Reducing waste at source in accordance with The Waste (England and Wales) Regulations 2011 would contribute towards reducing marine litter. Measures to facilitate the re-use and recycling of waste before it becomes marine litter must be implemented. Guidance on applying the Waste Hierarchy must be applied to ensure public authority functions capable of affecting the marine area include measures to avoid the introduction of litter to the marine environment.

712. Guidance on applying the Waste Hierarchy ranks waste management options according to what is best for the environment. It gives top priority to preventing waste in the first place. When waste is created it gives priority to preparing it for re-use, then recycling, then recovery, and last of all disposal (eg landfill). This guidance is produced under regulation 15(1) of The Waste (England and Wales) Regulations 2011 and any person subject to the regulation 12 duty must have regard to it.

713. Avoiding littering and inappropriate disposal of waste is the best way to reduce the amount of debris getting into the environment[3]. Public authorities (as defined in Section 89 (1) of the Environmental Protection Act 1990) have a duty in keeping their land free from litter which includes beaches, waterside land and public open spaces as described in the Code of Practice on Litter and Refuse. This can include the provision of waste bins and other infrastructure (for example signage and information boards) and provides local authorities with powers to take enforcement action against littering. Public authorities must focus their efforts to support the aims of the Litter Strategy for England, by improving education, enforcement and infrastructure to reduce littering.

714. A minimum requirement of the Environmental Protection Act 1990 states that amenity beaches identified by local authorities should be kept clear of all types of litter and refuse between 1 May and 30 September inclusive. Due to the warming climate beaches are increasingly being used outside of the traditional bathing season between May and September. It is recommended as good practice that authorities are aware of the different nature of beaches within their area that they carry out a regular monitoring programme of those beaches and develop an appropriate cleansing regime. Through collaborative working with the voluntary sector, public authorities should aim to increase the litter removal provision for non-amenity beaches as required.

715. Collaborative working covers a variety of ways that two or more organisations can work together. Collaborative working between charities, local organisations and public authorities can play an important role in helping to encourage reduction, re-

use and recycling initiatives and to remove marine litter. Groups such as love my beach demonstrate how collaborative working can help with the issues of marine litter. Public authorities play a key role in facilitating collaboration at a local level and advising other groups on best practice. Public authorities play a key role in facilitating collaboration at a local level and advising other groups on best practice.

716. In accordance with the most recent The Merchant Shipping and Fishing Vessels (Port Waste Reception Facilities) Regulations 2003[71], Ports and Harbour authorities must provide waste reception facilities adequate to meet the needs of ships normally using the harbour or terminal in question. Ports and harbour authorities should also support efforts where appropriate to remove marine litter from within their defined harbour limit. Through applying NW-ML-1 by working collaboratively with local authorities and the voluntary sector Port and Harbour Authorities could improve their waste management processes and cut costs, by reducing the amount of waste they have to pay to send to landfill.

717. Public authorities, including local authorities and port and harbour authorities, should have regard to NW-ML-1 when developing waste management plans or any plan which enables activities that generate waste or litter in the north west marine plan areas. Such activities include development, regeneration, access and tourism.

718. Public authorities responsible for approving waste management plans and strategic plans that could result in an increase of marine litter or litter at the coast should also have regard to NW-ML-1. This includes the Planning Inspectorate when approving local authority plans, and the Maritime Coastguard Agency when approving waste management plans for ports, harbours and vessels.

719. Public authorities developing River Basin Management Plans, and land or waste water management plans (including water companies) that are capable of affecting the north west marine plan areas must also have regard to NW-ML-1 and build in measures to avoid the introduction of litter to the marine area. Also see NW-WQ-1.

720. Inshore Fisheries and Conservation Authorities have duties under the Marine and Coastal Access Act 2009 (Section 153) to protect the marine environment from the effects of sea fisheries and seek to ensure the conservation objectives of any Marine Conservation Zones are furthered in their district and should therefore have regard to NW-ML-1 when carrying out these functions.

[71] As amended by The Merchant Shipping and Fishing Vessels (Port Waste Reception Facilities) (Amendment) Regulations 2016

Policy NW-ML-2 Marine Litter

Proposals that facilitate waste re-use or recycling to reduce or remove marine litter will be supported.

Proposals that could potentially increase the amount of marine litter in the marine plan area, must include measures to:

a) avoid
b) minimise
c) mitigate waste entering the marine environment.

Policy aim

721. The natural landscapes, wildlife and recreational opportunities on offer in the marine plan areas attract visitors to the area. More visitors and increases in coastal and marine development could lead to an increase in litter.

722. NW-ML-2 makes sure proposals avoid, minimise or mitigate waste entering the marine environment and encourages support for improvements in waste management and removal of marine litter, during construction and over the lifetime of the development. Proposals that cannot avoid, minimise or mitigate waste entering the marine environment will not be supported.

723. NW-ML-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

724. Proposals should demonstrate they have considered the potential for the introduction of litter. Proposals should demonstrate that they will, in order of preference, avoid, minimise or mitigate introductions of litter to the inshore and offshore marine areas throughout the lifetime of the proposal during construction, operation and decommissioning - proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) etc.

725. If there is potential from the proposal for waste to become marine litter then a waste management approach should be outlined including measures to minimise the risk of litter escape.

726. Measures could include:

- avoid – taking measures to avoid the discharge of any items of marine litter during development and once operational via methods outlined in a thorough waste management approach as part of the proposal
- minimise – taking measures to monitor and remove any items of marine litter from the proposal and other sources in the surrounding area, during development and once operational outlined in a thorough waste management approach as part of the proposal

- mitigate – taking measures to monitor and remove any items of marine litter from the development or other sources in the surrounding area as well as mitigation measures such as, but not limited to:
    - adopt sea bins or other creative technologies
    - extend the clean-up operation to support removal efforts
    - support a re-use or recycling scheme for marine litter
    - support coastal / marine clean-up groups

727. All of which can be outlined in a thorough waste management approach as part of the proposal.

728. Proposals should include an explanation or evidence of a plan to manage waste during construction and once operational. Licensed marine activities will need to demonstrate consideration of The Waste (England and Wales) Regulations 2011 and its Waste Hierarchy.

729. Guidance on applying the Waste Hierarchy must be applied to ensure developments capable of affecting the marine plan areas include measures to avoid the introduction of marine litter. Guidance on applying the Waste Hierarchy ranks waste management options according to what is best for the environment. It gives top priority to preventing waste in the first place. When waste is created it gives priority to preparing it for re-use, then recycling, then recovery, and last of all disposal (eg landfill). Measures to facilitate the re-use and recycling of waste before it becomes marine and coastal litter and also once removed from the marine and coastal area should be implemented where appropriate.

Decision-makers

730. This policy is of interest to public authorities making decisions that affect the north west marine plan areas directly or indirectly including local planning authorities and those authorities granting permits or licenses for activity in those areas.

731. Decision-makers should support proposals that seek to reduce marine litter through preventative or litter removal measures, where they comply with other policies in the North West Marine Plan.

732. Public authorities making any authorisation for proposals that are capable of introducing litter into the north west marine plan areas must make their decision in accordance with NW-ML-2.

733. Decision makers must consider the possible introductions of litter to the marine area throughout the lifetime of the proposal during construction, operation and decommissioning. Public authorities must review the applicants waste management approach as part of the proposal. Public authorities should request relevant information before proceeding further if it is judged that a proposal has not provided the required information. For example, where inadequate information has been provided to make an informed assessment.

Signposting

734. Legislation which relates to and may support the implementation of these policies includes:

- Environmental Protection Act 1990
- The Marine Strategy Regulations 2010
- The Merchant Shipping and Fishing Vessels (Port Waste Reception Facilities) Regulations 2003[72]
- The Waste (England and Wales) Regulations 2011
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

735. Guidance and other materials which relate to and may support the implementation of these policies include:

- Guidance on applying the waste hierarchy
- Guidance on the Merchant Shipping and Fishing Vessels (Port Waste Reception Facilities) Regulations 2003 and amendments
- G7 Action Plan to Combat Marine Litter
- OSPAR Regional Action Plan on Marine Litter 2014
- Marine Online Assessment Tool – CEFAS supports the Marine Strategy
- National planning policy for waste

736. Existing measures which support the implementation of these policies include:

- 25 Year Environment Plan
- Marine Strategy Part Three: UK programme of measures
- The Litter Strategy for England 2017
- Operation Clean Sweep – reducing plastic pellet loss to the environment
- The Resources and Waste Strategy 2018
- River Basin Management Plans
- Seafish Responsible Fishing Scheme
- WRAP the UK plastics pact

[72] As amended by the Merchant Shipping and Fishing Vessels (Port Waste Reception Facilities) (Amendment) Regulations 2016

5.18 Water quality

Policy Code	Policy Wording
NW-WQ-1	Proposals that enhance and restore water quality will be supported. Proposals that cause deterioration of water quality must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate deterioration of water quality in the marine environment.

What is water quality?

737. **Water quality** is a measure of the condition of water and its suitability to sustain a range of uses for both biotic and human benefits. Good water quality is important in meeting the UK Government's vision for clean, healthy, safe, productive and biologically diverse seas and oceans (Marine Policy Statement). Water quality in respect of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 is defined by specific biological, physico-chemical and hydromorphological criteria.

738. **Deterioration of water quality** refers to the presence of pollutants in water. These pollutants may include oil, sedimentation, sewage, nutrients and heavy metals.

739. Water pollution can come from either diffuse (run off - mostly unlicensed sources) or point sources (regulated sources). Diffuse sources can include:

- accidental chemical and oil spills
- agricultural run-off / land management
- contaminated run-off from roads
- discharge from vessels (unlicensed)
- drainage from housing estates
- microplastics
- pollution from abandoned mines

Point sources can include:

- aggregate extraction
- developments within the marine area
- discharge from vessels (licensed)
- industrial waste
- sewage treatment
- storm overflows
- waste water

740. Poor water quality also refers to increases (or decreases) in water temperature, dissolved oxygen or salinity and changes in flow. Eutrophication is when a body of water becomes overly enriched with nutrients, this may reduce the oxygen content of

the water body and can cause algal blooms, some of which can be harmful to habitats and species.

741. This policy supports the aim of the 25 Year Environment Plan to make sure that all those with a role to play take action to improve water quality.

Why is water quality important?

742. Water quality affects, and is affected by, many sectors, including health, energy, environment, agriculture, aquaculture, leisure and food. Water is a key part of the natural environment which provides valuable goods and services to people.

743. Rivers, lakes, estuaries, coastal areas, wetlands and water under the ground provide many different benefits to society; from supplying drinking water and supporting fisheries to providing an essential resource for business and agriculture, transport routes and a source of recreation that promotes well-being.

744. Water keeps us alive, drives our economy and sustains wildlife. Having good water quality, managed in a way that makes sure the country is more resilient to flood and drought, is essential.

745. Water quality in the north west marine plan area is important in rivers, estuaries and coastal waters. These areas play a vital role in the areas economy through providing essential fish habitats and supporting commercial shell fisheries, whilst providing safe and attractive bathing waters for residents and tourists alike.

746. The Environment Agency and Centre for Environment Fisheries and Aquaculture Science (CEFAS) monitor water quality in designated Shellfish water protected areas. At certain times of the year naturally occurring algae in the sea can give rise to blooms, which may not necessarily be noticeable. Algae in these blooms may produce potent biotoxins. These can accumulate in filter-feeding bivalve molluscs and sometimes in other shellfish, such as grazing gastropods. Eating shellfish contaminated with marine biotoxins may pose risks for those consuming the food, as well as for the seafood industry (CEFAS Harmful Algal Blooms Surveillance Programmes and Monitoring).

747. While scientists understand the many factors that can lead to algal blooms, how these factors come together to create harmful algal blooms is an emerging science. Increased nutrients (eutrophication - mainly phosphorus and nitrogen), pollution, water flow, coastal conditions and climate change all contribute. Increasing sea surface temperatures as a result of climate change may increase the potential for blooms of species that are not currently found in UK waters through range expansion or human mediated introduction (Impacts of climate change on harmful algal blooms).

748. Good water quality is essential for aquaculture which is a growing sector in the north west. Production areas where aquaculture is currently supported include:

- cockles and mussels – Duddon Estuary
- cockles and mussels - Morecambe Bay
- razor clams – Leasowe

- pacific oysters - Morecambe Bay
- pacific oysters – Solway Firth

749. Consideration must be given to shellfish water protected areas and their objectives; to improve or protect water quality in these areas in order to support shellfish life and growth and contribute towards high quality shellfish projects suitable for human consumption. In designated shellfish waters there is a requirement to endeavor to observe The Food Safety (Fishery Products and Live Shellfish) (Hygiene) Regulations 1998[73] microbial standard in shellfish flesh and to ensure no deterioration. This is done in accordance with the Food Standard Agency who is the competent authority directly responsible for decisions in relation to the classification and official control monitoring of shellfish, in line with The Food Safety (Fishery Products and Live Shellfish) (Hygiene) Regulations 1998[74].

750. As well as supporting commercial fishing and aquaculture, good water quality in the north west is also important for the increasing tourism industry. Blackpool and the Lake District attract the most coastal tourism in the area.

751. Water quality is monitored at coastal locations popular for swimming to ensure that beach users are protected from pollution at 'designated bathing waters'. The Environment Agency classifies designated bathing waters to help people to decide where is safe to swim. Using the Environment Agency classification The Blue Flag and Seaside awards by Keep Britain Tidy also informs the public about well managed beaches with good water quality. There are approximately only 26 beaches in the north west inshore marine plan area that have 'designated bathing waters' and currently no blue flag beaches. The state of the environment: water quality report by the Environment Agency states that bathing water quality has improved in the UK over the last 30 years with 98% passing minimum standards and 65% at excellent status in 2017. However, the North West has the highest proportion of inshore waters categorised as poor ecological water quality (Bathing water statistics).

752. There are a number of challenges to maintaining good water quality in the north west inshore marine plan area, notably from; run off from agricultural land towards the north of the plan area, including from sheep grazing on saltmarsh; diffuse pollution and waste water management from the large catchment areas such as Liverpool, Preston and Blackpool. All the above can also be exacerbated by periods of heavy rainfall, which can puts pressure on the sewage systems, resulting in sewer overflows operating more frequently. Heavy rainfall is also more likely to flush pollutants from agricultural and urban land into rivers and the sea.

753. The location of the north west marine plan area in the Irish sea and its proximity to Ireland and Wales means as well as being a busy marine plan area, the semi-enclosed nature of the sea means that measures to improve water quality require a

[73] As amended by The Food Safety (Fishery Products and Live Shellfish) (Hygiene) Amendment Regulations 1999
[74] As amended by The Food Safety (Fishery Products and Live Shellfish) (Hygiene) Amendment Regulations 1999

coordinated effort between England, Wales, The Isle of Man, The Republic of Ireland, Northern Ireland and Scotland.

754. Water quality is also affected by:

- changes to the natural flow and level of water
- extreme weather such as drought followed by intense rainfall
- negative effects of invasive non-native species
- physical modifications to water ways
- resuspension of sediment
- seasonal population variation
- vessels with sea toilets discharging waste too close to the shore

755. Physical modifications to water ways including; flood defences and weirs, and changes to the size and shape of natural river channels for land drainage and navigation all alter natural flow levels. These modifications can cause excessive build up of sediment in surface water bodies and the loss of habitats and recreational uses. In many cases the uses and associated physical modifications need to be maintained. In these circumstances it may not be possible to achieve good ecological status in effected bodies of water (North West River Basin Management Plan).

756. Developments within the marine plan area could also cause a deterioration in water quality. A number of policies in the North West Marine Plan support activities that could have adverse impacts upon water quality including (NW-CAB-1, NW-DD-3, NW-INF-1 and NW-TR-1).

757. The objectives of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 to protect and improve water quality, set ambitious environmental goals and actions which are implemented by River Basin Management Plans. This policy seeks to complement these objectives and River Basin Management Plan implementation. The Environment Agency works in partnership with a wide range of organisations, and takes action to improve water quality by targeting point and diffuse sources of water pollution.

758. There are three River Basin Management Plan areas within the inshore north west marine plan area; Dee River Basin district (Natural Resources Wales), the North West River Basin district and Solway Tweed River Basin District. Through these river basin management plans the Environment Agency maintain, review and keep an up-to-date register of the protected areas of water lying within each district. These include;

- areas designated for the protection of habitats or species where water quality is an important factor in their protection
- bodies of water designated as recreational waters
- drinking water protected areas
- nutrient sensitive areas
- shellfish waters (commercial shellfish harvesting)

759. The expected increase in the number and diversity of developments and marine users within the north west inshore marine plan area poses additional risk towards meeting Good status for ecological and chemical objectives in accordance with the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and Good Environmental Status in accordance with The Marine Strategy Regulations 2010.

760. As set out in the Marine Strategy, descriptors of Good Environmental Status relevant to water quality are:

- contaminants
- contaminants in seafood
- eutrophication
- hydrographical conditions

761. Good water quality is important to support biodiversity and meet the conservation objectives of European sites in accordance with The Conservation of Habitats and Species Regulations 2017[75] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[76].

762. This policy supports the aims of the 25 Year Environment Plan target for clean and plentiful water which includes:

- minimising the harmful bacteria in our designated bathing waters and continuing to improve the cleanliness of our waters
- reaching or exceeding objectives for rivers, lakes, coastal and ground waters that are specially protected, whether for biodiversity or drinking water as per our River Basin Management Plans
- increasing the proportion of protected and well-managed seas, and better managing existing protected sites

Policy NW-WQ-1 Water Quality

Proposals that enhance and restore water quality will be supported.

Proposals that cause deterioration of water quality must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate deterioration of water quality in the marine environment.

Policy aim

763. Much of the economic and cultural prosperity of the north west marine plan areas is reliant on water quality. Activities can place stress on water bodies such that, in parts

[75] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[76] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

of the north west marine plan areas water quality requires improvement. NW-WQ-1 supports activities whose primary objective is to enhance and restore water quality.

764. NW-WQ-1 also manages activities that may cause deterioration to a body of water by ensuring that adverse impacts from proposals must be avoided, minimised and mitigated. With the exception of Article 4.7[77] derogation route no residual adverse impacts on water bodies should occur.

765. NW-WQ-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

766. The North West Marine Plan builds on existing measures, consistent with the Marine Policy Statement (2.5.8) and addresses water quality issues through ensuring proposals and public authorities consider impacts on water quality (NW-WQ-1), and habitats and species of benefit to water quality that provide water filtration, nutrient assimilation and hazardous chemical sequestration services (covered in NW-BIO-4).

Proponents

767. This policy is of interest to all those developing proposals in the north west marine plan areas including, but not restricted to, those applying for an authorisation. All water bodies, including estuarine (transitional waters) up to one nautical mile from shore are protected under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 which requires that the licensed project or activity does not 'cause or contribute to deterioration in water body status' or 'jeopardise the water body achieving good status'.

768. In coastal waters out to 1nm an overlap exists between the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and the The Marine Strategy Regulations 2010. To achieve Good Environmental Status in accordance with The Marine Strategy Regulations 2010 NW-WQ-1 applies to the both the inshore and offshore marine plan areas.

769. Application of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 is enacted through River Basin Management Plans and the catchment based approach through catchment partnerships, as well as current water company controls and regulations. Other regulations should be taken into consideration, where appropriate, such as Nitrate Vulnerable Zones.

770. Proposals should demonstrate they have considered any effects the proposal may have upon water quality in the catchment area. The Catchment data explorer can be used to identify which water body your activity is in and any linked water bodies it could affect.

771. Using the Clearing the Waters for all guidance applicants can assess the impact of the proposal on estuarine (transitional) and coastal waters for the Water

[77] Article 4.7 of the Water Framework Directive is a mechanism by which developments which are beneficial to society can still be progressed even if they are likely to cause deterioration in Water Framework Directive water body status.

Environment (Water Framework Directive) (England and Wales) Regulations 2017. This assessment helps applicants and regulators to understand:

- the impact your activity may have on the immediate water body and any linked water bodies
- whether your activity complies with the river basin management plan (RBMP).

772. Proposals may be required to undertake any relevant assessments as required by Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 as part of obtaining regulatory consent for their activity. Being exempt from the need to undertake an assessment does not exempt proposals from policy NW-WQ-1.

773. Similarly, although a Water Regulations Assessment can contribute to demonstrating compliance with these policies, there may be impacts outside of the requirements of Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 that still need to be addressed to demonstrate compliance with policies NW-WQ-1.

774. Proposals should demonstrate how they will avoid, minimise, or mitigate deterioration of water quality, during the construction period, throughout the lifetime of the proposal and decommissioning phase. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) and so on. In the few cases where a detailed assessment indicates that activities will have a significant adverse impact on water quality then the proposed activity will only be acceptable where the conditions in Article 4.7 of the Water Framework Directive 2000/60/EC having regard to the river basin management plan are satisfied. The Environment Agency may be able to advise on meeting those requirements.Cumulative impacts upon water quality must also be considered in line with NW-CE-1.

775. The following aspects of any proposal needs to be considered:

- duration of the activity
- location
- mitigation measures that could reduce any potentially adverse impact
- physical footprint with respect to the water body size
- presence of contaminated sediments
- presence of sensitive habitats
- scale of impact
- water body (or bodies) potentially affected, including adjacent water bodies

776. Examples of how to avoid, minimise or mitigate significant adverse impacts include but are not limited to:

- avoid – identify and avoid siting proposals at locations where adverse impacts might occur, ensuring outputs of proposal do not indirectly impact these locations
- minimise - limiting the overall development footprint or the amount of time activities that disturb sediments occurs

- mitigation - using bioremediation around infrastructure (such as mussel ropes or microalga mats)

777. Developments or activities which could be of benefit to water quality may include:

- creating or enhancing compensatory habitats that improve water quality, such as woodland, wetland or grassland
- improvements to sewage treatment works
- minimising diffuse water pollution through applying Farming Rules for Water and other relevant regulations
- natural flood management
- sustainable drainage systems (SUDs)

778. Proposals must also consider their impacts upon habitats and species beneficial to water quality in consideration of NW-BIO-4. Water quality is also important to help support the conservation objectives of European sites in accordance with the The Conservation of Habitats and Species Regulations 2017[78] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[79]. A Habitat Regulations Assessment must be conducted when proposals may have an impact on the water quality of European sites. Where water quality is a consideration of the conservation objectives of a European site an Appropriate Assessment will be required.

779. Public authorities must build in measures to avoid, minimise or mitigate any adverse impacts to the marine area caused by but not limited to:

- agricultural run off
- increased inputs of nutrients, especially to nitrate vulnerable zones
- plastics, including micro plastics (See NW-ML-1 and NW-ML-2)
- pollution

780. Proposals in the north west marine plan area that may impact upon transboundary areas must show evidence of consultation with the relevant public authorities in line with NW-CBC-1.

781. The North West Marine Plan builds on existing measures, consistent with the Marine Policy Statement (2.5.13) and addresses water quality issues through ensuring public authorities consider impacts on water quality and look for opportunities to improve water quality. The plan policies are not restricted to the inshore marine plan area as there is the potential for offshore sources to affect inshore water quality.

Decision-makers

782. The Catchment Based Approach (CaBA) embeds collaborative working at a river catchment scale, bringing a range of partners together to support integrated catchment management, pool knowledge and expertise, and deliver cross-cutting environmental improvements. Decision-makers should only support proposals that

[78] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[79] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

incorporate measures to avoid, minimise or mitigate deterioration of water quality in the marine plan area. All proposals are best considered through a catchment based approach. The Catchment Partnerships in the north west marine plan area are:

- Alt / Crossens
- Douglas
- Eden
- Kent / Leven
- Lower Mersey
- Lune
- Middle Dee
- Ribble
- South Cumbria
- Tidal Dee
- West Cumbria
- Wyre

783. The environmental objectives summarised within River Basin Management Plans are legally binding under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. All public bodies must have regard to these objectives when making decisions that could affect the quality of the water environment.

784. Policy NW-WQ-1 aligns with the Marine Policy Statement (2.6.4.1 - 2.6.4.4) and the Marine and Coastal Access Act 2009 (Section 58 (3)). It complements the actions of The Marine Strategy Regulations 2010 and the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017.

785. Proposals and activities, such as recreation, not covered by the Clearing the Waters for all guidance have the potential to adversely impact water quality.

786. Confined estuaries with low flushing rates are subject to many pressures on water quality from agriculture, industrial and urban run-off and discharge from vessels. In areas of high use or where it is considered an issue, local authorities or harbour authorities can use legislation implemented through local byelaws to impose restrictions upon disposal of waste water and the location of polluting vessels (this includes houseboats). Guidance for such activities includes; The Maritime and Coastguard Agency's Pleasure Vessels – UK Regulations, and the Royal Yachting Association's 'The Green Blue' guidance on sewage and waste.

Signposting

787. Legislation which relates to and may support the implementation of this policy includes:

- The Food Safety and Hygiene (England) Regulations 2013
- The Food Safety (Fishery Products and Live Shellfish) (Hygiene) Regulations 1998
- The Marine Strategy Regulations 2010
- The Nitrate Pollution Prevention Regulations 2015

- Urban Waste Water Treatment (England and Wales) Regulations 1994
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

788. Guidance and other materials which relate to and may support the implementation of this policy include:

- Catchment based approach
- Catchment data explorer to identify which water body your activity is in and any linked water bodies it could affect
- Clearing the Waters for all on how to assess the impact of your activity in estuarine (transitional) and coastal waters
- Guidelines for managing water quality impacts within UK European marine sites
- Marine Online Assessment Tool – (MOAT) - CEFAS
- Nitrate Vulnerable Zones
- Pleasure Vessels – UK Regulations
- Port Marine Safety Code - For all UK Harbour Authorities and other marine facilities, berths and terminals
- Farming Rules for Water 'The Green Blue' guidance on sewage and waste
- The Water Industry National Environment Programme – updated every 5 years
- The unseen threat to water quality - Diffuse water pollution in England and Wales report – 2007
- River Basin Management Plans

789. Existing measures which support the implementation of this policy include:

- International Convention for the Prevention of Pollution from Ships (MARPOL)
- Septic tank permits

5.19 Access

Policy Code	Policy Wording
NW-ACC-1	Proposals demonstrating appropriate enhanced and inclusive public access to and within the marine area, and also demonstrate the future provision of services for tourism and recreation activities, will be supported. Where enhanced public access cannot be provided, proposals should demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts on public access.

What is access?

790. **Access** includes 'physical' access to the marine area to participate in recreational activities, or associated facilities and infrastructure on land to enable and support activities in the marine area (including but not limited to: paths, benches, slipways, car parks and marinas). Access also embraces 'interpretative' and 'virtual' access that increase awareness and understanding of the marine area. Examples include: interpretation boards, viewpoints, signage, films, literature and web based interpretation tools. Access can also cover financial access for example making sure that the cost of access to an area is justifiable and not prohibitive.

791. **Appropriate** in the context of this policy refers to what can be deemed reasonable. For example, proposals that establish or allow access to priority habitats (see definition below) would not be appropriate until they were able to demonstrate that they could avoid, minimise or mitigate any impact. Furthermore, new access, and the infrastructure to support it, needs to be appropriate to its location to avoid cumulative impacts on existing access, marine character and visual resource. Appropriate access also means safe for the public.

792. **Inclusive, and accessible**, means access for all, be it physical, virtual or interpretative access so that everyone can benefit from the marine area. The north west marine plan areas have a high recreational value and are very popular for activities including pleasure boating, sailing, diving, sea angling, kayaking, windsurfing and exploration of underwater and coastal heritage assets.

793. **Services for tourism and recreation** activities may include, but are not limited to:

- accommodation
- catering
- cycle infrastructure
- hospitality services
- jetties
- parking
- provision of transport

- public transportation
- reefs
- slipways
- toilet facilities

Why is access important?

794. The north west marine plan areas are important for tourism and this is predicted to continue over the lifespan of the marine plan MMO (2017). The report also identifies the plan areas as having significant potential for future renewable energy development which is likely to increase the number of people seeking access to the marine and coastal environment. Furthermore, access will create opportunities to raise the environmental awareness of users.

795. Increased access for tourism and recreation can impact on the very environment that draws visitors to a location. For example, disturbance can impact on achieving conservation objectives of the marine protected areas, or harm biodiversity and heritage assets.

796. The Marine Management Organisation's Strategic Scoping Report notes that the extent to which people find an area attractive to visit and ultimately to seek to access it, depends heavily on the appearance and health of the marine and coastal environment.

797. An increased understanding and appreciation of the marine environment, its natural processes, heritage assets, and social, economic and cultural values can provide social benefits for quality of life, health and well-being, cultural identity and sense of place. In the first instance, such benefits are gained directly by people living and working in coastal communities immediately adjacent to the north west inshore marine plan area. Benefits can be gained by visitors enjoying views of the coast, and undertaking recreational activities in and adjacent to the marine area. Through virtual and digital access, benefits may continue to be gained after visitors return home.

798. Public access plays an important role in supporting inclusive social benefits for local residents and visitors to the north west marine plan areas, particularly in support of recreation and tourism. Improved rights of access to the coast through the England Coastal Path Programme led by Natural England is expected to bring significant benefits to local economies and communities, recreational users, and to public health. As this is being managed by another agency and principally relates to space above mean high water springs, this should not be a focus for marine planning, though it will increasingly play an important role in how people access the marine area. NW-ACC-1 attempts to support appropriate and inclusive access to estuarine, coastal and marine areas.

799. NW-ACC-1 directly supports requirements of the Marine Policy Statement, which states 'The provision of slipways, coastal footpaths and ensuring coastal access for example could encourage economic growth and highlights the importance of considering the links between marine and terrestrial plans' (3.11.5). Provision for marine access is essential for realising the economic and social benefits for the north west marine plan areas.

800. The issue of coastal access is also set out in the National Planning Policy Framework (Section 96) which states 'Access to a network of high quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities'. It also notes that local planning authorities should 'improve public access to and enjoyment of the coast' (Section 118).

Policy NW-ACC-1 Access

Proposals demonstrating appropriate enhanced and inclusive public access to and within the marine area, and that demonstrate the future provision of services for tourism and recreation activities, will be supported.

Where enhanced public access cannot be provided, proposals should demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts on public access.

Policy aim

801. Provision for marine access is essential for enabling the economic, social and environmental benefits that will come from the growth of the right type of tourism and recreation in the north west marine plan areas.

802. NW-ACC-1 makes sure that support will be given to proposals which provide appropriate and inclusive enhanced public access to, and within, the marine area, such as physical, digital, and interpretative access and signage.

803. Support will also be given to proposals which enhance access by removing unsuitable arrangements such as those impacting health and safety or where they impact on heritage assets. The policy also encourages future provision of services for tourism and recreation. Furthermore, it requires proposals to manage impacts on public access to the marine area and contributes to the health and well-being of communities.

804. Any increase or decrease in access to the marine environment must be compatible with wider environmental, social and economic goals. For example, access should not impact priority habitats or exclude certain user groups.

805. Proposals that cannot avoid, minimise or mitigate significant adverse impacts should not be supported.

806. Policy NW-ACC-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

807. Enhancing public access may include removing unsuitable access (for health and safety reasons for example) or improving accessibility to the marine area. To avoid adverse impacts (including temporary and cumulative impacts) new access needs to demonstrate the appropriateness of the location and potential impacts on

biodiversity, heritage assets, seascape, existing access and use for recreation and tourism. Early engagement with land owners and other relevant parties is strongly recommended.

808. Proposals should demonstrate that they will in order of preference: avoid, minimise or mitigate significant adverse impacts of construction, operation and decommissioning on existing public access. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) etc. Mitigation may include providing alternative appropriate and inclusive public access.

809. Examples of (a) avoid, (b) minimise and (c) mitigate include, but are not limited to:

    a) Moving the proposal to a new location where access is not significantly impacted
    b) change the design of the proposal to reduce, as much as feasible, any significant impact on access
    c) development of alternative access opportunities off-site.

810. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans or the impact on wider environmental, social and economic considerations including, but not limited to: impacts on priority habitats, access only for a limited range of users or economic impacts on nearby businesses.

811. Identifying positive impacts of a proposal does not negate the need to assess adverse impacts in line with relevant legislation. Enhancement is not a substitute for avoidance, protection or mitigation measures. Proposals should include evidence of any public access related to the proposal area, or elsewhere, which it potentially affects.

812. Established developments should be maintained to a suitable standard to make access available to as wide a range of users as practical.

813. The issues presented in managing access are significant and there are a range of contributing policies that applicants should be aware of. Please see the list of associated policies below.

814. Construction should show evidence of regard for environmental implications in particular those on seasonal species such as over wintering birds or other migratory species and on priority habitats. Proposals should also consider, where possible, the impact of climate-induced and natural coastal change on public access.

815. Limiting disturbance from enhanced access is important to help support the conservation objectives of European sites in accordance with The Conservation of Habitats and Species Regulations 2017[80] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[81]. A Habitat Regulations Assessment must

[80] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[81] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

be conducted when proposals that enhance access may lead to a likely significant effect on the protected features of European sites. Where disturbance from increased access is a consideration of the conservation objectives of a European site, an Appropriate Assessment will be required.

Decision-makers

816. Public authorities should assess the potential impacts positive and negative, direct and indirect, permanent and temporary, as well as cumulative impacts on the access. Significant adverse impacts may include physically excluding access to parts of the marine area at all times or some times of the day or year. It is then necessary to confirm that the proposal will (in order of preference): not have a significant adverse impact on public access or have minimal adverse effects - this may be due to there being no rights of public access to the proposed site or through scope to provide for public access at certain times.

817. In examining and determining applications for Nationally Significant Infrastructure Projects, examining authorities and the Secretary of State for the Ministry of Housing, Communities and Local Government must have regard to this policy for Nationally Significant Infrastructure Projects that may have significant adverse impacts on public access.

818. The north west region includes a number of prominent coastal landmarks; the famous tower at Blackpool, Liverpool's historic waterfront that is designated as a World Heritage Site, the expansive beach at Morecombe Bay and Ravenglass – the western endpoint of Hadrian's Wall. Tourism and recreation use occurs along the full length of the north west coast, although activities tend to be more prevalent around large coastal towns. Award winning sandy beaches, local wildlife reserves and national parks attract tourists and local residents to the coast.

819. In addition to urban and beach-based tourism, the north west coast is popular for wildlife watching. There are various national and local nature reserves in the region, several of which provide facilities for visitors and local residents. Coastal reserves are often open year-round, offering potential for 'out of season' recreational use by local residents and other diversification options.

820. A range of protected species are present in the north west marine plan areas at different times throughout the year, for example the entire population of Svalbard barnacle geese overwinter in the Solway Firth (Solway Firth Bird Guide). Harbour porpoise and dolphin are regularly observed in the region, and some locations in Cumbria offer opportunities to watch grey seals year-round.

821. The England Coast Path runs between the Scottish and Welsh borders; edging around the Lake District, passing Morecambe Bay, iconic Blackpool and the famous city of Liverpool.The area contains two coastal Areas of Outstanding Natural Beauty. The Solway Coast from the Scottish border down to the beaches of Maryport and Arnside Silverdale. There are also a number of national nature reserves. Hadrian's Wall terminates at Bowness-on-Solway (English Heritage) and there is a coast to coast cycle route from Cumbria to Northumbria.

822. Sandy beaches, with good water quality and local and national nature reserves are recreation and tourism draws including Formby with its dunes. A number of caravan parks can be found along the sandier stretches of the foreshore. Ravenglass is a tourist centre within the Lake District National Park. In addition to urban and beach-based tourism, the coast is popular for bird watching, with a number of national and local nature reserves providing facilities for visitors.

Signposting

823. Legislation which relates to and may support the implementation of this policy includes:

- National Parks and Access to the Countryside Act 1949
- Countryside and Rights of Way Act 2000

824. Guidance and other materials which relate to and may support the implementation of this policy include:

- Sport England Strategy
- Planning and access for disabled people: a good practice guide
- England Coast Path: manage your land in the coastal margin

825. Existing measures which support the implementation of this policy include:

- Water Framework Directive assessment: estuarine and coastal waters
- Ecological Network Guidance.
- Annex I habitats.
- OSPAR list of threatened and/or declining species and habitats

5.20 Tourism and recreation

Policy Code	Policy Wording
NW-TR-1	Proposals that promote or facilitate sustainable tourism and recreation activities, or that create appropriate opportunities to expand or diversify the current use of facilities, should be supported. Where proposals may have a significant adverse impact on tourism and recreation activities they must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate that impact.

What is tourism and recreation?

826. **Tourism** is a general term that encompasses any time spent away from home to pursue leisure or relaxation activities. The United Nations World Tourism Organisation defines tourism as the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes; this definition has been adopted by the government.

827. **Sustainable tourism** is defined by the United Nations World Tourism Organisation as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities".

828. **Recreation** refers to leisure activities undertaken for enjoyment by local residents in their free time, near where they live.

829. The coastal-marine environment supports numerous tourism and recreation activities[82]. These vary between different locations, and range from passive interaction with the natural environment, such as bird watching, to more direct contact with the sea; for example, scuba diving. Other popular activities include pleasure boating, sailing, sea angling, kayaking and surfing, as well as exploration of underwater and coastal heritage assets. The coast can provide opportunities for casual walking, hiking and wildlife watching. It is also the inspiration for a range of artistic and cultural activities, and offers opportunities for culinary tourism and diverse forms of sustainable eco-tourism. These activities can generate a considerable amount of income and are often a mainstay for many coastal towns, supporting their economy, improving quality of life for residents, and providing many health and well-being benefits, with many local businesses relying on the coastal-marine environment for their livelihoods. Tourism and recreation are underpinned by a well-managed and healthy natural and historic marine environment that includes

[82] MMO1064 Modelling marine recreation potential in England

attractive and well-maintained beaches, a biodiverse seashore, clean bathing water, protected heritage assets and a recognition of seascape character.

Why are tourism and recreation important?

830. Tourism and recreation are important, well-established sectors within the north west marine plan areas. In terms of direct gross value added, the north west region received around £5.8 billion from tourism in 2013 (Office for National Statistics, 2016). In 2018 there were around 1.9 million domestic visits to the seaside in the North West, with the tourism industry in the region supporting an estimated 208,809 jobs (Office for National Statistics, 2018). Beaches and iconic seaside towns along the north west coast are some of the key attractions in the area, offering local residents and visitors numerous leisure, sport and recreation activities.

831. There is scope to diversify tourism and recreation ventures across the region to capitalise on a changing travel and leisure market. The over seven million residents and large urban populations with access to the coast provide excellent and enduring prospects for the future of the visitor economy of the North West's coastal communities (North West Coastal Forum, 2009). This policy supports proposals that promote and facilitate diversification, which will provide a greater range of employment opportunities in the tourism and recreation sector and improve resilience in times of economic uncertainty. Increasing the options available to visitors may also help reduce potential adverse impacts of tourism and recreation on the natural and historic heritage assets on which they depend, and improve the overall visitor experience.

832. The potential economic impact of marine tourism and recreation is exemplified by recreational sea angling, which is a popular activity around the coast, including many locations in the north west marine plan areas. The sector was estimated to generate a total spend of £2.1 billion, supporting over 23,600 jobs across England and almost £980 million of gross value added to the economy, once indirect and induced effects are considered (Sea angling 2012). Coastal communities can gain direct benefits when good fishing attracts anglers. Another significant income for coastal communities is that generated by the recreational boating industry, estimated to contribute over £2 billion annually to the UK economy (Royal Yachting Association, 2014).

833. The Marine Policy Statement (3.11.2) recognises that tourism can offer numerous benefits, and also costs, to individuals and coastal communities, specifically in terms of development, town characteristics and well-being effects. Any potential impacts, positive or negative, can help inform the types of marine activities that could be encouraged and used to attract tourism to coastal locations, with a focus on development of innovative, sustainable activities that balance local and regional economic, social and environmental needs. In addition, the North West of England contains a disproportionately high extent of the country's designated coastal habitat and also hosts many of the region's important landscape and historic designations.

834. Tourism and recreation provide many social benefits for coastal communities, such as improved health (mental and physical) and well-being and job creation (National

Planning Policy Framework). With tourism forecast to increase by 4% annually till 2025 (VisitBritain, 2013) it is essential that tourism and recreation development is managed sustainably with a focus on diversification and eco-tourism.

835. The north west region includes a number of prominent coastal landmarks; the iconic tower at Blackpool, Liverpool's historic waterfront that is designated as a World Heritage Site, the expansive beach at Morecombe Bay and Ravenglass – the western endpoint of Hadrian's Wall. Tourism and recreation use occurs along the full length of the north west coast, although activities tend to be more prevalent around large coastal towns. Award winning sandy beaches, local wildlife reserves and national parks attract tourists and local residents to the coast.

836. The north west marine plan area has an abundance of recreational sailing sites. A mixture of medium and light-use ports and harbours are located across the area, with recreational sailing popular between local ports. More widely, sailing routes link harbours on the English, Welsh and Isle of Man coasts.

837. In addition to urban and beach-based tourism, the north west coast is popular for wildlife watching. There are various national and local nature reserves in the region, several of which provide facilities for visitors and local residents. Coastal reserves are often open year-round, offering potential for 'out of season' recreational use by local residents and other diversification options.

838. A range of protected species are present in the north west marine plan areas at different times throughout the year, for example the entire population of Svalbard barnacle geese overwinter in the Solway Firth (Solway Firth Bird Guide). Harbour porpoise and dolphin are regularly observed in the region, and some locations in Cumbria offer opportunities to watch grey seals year-round.

839. In the north west region, the England Coast Path runs between the Scottish and Welsh borders; edging around the Lake District, passing Morecambe Bay, iconic Blackpool, the stunning sand dunes around Formby, and the famous city of Liverpool.

840. Possible diversification options might include promotion of recreational activities focused on local residents. This can increase support for local businesses such as equipment hire, food and drink sales, transport and fuel service, especially outside the peak tourist season. For local residents particularly, involvement in recreational pursuits can result in greater social cohesion and a sense of place. Use by local residents can also raise awareness of the importance of the coast and marine areas as the setting for their activity. This engenders a sense of pride and "ownership", which can encourage local action to protect areas and the services they provide (Marine Policy Statement (3.11.5)).

841. In addition to the numerous positive benefits resulting from tourism and recreation, there is also potential for adverse impacts on coastal-marine ecosystems, heritage assets and coastal communities. Ineffective regulation of activities, excessive visitation at sensitive locations or inappropriate facilities can all have detrimental social, environmental and economic consequences. This Policy aims to address this

potential issue by promoting the development of sustainable activities, at appropriate locations throughout the region.

842. Development of sustainable tourism and recreation in the north west marine plan areas will complement objectives outlined in the UK Government's Tourism Sector Deal. This policy will help address some of the key challenges that have been identified for the UK tourism industry, and aligns with strategies outlined to tackle these issues and promote the sector; for example, the development of Tourism Zones that aim to improve the local tourism economy. It is hoped that a range of areas across the country - including coastal, rural, and urban - will bid to become Tourism Zones.

843. The Tourism Sector Deal builds on government investment initiatives developed to aid coastal communities – many of which are reliant on tourism and recreation – that have been recognised as suffering economic decline. The Coastal Communities Fund and the Coastal Revival Fund have supported numerous tourism projects on the north west coast, including 'Connecting Cumbria's Hidden Coast' – a project to improve visitor experience at the coast – and 'LightPool', a project to enhance the iconic Blackpool Illuminations.

Policy NW-TR-1 Tourism and recreation

Proposals that promote or facilitate sustainable tourism and recreation activities, or that create appropriate opportunities to expand or diversify the current use of facilities, should be supported.

Where proposals may have a significant adverse impact on tourism and recreation activities they must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate that impact.

Policy aim

844. Tourism and recreation are widely recognised as important sectors within the north west marine plan areas, providing numerous economic and social benefits to coastal communities and visitors to the region. NW-TR-1 supports these established industries through promotion of sustainable tourism and recreation at appropriate locations. It also encourages diversification of activities – through extension of operating seasons or development of alternative uses for facilities – to create additional employment opportunities, while reducing adverse impacts on natural resources and heritage assets. To minimise stakeholder conflict, this policy also addresses the impact of proposals on existing tourism and recreation use, or future potential activities; those that cannot avoid, minimise and mitigate significant adverse impacts on tourism and recreation are unlikely to be supported.

845. Policy NW-TR-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

846. This policy applies to any proposal, from an individual or organisation, which is related to tourism and recreation provision within the north west marine plan areas. Proposals can be for the development of new activities or facilities, or to request a change of use for existing facilities that will incorporate tourism and / or recreational activities. Examples of how a proposal might create an opportunity to diversify the use of a facility include, but are not limited to:

    - extension of the visitor season, to facilitate access for local residents during 'low season'
    - provision of mooring facilities for recreational watercraft at a quay previously used exclusively for fishing vessels

847. Proposals should demonstrate how they will promote sustainable tourism and recreational use of the coastal-marine environment in the north west marine plan areas and identify how diversity of activities will strengthen the tourism and recreation industry (including addressing the challenges outlined in the Tourism Sector Deal).

848. Proposals must detail tourism and recreation activities or facilities in the area that might be disturbed, displaced or impacted (temporarily or permanently); for example, sailing routes or dive sites in the vicinity of a proposed renewable energy installation. All existing and authorised (but not yet implemented) activities should be considered.

849. For any proposal that might result in a significant adverse impact on tourism and recreation activities, applicants must demonstrate how they will, in order of preference, (a) avoid, (b) minimise and (c) mitigate that impact. Proposals cannot proceed to (b) unless they have first explained why they cannot meet (a), and similarly, they cannot proceed to (c) unless they clearly indicate why they cannot meet (b).

850. Specific measures that could be taken to avoid, minimise or mitigate significant adverse impacts will vary depending on the location, type of project and scale of the proposal. Examples of how adverse impacts can be avoided, minimised or mitigated (listed in order) include, but are not limited to:

    - temporal or spatial changes to proposal activities – to avoid established tourist seasons or known recreational 'hotspots'
    - reduction in the scale of the proposal to decrease the area of potential impact
    - provision of an alternative area/facility to support tourism and recreation activities that generate similar social benefits

851. Inclusion of this supporting information does not guarantee approval of the proposal by default. Applicants need to demonstrate compliance with other policies in the North West Marine Plans and other relevant local, regional or national plans. Some proposals may also be subject to marine and / or terrestrial licences and permits, which have distinct application procedures.

852. Proposals should encourage and enable more frequent recreational use by local residents, but should at all times consider impacts on the natural environment,

seascape and heritage assets in accordance with other plan objectives (both terrestrial and marine) and to align with sustainability principles.

853. Where possible, applicants should engage with relevant stakeholders from the tourism and recreation industry during early development stages of the proposal; this might include informal discussions and / or a formal consultation process if required by current legislation.

854. Limiting disturbance from enhanced tourism and recreation access is important to help support the conservation objectives of European sites in accordance with The Conservation of Habitats and Species Regulations 2017[83] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[84]. A Habitat Regulations Assessment must be conducted when proposals that enhance access may lead to a likely significant effect on the protected features of European sites. Where disturbance from increased access is a consideration of the conservation objectives of a European site, an Appropriate Assessment will be required.

Decision-makers

855. Public authorities, in consultation with industry stakeholders, may have previously identified where opportunities to diversify tourism and recreation activity exist, which are outside established patterns of use and / or seasons; this information could help inform authorisation of proposals. Diversification options may include provision of additional green-space and recreational opportunities in order to minimise impacts on sensitive wildlife habitats. There is a need to consider challenges associated with balancing promotion of tourism and recreational activity against impact on nature conservation interests, of particular importance in designated protected areas. Proposals should be assessed for compliance with any existing recreational disturbance avoidance and mitigation strategies.

856. Decision-makers must assess the potential impacts of proposals on recreation and tourism activities in the north west marine plan areas; such impacts may be positive or negative, direct or indirect, permanent or temporary. It is important that new proposals do not result in significant adverse impacts on existing (in some cases seasonal) tourism and recreation use, or future provision.

857. Significant adverse impacts may include restricting access to areas where recreation activities take place, reducing the length of the season within which tourists may visit a natural or historic heritage attraction, or any physical impact.

858. When making an authorisation, decision-makers should consider evidence from consultation with representative stakeholders from the tourism and recreation industry, the outcome of those discussions and any suggested mitigation options.

859. In line with their statutory duties, decision-makers may need to prioritise other proposals – for example, dredging to maintain safe navigation within harbour areas

[83] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[84] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

or to carry out emergency works in response to a marine incident. These activities take precedence and are also fundamental to the provision of many tourism and recreation activities.

860. In examining and determining applications for Nationally Significant Infrastructure Projects, decision-makers and the relevant secretary of state must consider this policy for projects that may have significant adverse impacts on tourism and recreation activities.

Signposting

861. Legislation which relates to and may support the implementation of this policy includes:

- The Marine Works (Environmental Impact Assessment) Regulations 2007
- The Town and Country Planning Act 1990
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[85]
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- Wildlife and Countryside Act 1981

862. Guidance and other materials which relate to and may support the implementation of this policy include:

- Guidance on EIA of offshore renewable energy development on surfing resources and recreation
- National Planning Policy Framework
- Tourism Sector Deal
- Understanding The Coastal Communities Of The North West

[85] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018

5.21 Knowledge, understanding, appreciation and enjoyment

Policy Code	Policy Wording
NW-SOC-1	Those bringing forward proposals are encouraged to consider and enhance public knowledge, understanding, appreciation and enjoyment of the marine environment as part of (the design of) the proposal.

What are knowledge, understanding, appreciation and enjoyment?

863. "Knowledge", includes access to, and interpretation of, information that increases understanding, appreciation and enjoyment of the natural environment, historic environment and socio-economic value of the north west marine plan areas. An increased understanding and appreciation of the marine environment, its natural processes, heritage assets, and social, economic and cultural values can provide social benefits for quality of life, health and well-being, cultural identity and sense of place. In the first instance such benefits are gained directly by people living and working in coastal communities immediately adjacent to the north west inshore marine plan area (see Figure 23). Benefits can be gained by visitors enjoying views of the coast, and undertaking recreational activities in and adjacent to the marine area. Benefits may continue to be gained after visitors return home. Understanding, appreciation and enjoyment can also be derived among people who are aware of the north west marine environment, but who may never have even visited the area in person through virtual experiences or simply knowing more about the areas' values and having awareness of their marine planning and sustainable management.

864. Knowledge and understanding are also important for conservation management, but that is more directly addressed through separate policies such as for biodiversity, marine protected areas, water quality, historic environment and seascape.

865. There is a recognised need to continue to gain more knowledge about the north west marine areas, but also to gain better insights into "understanding, appreciation and enjoyment" and the social benefits derived. This will improve the potential to secure enhanced understanding, appreciation and enjoyment and the benefits that generates. This needs to extend to impacts: positive and negative, direct and indirect, permanent and temporary, as well as those resulting from cumulative effects.

Why are knowledge, understanding, appreciation and enjoyment important?

866. Sustainable development requires balanced assessment of environmental, social and economic cumulative impacts. Consideration of social impacts is especially necessary as they are particularly problematic to measure due to being more qualitative, indirect and diffuse. The Marine Policy Statement (2.5.4) states that 'The marine environment provides national economic and social benefits including for heritage assets, seascape and social value of coastal and marine activities, as well as directly contributing to the quality of life and well-being of coastal communities. Marine planning will also therefore make an important contribution towards ensuring

vibrant and sustainable coastal communities, helping to build strong local economies and improving quality of life, access to, and enjoyment of their marine areas.'

867. The Marine Policy Statement (3.11.4) also states that, 'Tourism can provide environmental benefits through helping to enhance understanding and appreciation of the marine environment through activities such as eco-tourism and nature watching. Socio-economic benefits include positive economic benefits through increased visitor numbers and improved access. Outdoor recreation and enjoyment of the coast can also provide benefits to physical and mental well-being.'

868. There are many benefits which can be realised from an increased knowledge and awareness of the marine environment (natural, historic and social value) for those who live, work and enjoy the north west marine plan areas such as:

- An appreciation of the area including its landscape and seascape can improve social factors such as health and well-being, and develop a sense of place or ownership of an area. This fosters community cohesion, pride and passion for an area which raises aspirations and stimulates the local economy.
- An increased understanding and appreciation can benefit the natural environment and the many species which are native to the plan area. This may result in more effective conservation management schemes or a reduction in pollution including plastics, litter on beaches and the disturbance to wildlife including marine mammals and bird nesting sites.
- Heritage assets are also under threat from increased access from tourism and recreation activities. Impacts on historic buildings require great appreciation for their setting in the landscape so they can be conserved for future generations. Smaller but equally significant assets require greater awareness. The impact of increased number of people visiting an area and the coastal erosion on buried or submerged heritage assets results in assets being lost before they are discovered.

869. The Marine Management Organisation developed "coastal typologies" published through the research report Maximising the socio-economic benefits of marine planning for English coastal communities. The most common typologies are Striving Communities and Structural Shifters. Many communities on Merseyside (in and around Liverpool, St Helens and Runcorn) and on the Cumbrian coast (such as Barrow) experience high levels of deprivation with particular social and economic challenges for a significant numbers of people in these areas. Some towns, including those again on the Cumbrian coast (such as Whitehaven and Workington), have lost their primary markets, and are facing the challenge to find new ones. New Towns and Ports (in the Merseyside hinterland) face challenges relating to poor skills and high levels of unemployment, but counterbalanced by relatively strong economy and often located close to areas of economic growth. The North West also has significant numbers of affluent Prosperous Suburbia communities such as Southport and on the Wirral. Working Hard communities on the edge of towns and in satellite towns around larger coastal cities, such as Fleetwood and Cockermouth, are also prevalent. This indicates strength in employment in industrial sectors and a stable population.

870. All residents of coastal communities and visitors gain knowledge, understanding, appreciation and enjoyment (and social benefits derived from them) from the north west marine plan area at various times and to various degrees. Displacement of activities which produce social benefits, particularly ones that are important to coastal communities experiencing deprivation or other social challenges, is therefore a concern. As a consequence it is important to manage significant negative impacts on activities with social benefits (Marine Policy Statement 3.11.2, NPPF Chapter 8 and Monitoring Engagement with the Natural Environment 2017-18). The need to encourage co-existence is essential in minimising or mitigating the significant negative impacts of displacement on social benefits.

871. As noted above many social benefits are derived indirectly from employment (in many industries, but including fishing), having skills, access to and within the marine area and recreation and tourism opportunities. Social benefits are also contingent on the natural and historic environment, the seascape, good water quality and reduced marine litter. Social benefits will be partly safeguarded as an indirect consequence of the effective implementation of relevant sector policies (see signposting below). However, as social benefits are derived from such a wide range of sources, and are important to both residents and visitors who experience them in diverse ways, active intervention is required to ensure they continue to be provided.

Policy NW-SOC-1 Knowledge, understanding, appreciation and enjoyment

Those bringing forward proposals are encouraged to consider and enhance public knowledge, understanding, appreciation and enjoyment of the marine environment as part of (the design of) the proposal.

Policy aim

872. NW-SOC-1 seeks to increase the general knowledge, understanding, appreciation and enjoyment by people of the many values provided by the marine environment through encouraging proposals that incorporate these factors.

873. Policy NW-SOC-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

874. To apply NW-SOC-1 successfully applicants, consultants and decision-makers may wish to consult the Marine Management Organisation research report Maximising the socio-economic benefits of marine planning for English coastal communities. It describes the diversity between communities within the north west (see Figure 23) and their levels of deprivation, employment, education and health. This provides a spatially mapped indication of where social benefits (from knowledge, understanding, appreciation and enjoyment) are most needed to address challenges faced by local communities.

875. The influence of a proposal in an area including its effects on the marine environment, its wildlife, iconic views and cultural heritage may not be constrained to the marine plan area. The effects a development may have on an area may be felt more broadly including the areas sense of place, its visitor numbers or well-being of coastal communities.

Proponents

876. Proposals that enhance the knowledge, understanding, and enjoyment, and / or increase the awareness, and appreciation, of the marine environment (natural, historic and social value) are encouraged and will be supported. The social benefits that are derived from these activities include, but are not limited to:

- a sense of place
- cultural identity
- enjoyment
- health and well-being

877. This can include for the promotion of conservation management, education and / or provision of skills. Whilst conservation management processes will be administered directly through environmental and heritage marine plan policies, this policy contributes to the awareness of adverse impacts by enhancing awareness and understanding of the natural and historic environment.

878. Proposals should consider how knowledge and awareness can be delivered throughout their development including construction, operation and the legacy left by the development or activity once it ceases to realise the benefits set out in the Marine Policy Statement. This may include access to and within the marine area (eg footpaths or viewing platforms), recreation and tourism opportunities, admission to onsite archaeological excavations and information points describing the environment of the site and aiding the development of a sense of place, cultural heritage and well-being.

879. Some existing activities supporting knowledge, understanding, appreciation and enjoyment can be identified via the Explore Marine Plans digital service (and the public register), local plans, shoreline management plans, and heritage coast and coastal partnership plans. Proposals may demonstrate inclusion of consultation (with public authorities, coastal partnerships, industry groups including those representing the recreation and tourism sector) to identify opportunities and also displacement issues at the pre-planning stage and suggested measures to minimise or mitigate them.

Decision-makers

880. Decision-makers must consider the mechanisms claimed by applicants to enhance knowledge, understanding, appreciation and enjoyment (both directly and indirectly). This can include the following in regard to the north west marine areas:

- activities that bring people into contact with the marine environment and so enhance their appreciation and enjoyment
- gathering data and evidence about its environment, economy and social values to enhance knowledge and understanding
- interpretative media to communicate the knowledge to local communities and visitors
- proposals for physical access to the marine environment

881. They need also to recognise the coastal typologies (Figure 23) which can provide indications of where communities may gain particular benefits from knowledge, understanding, appreciation and enjoyment in response to social issues they experience.

Signposting

882. Legislation which relates to and may support the implementation of this policy includes:

- Countryside and Rights of Way Act 2000
- Environmental Protection Act 1990
- The Marine Strategy Regulations 2010
- The Waste (England and Wales) Regulations 2011
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- Wildlife and Countryside Act 1981
- Natural Environment and Rural Communities Act 2006
- National Parks and Access to the Countryside Act 1949

883. Guidance and other materials which relate to and may support the implementation of this policy include:

- 25 Year Environment Plan
- National Parks
- Areas of Outstanding Natural Beauty
- Heritage Coasts
- Guidance on applying the waste hierarchy
- Managing marine recreational activities (NECR242)
- OSPAR Regional Action Plan on Marine Litter 2014
- Planning and access for disabled people: a good practice guide
- Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate)
- National Planning Policy for Waste
- Natural England's coastal path provides right of access around the coast of England. It will increasingly play an important role in how people access the marine area.
- Sustainable Tourism in England: A framework for action
- The Litter Strategy for England 2017
- World Heritage Sites UK
- Visit Britain, Destination Management Plans
- WRAP the UK plastics pact
- Sport England Strategy
- Planning and access for disabled people: a good practice guide
- England Coast Path: manage your land in the coastal margin

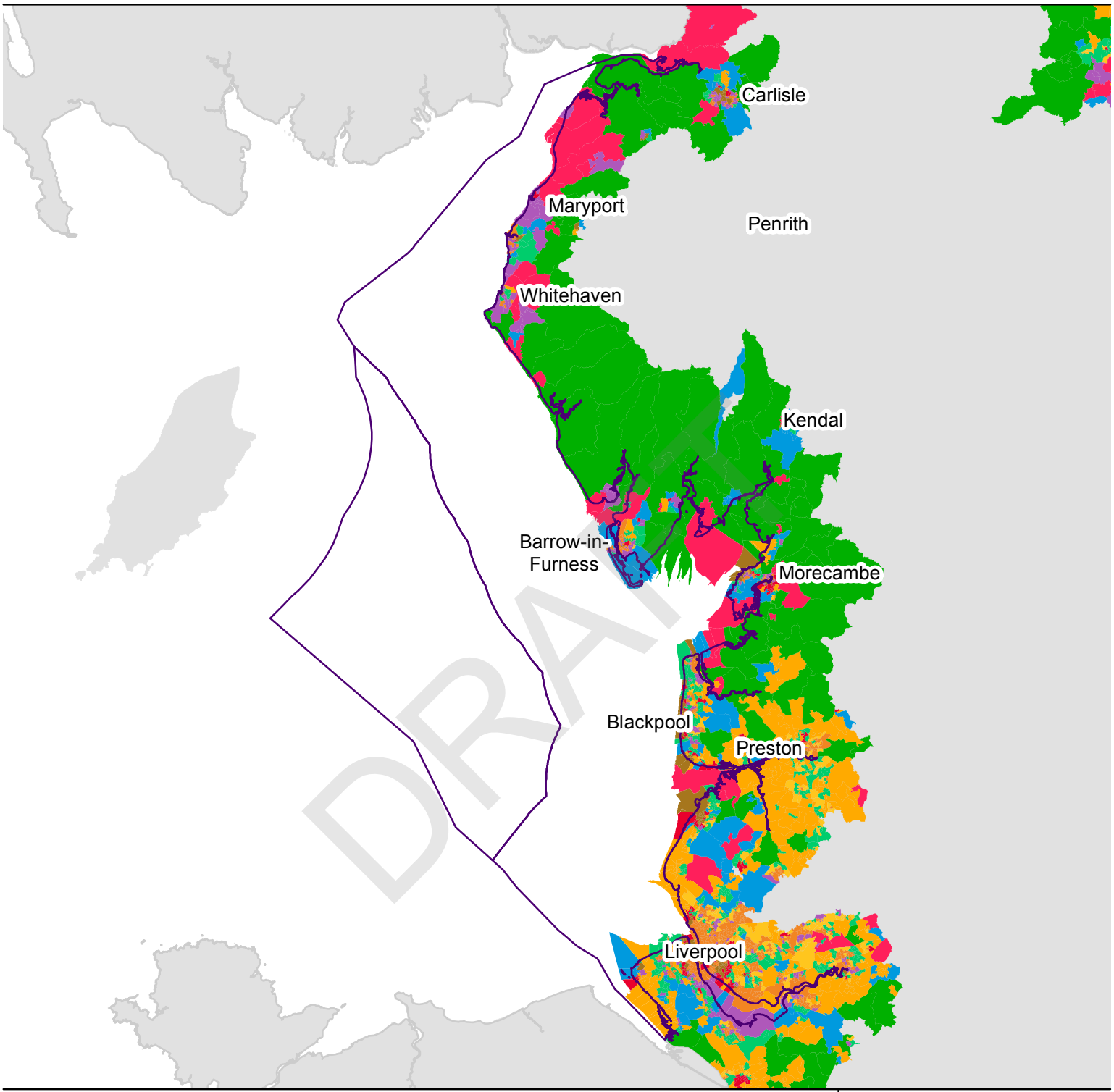
884. Existing measures which support the implementation of this policy include:

- National Policy Planning Framework

- Coastal Communities Fund
- G7 Action Plan to Combat Marine Litter
- Marine Strategy Part Three: UK programme of measures
- Operation Clean Sweep – reducing plastic pellet loss to the environment
- River Basin Management Plans covering the north west inshore marine plan areas
- Maximising the socio-economic benefits of marine planning for English coastal communities
- Social Impacts and Interactions between Marine Sectors
- Social Impacts of Fisheries, Aquaculture, Recreation, Tourism and Marine Protected Areas (MPAs) in Marine Plan Areas in England
- Water Framework Directive assessment: estuarine and coastal waters
- Ecological Network Guidance
- Annex I habitats
- OSPAR list of threatened and/or declining species and habitats

Marine Management Organisation

Figure 23 | Socio-economic Typologies of Coastal Communities



North West Marine Plan Areas

Coastal Typology

- A1 Silver Seaside
- A2 Working Countryside
- A3 Rural Chic
- B1 Structural Shifters
- B2 New Towns and Ports
- B3 Striving Communities
- C1 Reinventing Resorts
- C2 Coastal Professionals
- D1 Prosperous Suburbia
- D2 Working Hard

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
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Projection: Transverse Mercator
Datum: ETRS 1989

5.22 Defence

Policy Code	Policy Wording
NW-DEF-1	Proposals in or affecting Ministry of Defence areas should only be authorised with agreement from the Ministry of Defence.

What is defence?

885. The Ministry of Defence has the primary role of providing defence and security to the people of the UK and overseas territories. Within UK waters in peacetime, military activities are comprised of operational, practice and training activities, routine patrolling, transporting equipment and personnel in and out of the country, and communications including using radar.

886. There are a high number of defence activities and estates in the north west marine plan areas. Marine infrastructure can affect their continuity or future use. NW-DEF-1 will avoid conflict between defence activities and new proposals within the plan areas. It will ensure that defence interests are not impeded

Why is defence important?

887. Marine and land-based Ministry of Defence activities are of national importance. There is a widespread presence in defence activities and estates in the north west marine plan areas. Marine infrastructure may have a cumulative or individual effect on their continuity or future use.

888. The north west marine plan areas include over 2,000 sq km of military practice and exercise areas. The Inshore and Offshore areas contain extensive danger areas used for weapon test and evaluation activities. There are also a number of coastal sites with associated danger and exercise areas used for firing ranges and ordnance disposal. In addition, defence maritime navigational interests are also applicable.

889. Marine Policy Statement (3.2.4) states that, ‘defence activities that use the marine environment, directly or indirectly, in support of operational capability are diverse but include operational vessels and aircraft, HM naval bases, surface and sub-surface navigational interests, underwater acoustic ranges, maritime and amphibious exercises, coastal training, test and evaluation ranges’.

890. NW-DEF-1 supports the need for defence activities to take place in the north west marine plan areas for the purpose of national security.

Policy NW-DEF-1 Defence

Proposals in or affecting Ministry of Defence areas should only be authorised with agreement from the Ministry of Defence.

Policy aim

891. There are a high number of defence activities and estates in the north west marine plan areas. Marine infrastructure can affect their continuity or future use. NW-DEF-1

will avoid conflict between defence activities and new proposals within the north west marine plan areas. This policy will ensure defence interests are not hindered.

892. Policy NW-DEF-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

893. Marine Policy Statement (3.2.2) states that marine activities should not prejudice the interest of defence and national security and the Ministry of Defence should be consulted accordingly. The participation of the Ministry of Defence in the development of Marine Plans and their contribution to overall safety, security and resilience will ensure the effective use of marine resources whilst identifying mitigation measures, where possible, for incompatible activity or usage. Consulting with Ministry of Defence should reduce any negative impact on national security or defence.

894. The Marine Policy Statement (3.2.9) goes on to state that the construction and operation of offshore marine infrastructure, installations and activities, as well as policies on conservation designations and the health of the wider environment may impact on defence interests in certain areas. Marine plan authorities and decision makers should take full account of the individual and cumulative effects of marine infrastructure on both marine and land based Ministry of Defence interests. Marine plan authorities, decision makers and developers should consult the Ministry of Defence in all circumstances to verify whether defence interests will be affected.

Proponents

895. The Ministry of Defence should be consulted in all circumstances to verify whether defence interests will be affected and make sure that national defence capabilities and interests are not compromised. Permission from the Ministry of Defence is needed for any proposals that will have an adverse impact on defence activities in or affecting Ministry of Defence areas.

896. Any proposal that impacts on the movement of vessels from Walney Channel to the Irish Sea would have an impact on defence. Applicants should therefore consult contractors who are responsible for the design, construction and delivery of royal naval vessels and submarines.

897. In order to operate efficiently, reducing greenhouse gas emissions and cost to Defence, Ministry of Defence transit route cannot be impeded. Ministry of Defence should be consulted on proposals which will add significantly to the transit time of Military vessels.

Decision-makers

898. Decision makers should ensure that the Ministry of Defence has been consulted in all circumstances to verify whether defence interests will be affected and make sure that national defence capabilities and interests are not compromised.

899. In examining and determining applications for Nationally Significant Infrastructure Projects, examining authorities and the Secretary of State for The Ministry of Housing, Communities and Local Government must have regard to this policy for

Nationally Significant Infrastructure Projects that may have significant adverse impacts on Ministry of Defence areas.

900. Figure 24: Ministry of Defence areas (some regulated by byelaws) within the north west inshore and offshore marine plan areas

Signposting

901. Legislation which relates to and may support the implementation of this policy includes:

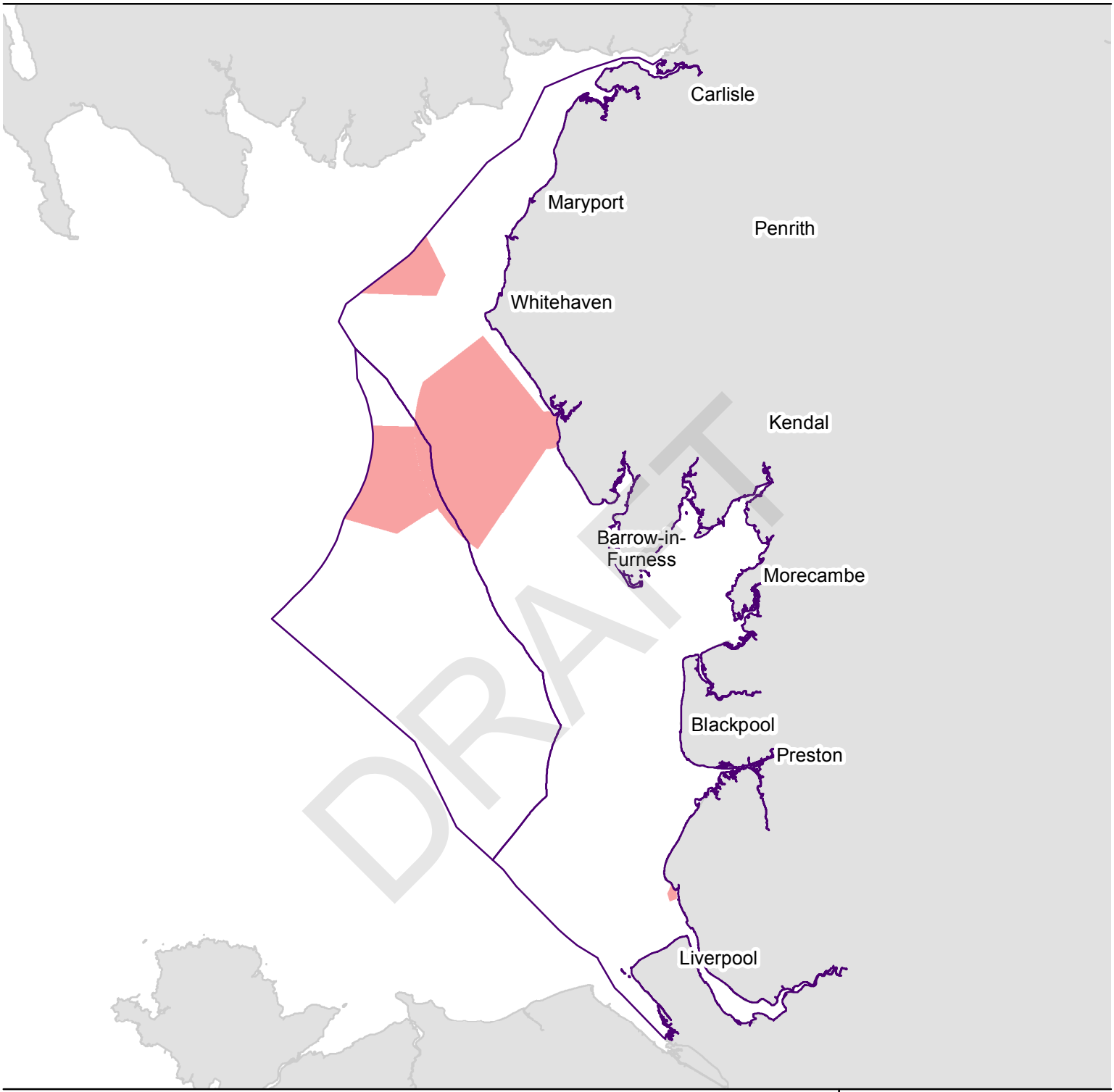
- Military Lands Acts 1892
- Military Lands Acts 1900
- Land Powers Defence Act 1958
- National Planning Policy Framework (Section 95(b))

902. Guidance and other materials which relate to and may support the implementation of this policy include:

- National Security Strategy and Strategic Defence and Security Review 2015
- Offshore Wind Sector Deal

Marine Management Organisation

Figure 24 | Ministry of Defence Areas



North West Marine Plan Areas

Military Practice Areas

Policy map
This map is to be used for reference only.

Date of Publication: August 2019
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Datum: ETRS 1989

Living within environmental limits

5.23 Marine protected areas

Policy Code	Policy Wording
NW-MPA-1	Proposals that support the objectives of marine protected areas and the ecological coherence of the marine protected area network will be supported. Proposals that may have adverse impacts on the objectives of marine protected areas must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate adverse impacts, with due regard given to statutory advice on an ecologically coherent network.
NW-MPA-2	Proposals that enhance a marine protected area's ability to adapt to climate change, enhancing the resilience of the marine protected area network will be supported. Proposals that may have adverse impacts on an individual marine protected area's ability to adapt to the effects of climate change and so reduce the resilience of the marine protected area network, must demonstrate that they will, in order of preference: a) avoid b) minimise, c) mitigate adverse impacts.
NW-MPA-3	Where statutory advice states that a marine protected area site condition is deteriorating or that features are moving or changing due to climate change, a suitable boundary change to ensure continued protection of the site and coherence of the overall network should be considered.
NW-MPA-4	Proposals must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts on designated geodiversity.

What are marine protected areas?

903. **Marine protected areas** are areas of the sea protected by law for nature conservation purposes. They protect geological features and habitats and species on the sea bed, in the water column, on the sea surface, in the air above, or in the intertidal area.

904. Marine protected areas in the north west marine plan areas include:

- Marine Conservation Zones (including recommended sites) – geological features, habitats and species typical of UK waters
- Ramsar Sites – wetlands of international importance
- Sites of Special Scientific Interest – geological features, flora and fauna of special interest
- Special Areas of Conservation (including candidate sites and Sites of Community Importance) – habitats and species in need of conservation

- Special Protection Areas (including proposed sites) – rare, vulnerable or threatened birds and for regularly occurring migratory species

905. Ramsar sites are designated and protected under the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat. Special protection areas and special areas of conservation are designated and protected under The Conservation of Habitats and Species Regulations 2017[86] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[87]. Marine Conservation Zones are designated and protected under the Marine and Coastal Access Act 2009. Sites of special scientific interest are designated and protected under the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 2000.

906. For special protection areas and special areas of conservation, areas outside the designated area that are important to features for which a site has been designated are also protected.

907. An **ecologically coherent network** includes well managed, resilient, and adequately sized marine protected areas that are ecologically connected and which represent a range of replicated marine habitats and species. The designations listed above form the English contribution towards a wider ecologically coherent network of marine protected areas in the North East Atlantic. They form the government's contribution to commitments under the Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR Convention). The UK principles of ecological coherence are laid out in the Joint Administration Statement and are based on guidance produced by the Commission for the OSPAR Convention.

908. **Resilience** is defined in guidance by the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic as "the ability of an ecosystem to recover from disturbances within a reasonable timeframe". A resilient ecosystem can absorb, resist or recover from damage and disturbance caused by human activities and natural change, including climate change, and continues to provide ecosystem services. They are more likely to recover from or withstand environmental fluctuations and unexpected events, and can potentially replenish other damaged populations.

909. **Site condition** is the condition of the qualifying features of a marine protected area. Condition may be reported as favourable (maintained or recovered), unfavourable (recovering, no change or declining), or destroyed (partially or completely). Site condition is monitored by statutory nature conservation bodies who provide advice to government and other public authorities in relation to marine protected areas. The most up-to-date information on site condition for marine protected areas in the north west inshore marine plan area can be found on the Designated Sites View. Condition

[86] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[87] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

for sites in the north west offshore marine plan area can be found through the Site Information Centres.

910. Climate change can affect and impact the condition of site features, particularly if the ability of habitats and species to shift their ranges in response to climate change is limited by human activities. The loss or movement of features from a site, or a decline in their condition due to climate change, may result in unfavourable condition. Boundary changes are an important consideration for adaptive management to maintain the integrity of the site.

911. **Geodiversity** is the term used to describe the variety of landforms, rocks, minerals, fossils, soils and natural processes that underlie and determine the character of our landscape and seascape. The UK's rich geodiversity tells the story of Earth's complicated past, providing evidence of past life and environmental conditions stretching back over 2,800 million years. The UK's changing coastline provides an unparalleled slice through our geodiversity as the action of the sea and waves continuously exposes new rocks and sediments.

912. There is an intimate relationship between geodiversity and biodiversity. Geodiversity and the way it influences landscapes, sediments and climate is fundamental to the distribution of habitats and species, for example, intertidal rocky shores and subtidal sands and gravels each support their own unique assemblages of marine plants and animals.

913. Geodiversity receives statutory protection in the English marine area through the designation and protection of:

- Marine Conservation Zones under the Marine and Coastal Access Act 2009
- National Parks under the National Parks and Access to the Countryside Act 1949 and Areas of Outstanding Natural Beauty under the Countryside and Rights of Way Act 2000
- Sites of Special Scientific Interest under the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way Act 2000

914. Non-statutory conservation of geodiversity is provided through the designation and protection of Regionally Important Geological/Geomorphological Sites. These sites are designated through local site selection procedures and are considered the most important places in the UK for Earth science outside of the statutory sites. Heritage Coast designations are another non-statutory landscape designation that may include important geodiversity.

Why are marine protected areas important?

915. **Resilient marine protected areas** in the north west marine plan areas are an important tool for protecting biodiversity, ecosystem services and natural capital assets, and to prevent habitat loss. They benefit rare, vulnerable and threatened habitats and species, as well as those typical to UK waters. They support the local economy, provide opportunities for research, health and well-being, and provide inspirational places to live, work and visit.

916. The loss of coastal habitats through mechanisms such as coastal squeeze, can impact the integrity of an individual marine protected area and the local ecosystem, but it can also impact the ecological coherence of the wider network, especially if the design principles of the network are compromised. This is particularly relevant for sensitive habitats that are not formally protected but which may need to be designated in the future to maintain the coherence of the network. Habitat loss could also have a direct impact on the species that rely on the habitat.

917. In addition to protecting internationally significant marine biodiversity, marine protected areas in the north west marine plan areas provide natural capital assets and ecosystem services that offer social and economic benefits. Seagrass and saltmarsh habitat absorbs carbon from the atmosphere, dunes, rocky reefs and sand and mudflats offer natural coastal protection, while the rich diversity of wildlife and natural beauty of marine protected areas in the north west marine plan areas offer inspiring places to live, work and visit.

918. A large proportion of the north west coastline is protected by numerous marine protected areas. Marine conservation zones protect intertidal, inshore and offshore habitats and species. The Cumbria Coast Marine Conservation Zone protects some of the most extensive and important areas of intertidal rocky shore habitats in the otherwise generally sedimentary coastline of the north west. The Allonby Bay Marine Conservation Zone contains large living reefs of Honeycomb Worm which supports a wide range of other marine life. West of Walney and the Flyde make up two large offshore Marine Conservation Zones and both are designated for their extensive and productive subtidal sand and mud, typical of the north west marine plan areas.

919. The north west marine plan areas contain a number of marine conservation zones providing vital habitats for smelt, such as feeding grounds and habitats for post-larval development, including the Riddle Estuary Marine Conservation Zone, the Solway Firth Marine Conservation Zone and the Wyre-Lune Marine Conservation Zone. Situated to the west of the Isle of Man is the South Rigg Marine Conservation Zone which protects a wide range of habitats that support a variety of species, such as sea urchins, starfish, burrowing anemones, molluscs and commercially important species such as Norway lobsters.

920. The north west marine plan areas also support internationally significant populations of seabird and waterfowl which feed on invertebrates living in the extensive intertidal sand and mudflats. The importance of the area for birds is recognised through, Ramsar sites, special protection areas, and large stretches of the coast that are designated as special areas of conservation for a variety of habitats, including sand dunes and salt marsh.

921. A number of marine protected areas in the north west inshore marine plan area extend into adjacent marine plan areas. The Liverpool Bay Special Protection Area extends into the Welsh National Marine Plan area up to Holy Island, protecting important seabird assembles and species such as little tern and red-throated diver. In the north, the Upper Solway Flats and Marshes Special Protection Area extends into the Scottish marine plan area, also protecting assemblages of seabird including grey plover and whooper swan.

922. As stated in the Joint Administration Statement, linking the marine protected areas in the north west marine plan areas 'together in an ecologically coherent network, supported by wider environmental management measures will achieve benefits more effectively than individual marine protected areas can alone.'

923. The marine protected areas in the north west marine plan areas play a significant role in achieving the government's vision for clean, healthy, safe, productive and biologically diverse oceans and seas. They contribute to targets in the United Nations Convention on Biological Diversity to protect 10% of the world's coastal and marine areas by 2020, and are part of the UK programme of measures to achieve Good Environmental Status in UK waters under The Marine Strategy Regulations 2010. These commitments are reinforced in the Marine Policy Statement through a commitment to 'complete an ecologically coherent network as part of a broad based approach to nature conservation' (3.1.2). The National Planning Policy Framework includes commitments to enhance the natural environment by 'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures' (para.170(d)). The 25 Year Environment Plan from the Department for Environment, Food and Rural Affairs commits to increasing the proportion of protected and well-managed seas, and better management of existing protected sites.

924. An ecologically coherent network includes well managed marine protected areas. The management of marine protected areas is a shared responsibility across various management authorities. As recognised in regulation 38 of The Conservation of Habitats and Species Regulations 2017[88], collaborative management schemes are a suggested management method for marine protected areas. The 25 Year Environment Plan from the Department for Environment, Food and Rural Affairs commits to moving to adaptive, whole-site management of protected sites.

925. Adapting to the effects of climate change is promoted through the Department for Environment, Food and Rural Affairs National flood and coastal erosion risk management strategy for England and the Climate Change Act 2008.

926. **A flexible management approach** for marine protected area boundaries in response to climate change is important to the north west marine plan areas as there are a high number of overlapping marine protected areas in the north west marine plan areas. A change in the natural range of habitats and species will likely result in the displacement of another habitat or species which may also be a protected feature. The number of overlapping sites, many of which are large with extensive boundaries, means marine protected areas in the north west marine plan areas are susceptible to feature migration or loss caused by climate change.

927. Coastal habitats are particularly vulnerable to the impacts of climate change. Coastal squeeze resulting in loss of intertidal habitats and species, including birds, may affect the extent or quality of protected sites and / or the features for which they have

[88] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

been designated. This may require new compensatory habitat to be created and / or designated in coastal areas.

928. Site condition monitoring is important to understand how the condition of a marine protected area and its qualifying features are changing over time and to inform adaptive management.

929. The Marine Policy Statement states that marine plans should build in "sufficient flexibility to take account of climate change impacts, for example by introducing appropriate criteria for selection or de-selection of protected marine areas, seeking the advice of statutory advisors, changing or moving current uses/spatial allocations, or safeguarding areas for future uses" (2.6.7.8). Marine plans will endeavour to achieve this but will not seek to duplicate existing regimes, for example, the role of the Department for Environment Food and Rural Affairs in designating marine protected areas.

930. Responding to the effects of climate change requires global action. Adaptive management is important for the protection of habitats and species, and suitable site boundary changes, in response to the impacts of climate change, protect the integrity of the marine protected area network design principles. The design principles of the marine protected area network as laid out in the Joint Administration Statement promote the resilience of marine ecosystems through:

    - connectivity between sites
    - effective protection of features
    - ensuring sites are of a viable size
    - inclusion of replicates of representative habitats within the network

931. It is too early to determine if the network in its current state is sufficient to achieve full resilience, for example sites may be too far apart for some species depending on their dispersal strategies. Adaptive management is essential to help mitigate the effects of climate change and to maintain the coherence of the marine protected area network in the north west marine plan areas.

932. **Geodiversity** is an important part of an ecologically coherent network of marine protected areas, for its size, the UK is regarded as one of the most geodiverse places in the world. The practice of Earth science was developed in the UK and many periods of geological time were first defined and named here. The north west inshore marine area is significant for the Island of Walney, the largest barrier island in England. During the post-glacial period significant sand dune systems were also formed in this area as a result of the distribution of glacial material along the coast.

933. Geodiversity is finite and sensitive to change. Understanding and valuing geodiversity is critical to understanding the planet and how the decisions made influence the future of our environment. Geodiversity in the north west marine plan areas has an important role to play in ensuring that the natural environment continues to provide important ecosystem services.

934. Geodiversity supports our economy and influences where we live. Its sustainable use is critical to the future well-being of our environment and for the ecosystem

services that it provides. Our geological past can be used to predict changes in our environment, offering insights into climate change and how it might affect our lives. Minerals and aggregates are a major economic resource. Protected landscapes are valued for tourism, while coastal processes influenced by geodiversity can provide natural protection from flood and coastal erosion, such as the sand dune systems in the north west inshore marine plan area. Geodiversity provides a wide range of habitats that in turn support a rich assemblage of marine life, including coastal cliffs which support thousands of seabirds throughout the north west inshore marine plan area.

935. The Marine Policy Statement states "development should aim to avoid harm to marine ecology, biodiversity and geological conservation interests (including geological and morphological features), including through location, mitigation and consideration of reasonable alternatives" (2.6.1.3). Also, that "development proposals may provide, where appropriate, opportunities for building-in beneficial features for marine ecology, biodiversity and geodiversity as part of good design" (2.6.1.4).

936. The National Planning Policy Framework states that "Planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils" (170).

937. The UK Geodiversity Action Plan provides an agreed framework for geodiversity action across the UK. Objective 6 seeks "to conserve and manage our geodiversity through appropriate recognition at international, national and local levels." Objective 7 seeks "to maintain and enhance our geodiversity through the management of sites, areas and wider landscapes."

Policy NW-MPA-1 Marine protected areas

Proposals that support the objectives of marine protected areas and the ecological coherence of the marine protected area network will be supported.

Proposals that may have adverse impacts on the objectives of marine protected areas must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate adverse impacts, with due regard given to statutory advice on an ecologically coherent network.

Policy aim

938. The government is committed to establishing an ecologically coherent network of marine protected areas around the UK. The north west marine plan areas will make a significant contribution to this network, through the many existing and proposed marine protected area sites. NW-MPA-1 makes sure proposals take account of adverse impacts on individual sites and the overall network, protecting important habitats, species and geological features, enabling the successful and continued management of these sites.

939. Proposals that cannot avoid, minimise and mitigate adverse impacts will not be supported. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a), and so on.

940. NW-MPA-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

941. This policy applies to individual marine protected areas throughout the north west marine plan areas, and areas outside marine protected areas that are important to features for which a marine protected area has been designated.

942. Consideration of impacts at the network level should also be undertaken at a strategic level, addressed through mechanisms such as:

- assessments and measures to achieve Good Environmental Status with regard to support of The Marine Strategy Regulations 2010
- Environmental Impact Assessments
- Regional environmental assessments, eg marine aggregate regional environmental assessments
- Strategic Environmental Assessments

Proponents

943. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that results in the change of authorisation or authorisation conditions, and that is subject to management by public authorities.

944. Proposals that support the objectives of marine protected areas should include information demonstrating how this will be achieved. The conservation objectives for individual sites are provided by the statutory nature conservation bodies through the Designated Sites View for sites within 12nm and through the Site Information Centres for sites between 12-200nm. The conservation objectives describe whether the condition of features for which the site is designated should be maintained or restored. Where positive impacts are identified, proposals must also assess adverse impacts in line with relevant legislation. Enhancement is not a substitute for avoidance, protection or mitigation measures.

945. Proposals must still comply with requirements under relevant legislation including The Conservation of Habitats and Species Regulations 2017[89], The Conservation of Offshore Marine Habitats and Species Regulations 2017[90], the Marine and Coastal Access Act 2009, the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000, The Town and Country Planning (Environmental Impact

[89] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[90] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Assessment) Regulations 2017[91], The Marine Works (Environmental Impact Assessment) Regulations 2007 and other national legislation.

946. Proposals that may have adverse impacts on the objectives of marine protected areas must demonstrate that they have, firstly, avoided adverse impacts. Avoidance is the preferred measure due to the difficulty of mitigating impacts in the marine environment, particularly habitat loss. Advice should be sought from the statutory nature conservation bodies on the suitability or appropriateness of mitigation measures. Where adverse impacts cannot be avoided proposals must demonstrate how the impacts will be minimised and mitigated. Proposals that cannot avoid, minimise and mitigate adverse impacts will not be supported. This policy does not remove the provisions for derogations that are present in primary legislation and regulations.

947. The assessment of adverse impacts on individual sites must be in accordance with statutory monitoring requirements, such as Habitats Regulations Assessment, Marine Conservation Zone Assessment (as required by the Marine and Coastal Access Act 2009 (Section 126)), Sites of Special Scientific Interest Assessment, and the conservation objectives set out by the statutory nature conservation bodies. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a), and so on. Measures could include but are not limited to:

- avoid- situating developments in a location that does not impact on the objectives of the marine protected area, particularly in cases of habitat loss
- minimise- avoiding operational work during seasonal migrations of designated features or the use of temporary or floating structures
- mitigate- use of soft-start piling, vibro-piling, or bubble curtains to manage impacts from underwater noise

948. Where minimising and mitigating impacts are not possible, particularly for habitat loss, avoidance is the preferred option.

949. Where proposals have been determined to have a likely significant effect (as detailed in The Conservation of Habitats and Species Regulations 2017[92] Regulation 63) on European sites through a Habitats Regulations Assessment, an Appropriate Assessment will be required.

950. Proposals should demonstrate consideration of any existing management measures relevant to the marine protected area(s).

951. Inclusion of this information does not indicate that approval of the proposal will follow by default. Approval will also depend on other material considerations taken into account by the decision-maker which may include, for example, other plans.

[91] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018

[92] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Decision-makers

952. Public authorities will support proposals that support the conservation objectives of a marine protected areas and the ecological coherence of the network where it complies with other policies in this plan and other relevant legislation.

953. Public authorities will assess if the proposal affects the ecological coherence of the network on a case-by-case basis. Decision-makers should seek advice on how to consider the ecological coherence of the marine protected area network in decision-making from the statutory nature conservation bodies. Where advice states that it is not possible to assess the impact on the ecological coherence of the network, there will be no further requirements for decision-makers to consider the network. Current guidance provides advice on how marine protected areas are considered in the decision-making process. The requirements on how to consider impacts on the ecological coherence of the marine protected network under policy NW-MPA-1 may change if new guidance is issued. New and evolving advice will not be applied retrospectively to activities that have already been consented.

954. This policy does not remove the provisions for derogations that are present in primary legislation and regulations.

955. Public authorities must also consider cumulative, combined or synergistic effects which their functions, authorisations and enforcement may have, with regards to any advice issued by the statutory nature conservation bodies.

956. The Joint Nature Conservation Committee Marine Protected Area mapper is an interactive resource containing information on the marine protected areas designated in UK waters. The network of marine protected areas is likely to change over the period of this plan and the most up-to-date information should be used when applying this policy.

957. Conservation advice packages and information on the condition of marine protected areas, is provided by Natural England for inshore marine protected areas within 12nm through the Designated Sites View. The Joint Nature Conservation Committee provides conservation advice and condition information for marine protected areas between 12-200nm through the Site Information Centres. Conservation advice packages include statutory advice on the qualifying features of a site and their conservation objectives, including advice on seasonality of mobile features. They advise how to further the conservation objectives, and they identify activities that are capable of affecting the qualifying features and the processes they depend upon.

958. Mobile species designated as a feature of special protection areas and special areas of conservation are also protected when they are outside the boundary of their site. Seabird and seal density maps are available on the Explore Marine Plans digital service. The evidence base for mobile marine species is continuously developing. The most up-to-date information and conservation advice should be used when applying this policy.

959. The boundaries of marine protected areas in the north west marine plan areas may change in the future in response to natural range shifts caused by climate change,

and additional marine protected areas may be designated. Policy NW-MPA-1 will apply to new and amended areas as they develop.

960. Figure 25 shows the marine protected areas in the north west marine plan area. This Figure 25 should not be considered definitive as more designations may have been made since the adoption of this plan.

Policy NW-MPA-2 Marine protected areas

Proposals that enhance a marine protected area's ability to adapt to climate change, enhancing the resilience of the marine protected area network will be supported.

Proposals that may have adverse impacts on an individual marine protected area's ability to adapt to the effects of climate change and so reduce the resilience of the marine protected area network, must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate adverse impacts.

Policy aim

961. The effects of climate change on habitats and species poses a challenge to designated marine protected area sites in the north west marine plan areas. NW-MPA-2 ensures proposals account for adverse impacts on individual marine protected areas ability to adapt to climate change, improving resilience and working towards a well-managed marine protected area network.

962. Proposals that cannot avoid, minimise and mitigate adverse impacts will not be supported. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a), and so on.

963. NW-MPA-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

964. This policy applies to marine protected areas throughout the north west marine plan areas and any areas required to support the adaptation of marine protected areas to the effects of climate change.

965. The Marine Policy Statement (2.6.7.5) sets out that decisions on and proposals for marine and coastal developments should take account of climate change projections. There are a number of sources of advice available, including the Climate Change Risk Assessment, UK Climate Projections and Marine Climate Change Impact Partnership reports.

Proponents

966. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that results in the change of

authorisation or authorisation conditions, and that is subject to management by public authorities.

967. Proposals that enhance the ability of a marine protected area to adapt to the effects of climate change should include information demonstrating how this will be achieved. Enhancement refers to measures taken which have a positive impact. An example of enhancement could include the removal of hard coastal defence structures in favour of soft engineering which enables habitat roll back.

968. Where positive impacts have been identified, proposals must also assess adverse impacts in line with relevant legislation. Enhancement is not a substitute for avoidance, minimisation or mitigation measures.

969. Proposals must still comply with requirements under relevant legislation including The Conservation of Habitats and Species Regulations 2017[93], The Conservation of Offshore Marine Habitats and Species Regulations 2017[94], the Marine and Coastal Access Act 2009, Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000, The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[95], The Marine Works (Environmental Impact Assessment) Regulations 2007 and other national legislation.

970. Proposals that may have adverse impacts on the ability of a marine protected area to adapt to the effects of climate change must demonstrate that they will, in order of preference, avoid, minimise or mitigate these impacts. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a), and so on. Measures could include:

- avoid- situating developments in a location that does not impact on the ability of a marine protected area to adapt to climate change
- minimise- minimising the overall development footprint or amount of time activities occur that reduce a marine protected area's ability to adapt to climate change
- mitigate- creating or enhancing compensatory habitat that provides an ecosystem service to improve the ability of a marine protected area to adapt to climate change

971. Where proposals have been determined to have a likely significant effect (as detailed in The Conservation of Habitats and Species Regulations 2017[96] Regulation 63) on European sites through a Habitats Regulations Assessment, an Appropriate Assessment will be required.

[93] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[94] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[95] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018
[96] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

972. Adaptation could be recovery (where impact has occurred), opportunity for habitat migration if necessary (for example due to sea level rise) or amendment to site boundaries in response to climate driven range shifts which is enabled through policy NW-MPA-3.

973. Proposals should demonstrate consideration of any existing management measures relevant to the marine protected area(s).

974. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

975. This policy does not remove the provisions for derogations that are present in primary legislation and regulations.

976. Where proposals cannot avoid, minimise or mitigate adverse impact but are in the public interest, they must state the case for proceeding with details of how compensation of equal environmental benefit will be achieved.

Decision-makers

977. Public authorities will support proposals that enhance the ability of a marine protected area to adapt to the effects of climate change where it complies with other policies in this plan and relevant legislation.

978. Public authorities must consider and account for adaptation in the face of potential impacts from climate change. Public authorities must also take into account other relevant projects, programmes and plans, and matters including those outlined in the Marine Policy Statement (2.6.8).

979. Up-to-date information on the location of marine protected areas in the north west marine plan areas can be found on the Joint Nature Conservation Committee Marine Protected Area mapper which is an interactive resource containing information on the marine protected areas designated in UK waters. The network of marine protected areas is likely to change over the period of this plan and the most up-to-date information should be used when applying this policy.

980. Conservation advice packages and information on the condition of marine protected areas, is provided by Natural England for inshore marine protected areas within 12nm through the Designated Sites View. The Joint Nature Conservation Committee provides conservation advice and condition information for marine protected areas between 12-200nm through the Site Information Centres. Conservation advice packages include statutory advice on the qualifying features of a site and their conservation objectives, including advice on seasonality of mobile features. They advise how to further the conservation objectives, and they identify activities that are capable of affecting the qualifying features and the processes they depend upon.

981. Coastal habitats including sand dunes, saltmarsh, sandflats, mudflats, shingle beaches and maritime cliffs are particularly sensitive to the effects of climate change and can be found throughout the north west inshore marine plan area. They experience changes in rainfall, temperature, storminess and wave energy, but also

habitat loss due to erosion and sea-level rise. These habitats support a rich assemblage of marine species and rely on natural sediment supply and transport to maintain their natural, dynamic state.

982. The Marine Climate Change Impacts Partnership reports that natural sea defence provided by sand dunes, saltmarsh and shingle in the inshore north west marine area may face increasing erosional pressure due to sea level rise and an increase in storm events.

983. Coastal habitats can, and do, adapt to change, but an increase in coastal flood and erosion events in the north west inshore marine plan area has led to a reliance on coastal protection assets. Where fixed landward assets prevent habitat migration or 'roll back', habitat loss is likely to occur due to coastal squeeze. Fixed structures within the marine area can also create barriers to species movement.

984. The north west marine plan areas support internationally significant populations of breeding and overwintering seabirds. The Marine Climate Change Impacts Partnership 2017 Report Card states that the breeding success of seabirds are strongly linked to temperature rises and changes in fish prey populations such as sandeels. Short term weather events such as severe summer storms are also having a severe negative effect on the breeding performance of some species. It is predicted that there will be a continuing shift northwards in habitat suitability and prey availability for many species over the coming century.

985. Evidence of long-term shifts in the distribution and abundance of marine species due to higher temperatures is now discernible (UK Climate Change Risk Assessment 2017). These shifts are expected to continue and become more widespread, with some species potentially benefiting, but others losing suitable space.

986. Figure 25 shows the marine protected areas in the north west marine plan area. This Figure 25 should not be considered definitive as more designations may have been made since the adoption of this plan.

Policy NW-MPA-3 Marine protected areas

Where statutory advice states that a marine protected area site condition is deteriorating or that features are moving or changing due to climate change, a suitable boundary change to ensure continued protection of the site and coherence of the overall network should be considered.

Policy aim

987. Anthropogenic activities such as the burning of fossil fuels, deforestation, and farming and methane release from animal farming are having serious adverse impacts on the climate. These impacts include but are not limited to, increased ocean acidity, temperature shifts, and increased storm activity. Climate change will likely result in marine protected area feature migration and / or feature displacement due to shifts in ranges of habitats and species. NW-MPA-3 ensures flexibility by supporting boundary changes to improve the resilience of the marine protected area network. NW-MPA-3 enables adaptive management to help mitigate the loss of features within sites, and support adaptation to climate change.

988. NW-MPA-3 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

989. This policy applies to marine protected areas throughout the north west marine plan areas and any areas required to support the adaptation of marine protected areas to the effects of climate change.

Decision-makers

990. The statutory nature conservation bodies monitor and assess the condition of marine protected areas and they should clearly state when the condition of a feature is changing or deteriorating due to climate change. This policy should also be considered when recommending and designating new marine protected areas to ensure that boundaries allow for adaptive management if necessary.

991. The Department for Environment, Food and Rural Affairs should consider this policy when designating, amending or de-selecting marine protected areas.

992. Public authorities who manage and regulate the placement of hard constraints (for example coastal defences) in the marine area may also need to consider the future need for adaptive management in line with policy NW-MPA-2.

993. One aspect of managing a marine protected area is enabling the features for which a site is designated to adapt to climate change, for example through a boundary change or even a new site location. It is important to raise the potential for such changes as the process of identifying, designating and providing conservation advice for sites is still underway.

994. The statutory nature conservation bodies will flag condition assessments which show that a protected feature has changed its location due to a shift in range, or an increase or decrease in its extent, abundance or assemblage, to the appropriate authorities. If climate change is found to be the causing factor, a suitable boundary change should be considered. A boundary change will not be supported where the condition of a site has deteriorated due to pressures from human activities, as this should be addressed through revised site management measures.

995. Where it is not possible to alter a site boundary due to hard constraints (for example a sea wall), public authorities should consider actions to remove barriers where possible to enable the features of the site to adapt. It will be necessary to consult relevant Shoreline Management Plans.

996. In certain cases the removal of barriers will not be possible due to their usage as flood and coastal erosion protection. This policy supports use of soft defences in preference to hard defences where coastal defence is necessary. Soft defences enable boundary changes should the need occur through condition assessments. Further consideration regarding the removal of barriers to enable range shifts and boundary changes to occur should be applied in light of policy NW-CC-3.

997. This policy focuses on deterioration of site condition and the potential future requirement for suitable boundary changes. This should be considered alongside

policy NW-MPA-2 which details the consideration required to ensure individual marine protected areas have the ability to adapt to climate change.

998. Up-to-date information on the location of marine protected areas in the north west marine plan areas can be found on the Joint Nature Conservation Committee Marine Protected Area mapper which is an interactive resource containing information on the marine protected areas designated in UK waters. The network of marine protected areas is likely to change over the period of this plan and the most up-to-date information should be used when applying this policy.

999. Conservation advice packages and information on the condition of marine protected areas, is provided by Natural England for inshore marine protected areas within 12nm through the Designated Sites View. The Joint Nature Conservation Committee provides conservation advice and condition information for marine protected areas between 12-200nm through the Site Information Centres. Conservation advice packages include statutory advice on the qualifying features of a site and their conservation objectives, including advice on seasonality of mobile features. They advise how to further the conservation objectives, and they identify activities that are capable of affecting the qualifying features and the processes they depend upon.

1000. Figure 25 shows the marine protected areas in the north west marine plan areas. This Figure 25 should not be considered definitive as more designations may have been made since the adoption of this plan.

Policy NW-MPA-4 Marine protected areas

Proposals must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts on designated geodiversity

Policy aim

1001. Geodiversity in the north west marine plan areas has formed over millions of years and natural change happens slowly over long time scales, meaning geodiversity is particularly vulnerable to human impacts. NW-MPA-4 makes sure proposals account for adverse impacts on designated geodiversity, protecting important geological and geomorphological features that underlie and determine the character of our landscape and seascape.

1002. Proposals that cannot avoid, minimise and mitigate adverse impacts will not be supported. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a), and so on.

1003. NW-MPA-4 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

1004. This policy applies to all statutory and non-statutory designated geodiversity sites throughout the north west marine plan areas.

1005. Consideration of impacts to geodiversity sites should also be undertaken at a strategic level, addressed through mechanisms such as:

- Environmental Impact Assessments
- Regional environmental assessments, eg marine aggregate regional environmental assessments
- Strategic Environmental Assessments

Proponents

1006. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that results in the change of authorisation or authorisation conditions, and that is subject to management by public authorities.

1007. Proposals that have significant adverse impacts on geological features of sites of special scientific interest, marine conservation zones or regionally important geological sites must demonstrate that they have, in order of preference, avoided, minimised or mitigated such impacts in accordance with statutory monitoring requirements, such as Marine Conservation Zone Assessment (as required by the Marine and Coastal Access Act 2009 (Section 126)), Sites of Special Scientific Interest Assessment, and the conservation objectives set out by the statutory nature conservation bodies. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a), and so on. Measures could include:

- avoid- situating developments in a location that does not impact on designated geodiversity
- minimise- minimising the overall development footprint or amount of time activities occur that impact designated geodiversity
- mitigate- innovative infrastructure design that allows for sediment bypassing to avoid sediment loss

1008. Proposals should demonstrate consideration of any existing management measures relevant to the marine protected area(s).

1009. Inclusion of this information does not indicate that approval of the proposal will follow by default. Approval will also depend on other material considerations taken into account by the decision-maker which may include, for example, other plans.

Decision-makers

1010. Decision-makers will not support proposals that cannot avoid, minimise and mitigate impacts on designated geodiversity.

1011. Cumbria Geoconservation provides information about important geological features on the Cumbria coast, and a Geodiversity Action Plan for the area outlines the principle aims and objectives for Cumbria's geodiversity. The Lancashire Geodiversity Action plan discusses some of the geological history in the area, and further information is provided by the GeoLancashire Group.

1012. The Geological Conservation Review Series is a public record of over 3,000 sites of special scientific interest that represent the range of geomorphological features in England, Scotland and Wales. The Geological Conservation Database is an inventory of each site and contains basic information and some full site reports. The information is administered by the Joint Nature Conservation Committee who also provide a UK map of Geological Conservation Review Sites.

1013. The Designated Sites View provides information, including conservation objectives, on sites of special scientific interest and marine conservation zones and the activities that are likely to cause damage. The Site of Special Scientific Interest Impact Risk Zone and Marine Conservation Zone data provides information to carry out an initial assessment of potential risks posed by a proposal.

1014. Figure 26 shows marine habitats in the north west marine plan area to assist with application of this policy.

Signposting

1015. Legislation which relates to and may support the implementation of these policies includes:

- Climate Change Act 2008
- The Conservation of Habitats and Species Regulations 2017[97]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[98]
- Countryside and Rights of Way Act 2000
- National Parks and Access to the Countryside Act 1949
- North West Inshore Fisheries and Conservation Authority byelaws
- Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat
- Wildlife and Countryside Act 1981

1016. Guidance and other materials which relate to and may support the implementation of these policies include:

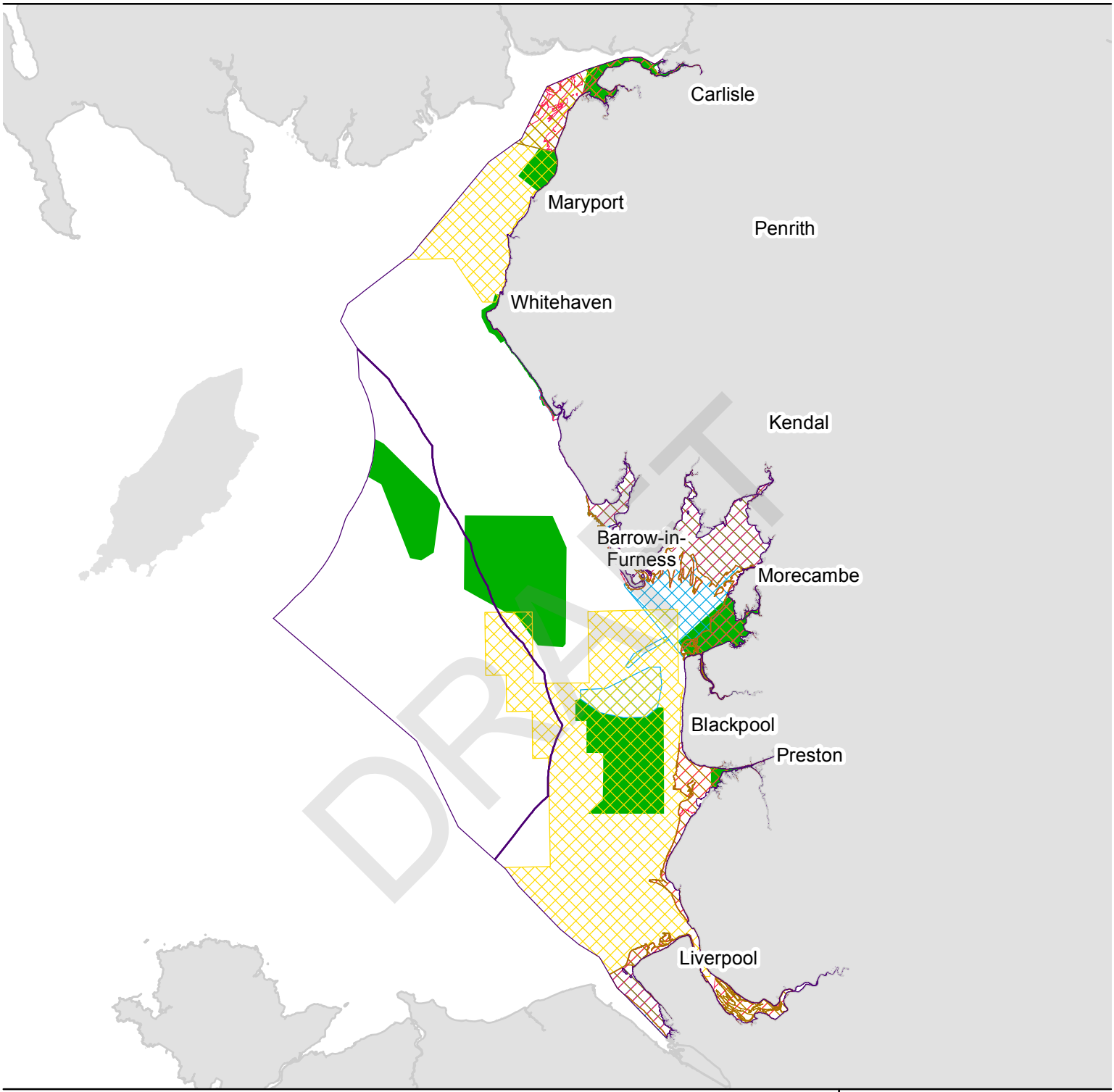
- British Geological Society Geology of Britain Maps
- Coastal Change Management Areas
- Cumbria Geodiversity Action Plan
- Geological Conservation Database
- Geological Conservation Review Series
- Joint Nature Conservation Committee Marine Protected Area mapper
- Lancashire Geodiversity Action plan
- Managing marine recreational activities: a review of evidence
- Marine Climate Change Impacts Partnership
- National flood and coastal erosion risk management strategy for England

[97] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[98] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

- Shoreline Management Plans
- Statutory conservation advice packages for marine protected areas 0-12nm (Natural England)
- Statutory conservation advice packages for marine protected areas 12-200nm (Joint Nature Conservation Committee)
- SSSI Impact Risk Zone and Marine Conservation Zone data
- UK Climate Projections (UKCP18)
- UK Climate Change Risk Assessment
- UK Geodiversity Action Plan
- UK map of Geological Conservation Review Sites

Marine Management Organisation

Figure 25 | Marine Protected Areas



North West Marine Plan Areas
Ramsar Sites
Sites of Special Scientific Interest (SSSI)
Special Protection Areas (SPA)
Special Areas of Conservation (SAC)
Marine Conservation Zones (MCZ)

Policy map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

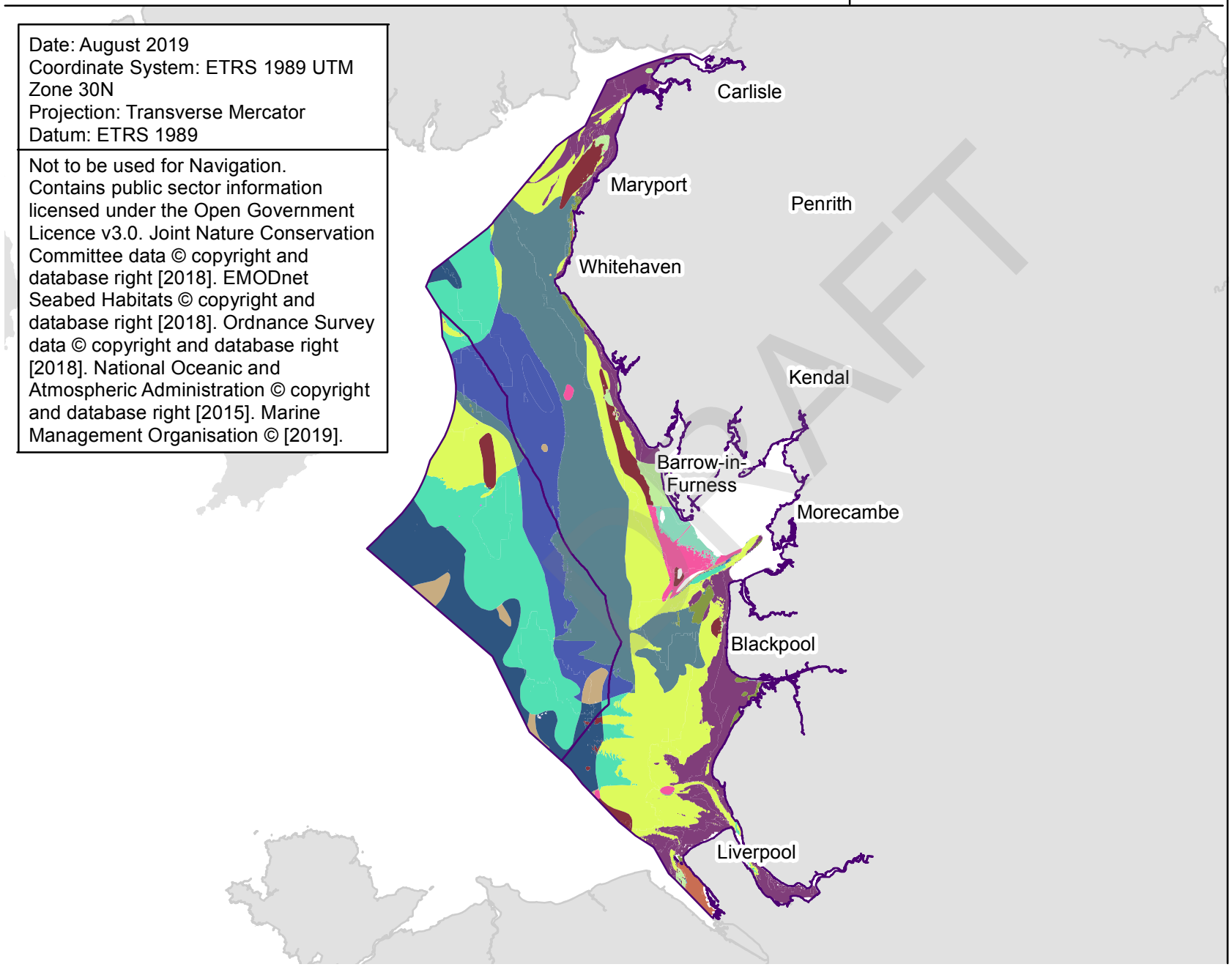
Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

Marine Management Organisation

Figure 26 | Marine Habitats

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989



North West Marine Plan Areas

Survey/Modelled Habitat UK Sea Map

- A3.1 Atlantic and Mediterranean High Energy Infralittoral Rock
- A3.2 Atlantic and Mediterranean Moderate Energy Infralittoral Rock
- A3.3 Atlantic and Mediterranean Low Energy Infralittoral Rock
- A4.1 Atlantic and Mediterranean High Energy Circalittoral Rock
- A4.27 Faunal Communities on Deep Moderate Energy Circalittoral Rock
- A4.2 Atlantic and Mediterranean Moderate Energy Circalittoral Rock
- A4.33 Faunal Communities on Deep Low Energy Circalittoral Rock
- A4.3 Atlantic and Mediterranean Low Energy Circalittoral Rock
- A5.13 Infralittoral Coarse Sediment
- A5.14 Circalittoral Coarse Sediment
- A5.15 Deep Circalittoral Coarse Sediment
- A5.23 or A5.24 Infralittoral Fine Sand or Infralittoral Muddy Sand
- A5.25 or A5.26 Circalittoral Fine Sand or Circalittoral Muddy Sand
- A5.27 Deep Circalittoral Sand
- A5.33 or A5.34 Infralittoral Sandy Mud or Infralittoral Fine Mud
- A5.33 Infralittoral Sandy Mud
- A5.35 or A5.36 Circalittoral Sandy Mud or Circalittoral Fine Mud
- A5.35 Circalittoral Sandy Mud
- A5.37 Deep circalittoral Mmud
- A5.43 Infralittoral Mixed Sediments
- A5.44 Circalittoral Mixed Sediments
- A5.45 Deep Circalittoral Mixed Sediments

5.24 Biodiversity

Policy Code	Policy Wording
NW-BIO-1	Proposals that enhance the distribution of priority habitats and priority species will be supported. Proposals that may have significant adverse impacts on the distribution of priority habitats and priority species must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate d) compensate for significant adverse impacts.
NW-BIO-2	Proposals that enhance or facilitate native species or habitat adaptation or connectivity, or native species migration will be supported. Proposals that may cause significant adverse impacts on native species or habitat adaptation or connectivity, or native species migration must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts d) compensate for significant adverse impacts.
NW-BIO-3	Proposals that deliver environmental net gain for coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services will be supported. Proposals must take account of the space required for coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services, and demonstrate that they will in order of preference: a) avoid b) minimise c) mitigate d) compensate for net habitat loss and deliver environmental net gain.

What is biodiversity?

1017. **Biodiversity** is the variety of all life on earth, including the diversity within and between all plant and animal species and the diversity of ecosystems. Each of the components detailed in NW-BIO-1, NW-BIO-2 and NW-BIO-3 contribute to maintaining and restoring biodiversity in the north west marine plan areas.

1018. **Priority habitats and species** are those recognised as being of 'principal importance' for the conservation of biological diversity in England under the Natural Environment and Rural Communities Act 2006 (Section 41). Priority habitats comprise coastal and offshore habitats including but not limited to intertidal mudflats, blue mussel beds, *Sabellaria alveolata* reefs, peat and clay exposures, sea grass

beds and sheltered muddy gravels. Priority species include but are not limited to herring gull, spiny dogfish, Atlantic salmon, sea lamprey and smelt.

1019. **Priority habitats and species** have been identified through additional organisations and legislation. Features of Conservation Importance, including marine habitats, are identified by the Joint Nature Conservation Committee and listed in the Ecological Network Guidance. The Conservation of Habitats and Species Regulations 2017[99] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[100] require protection for Annex I habitats and Annex II species. The Convention for the Protection of the North-East Atlantic has developed a list of threatened and / or declining species and habitats.

1020. **Adaptation** is the ability of habitats, species and populations to respond to changes in the environment. Adaptation includes the natural succession of habitats and range shifts in response to climatic and other environmental changes. The ability of habitats and species to adapt to climate change is also addressed by policies regarding climate change.

1021. **Species connectivity** allows the movement of individuals, juveniles and groups preventing individual or group isolation. **Habitat connectivity** allows the movement of nutrients and supports species connectivity through the presence of continuous suitable habitat.

1022. **Species migration** is the seasonal movement of populations of animals, for example for breeding or feeding purposes. Migration may occur over a small distance or over a much larger, international, distance. Species can migrate within, to and from the north west marine plan areas.

1023. **Coastal habitats** occur where land meets sea. Coastal habitats in the north west inshore marine plan area include but are not limited to vegetated shingle, maritime cliffs and slopes, saltmarsh, sand dunes, sandflats, mudflats, seagrass beds, intertidal rocky reefs and intertidal sea caves. An ecosystem is the dynamic complex of plant and animal communities and the surrounding non-living environment that supports them in the north west marine plan areas.

1024. **Ecosystem function** is dependent on the relationship within, among and between species and the non-living environment as well as the physical and chemical interactions within the environment. Effective ecosystem function is reliant upon solar energy flow, for example photosynthesis by phytoplankton, mineral and nutrient cycling such as the absorption of carbon dioxide from the atmosphere, for example by saltmarsh, and water cycling. Ecosystem function can also include geomorphological processes that contribute towards geodiversity.

1025. **Ecosystem services** are the benefits people obtain from the natural environment. The classification of ecosystem services adopted by the UK National Ecosystem

[99] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[100] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Approach categorises services as follows: regulating, provisioning, cultural and supporting services.

- cultural services are non-physical and connected to human behaviours and values, for example aesthetic values, cultural heritage values and tourism
- regulating services such as flood defence, water purification and carbon sequestration services (the process of capturing carbon dioxide from the environment) for example sand dunes which act as natural flood defences
- provisioning services comprise products obtained from the environment such as food and resources, for example fish stocks targeted by fisheries
- supporting services are necessary for the function of all other ecosystem services. Impacts on humans from supporting services are likely to be indirect or occur over a long period of time. Examples include oxygen production through photosynthesis, soil formation and retention and habitat provision

1026. **Net gain** is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Environmental features and functional processes, known as natural capital assets and services, are protected and enhanced. Where adverse impacts occur, natural capital assets and / or services are restored or replaced to provide greater benefits to wildlife and people.

1027. **Biodiversity net gain** is an approach to development that seeks to leave biodiversity in a better state by protecting habitats and ecological features. The approach to delivering biodiversity net gain in the terrestrial environment, including intertidal areas, is set out in the government's consultation on proposals to mandate biodiversity net gain.

1028. Wider **environmental net gain** is an evolving concept that will expand biodiversity net gain approaches to include wider benefits, such as flood protection, recreation and improved water and air quality. Given the challenges of delivering biodiversity net gain in the marine area, the wider environmental net gain approach will likely be applied.

Why is biodiversity important?

1029. Biodiverse communities are typically more resilient to change than those dominated by fewer species. In biodiverse communities different functions are carried out by multiple species, thus declines in a single species, for example due to disease, do not result in a loss of overall ecosystem function. This resilience is essential to the maintenance of healthy ecosystems required for delivery of ecosystem services such as clean air and water, healthy soil and raw materials. Each of the components detailed in NW-BIO-1, NW-BIO-2 and NW-BIO-3 contribute to biodiversity in the north west marine plan areas and their importance is detailed below.

1030. Priority species are important in their own right for their contribution to biodiversity and can encourage eco-tourism which brings economic prosperity to the north west region. Atlantic salmon is a diadromous species which migrates from freshwater to sea as a juvenile before returning to freshwater to breed as an adult. There are several Atlantic salmon rivers in the north west inshore marine plan area thus both juvenile and adult salmon are likely to occur in the north west marine plan areas as

they migrate. The herring gull is a priority species which occurs throughout the north west inshore marine plan area all year round.

1031. Priority habitats in the north west marine plan areas include but are not restricted to: intertidal mudflats, sheltered muddy gravels and peat and clay exposures, for example around Morecambe Bay; subtidal sands and gravels along much of the coast of the north west inshore marine plan area; Seagrass beds for example off the coast of Workington in the Solway Firth; and intertidal boulder communities for example off the coast of Rottington.

1032. Some priority habitats provide important ecosystem services, such as water purification: coastal saltmarsh, reed beds and intertidal mudflats aid in reducing turbidity and sedimentation and in the longer term removing hazardous chemicals and nutrients. Seagrass beds also play a role in the removal of nitrogen and hazardous chemicals from the water column providing benefits to water quality.

1033. Not all priority habitats and species occur within designated sites. Some habitats and species that are recognised as internationally important are not always present to an internationally significant extent in the north west marine plan areas and are therefore not designated. These habitats and species may still be important at a local level but receive less protection compared to designated features, although are protected by some legislation, including but not limited to the Wildlife and Countryside Act 1981 and the Natural Environment and Rural Communities Act 2006. These policies protect non-designated habitats that are important for protected species. These policies also support the government's commitments under the Convention for the Protection of the Marine Environment of the North East Atlantic for an ecologically coherent network of marine protected areas (See MPA-1).

1034. The ability of habitats to respond to and adapt to climatic and other environmental changes ensures resilience in the natural environment. Particular species may also need to adapt to changes in their habitats, predation or competition. The ability of habitats and species to adapt to change is important for biodiversity both within and outside of marine protected areas. The restoration of wetland habitats for wading birds around Morecambe Bay is one example of increasing the ability of species to adapt to change.

1035. Migratory routes are essential to the success of key life stages of migratory species, such as breeding. Disruption to migratory pathways can negatively affect the success of a population, potentially threatening long term viability. Salmon are one migratory fish species which occur in the north west marine plan areas, migrating from the River Derwent and River Eden as juveniles and back as adults to breed. St Bees Head, for example, is important for migratory seabirds which breed there from April to July.

1036. Connectivity between species, habitats and populations (both within and outside of the north west marine plan areas) is important for maintaining genetic diversity and allowing species to undergo seasonal breeding and foraging migrations. Habitat fragmentation and loss as a result of development often has a negative impact such

as on population numbers or on the movement of individuals between increasingly isolated populations. This threatens species long term viability.

1037. Ensuring the connectivity of habitats and species within and outside of the north west marine plan areas is also important as it contributes to the maintenance and cohesion of the existing marine protected area network and surrounding seas.

1038. The coastal region of the north west inshore marine plan area is characterised by estuaries including the Solway Firth, Duddon and Esk estuaries in the north, Morecambe Bay, the largest intertidal area in Britain, in the centre and Ribble, Dee and Merseyside estuaries in the south. These estuarine habitats are associated with sandflats, mudflats and saltmarshes. The north west inshore marine plan area is also associated with extensive beaches and sand dune habitats. These habitats support a rich assemblage of species and rely on natural sediment supply and transport to maintain healthy ecosystem function.

1039. There are frequent storm surges which, combined with high tides in the area, increase the risk of flooding. Coastal erosion affects some of the shoreline throughout the north west inshore marine plan area and man-made barriers are in place in some areas to protect the coast (Marine Climate Change Impact Partnership). Where fixed landward assets prevent habitat migration or 'roll back', habitat loss is likely to occur due to coastal squeeze. Fixed structures in the marine area can also create barriers to species movement. Sand bars and dunes can and do act as a natural defence against flooding particularly in the southern extent of the plan area.

1040. The change or loss of coastal habitats can impact the function of the local ecosystem and the provision of ecosystem services. Dunes, sandflats and mudflats offer natural coastal protection throughout the north west inshore marine plan area whilst saltmarsh habitat absorbs carbon from the atmosphere. The rich diversity of wildlife and natural beauty of marine protected areas in the north west inshore marine plan area offer inspiring places to live, work and visit. The Joint Nature Conservation Committee has explored the components and processes associated with marine and coastal ecosystem services.

1041. The Marine Strategy Regulations 2010 require the UK to take necessary measures to achieve or maintain Good Environmental Status of our seas by 2020 through the development of a Marine Strategy. The objective of the Marine Strategy reflects the UK's vision for clean, healthy, safe, productive and biologically diverse oceans and seas. The updated Marine Strategy Part One includes 11 qualitative descriptors to assess progress towards Good Environmental Status. NW-BIO-1, NW-BIO-2 and NW-BIO-3 support the delivery the objectives associated with four descriptors directly: D1 (Biological diversity (cetaceans, seals, birds, fish, pelagic and benthic habitats)), D4 Food webs (cetaceans, seals, birds, fish and pelagic habitats), D6 (Sea-floor integrity (pelagic habitats and benthic habitats)) and D7 (Hydrographical conditions).

1042. By encouraging the protection and enhancement of biodiversity these policies support the aim set out in the government's 25 Year Environment Plan to achieve

good environmental status of our seas and to deliver environmental net gain through development. Environmental enhancement is also supported through the National Planning Policy Framework (Chapter 15 Section 170 and 174) and the Marine Policy Statement which details biodiversity's essential role in enhancing quality of life (Section 2.6.1).

Policy NW-BIO-1 Biodiversity

Proposals that enhance the distribution of priority habitats and priority species will be supported.

Proposals that may have significant adverse impacts on the distribution of priority habitats and priority species must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate
d) compensate for significant adverse impacts.

Policy aim

1043. Maintaining the distribution of priority habitats and priority species is important as it reduces habitat fragmentation, species isolation and supports strong, biodiverse communities which in turn provide ecosystem services. NW-BIO-1 maintains the distribution of priority habitats and priority species by ensuring proposals do not significantly adversely affect them. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate, for significant adverse impacts, will not be supported.

1044. NW-BIO-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

1045. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that is subject to management by public authorities.

1046. Proposals whose primary objective is to enhance the distribution of priority habitats and priority species should demonstrate how this will be achieved. Enhancement refers to measures taken which have a positive impact. An example of enhancement could include the removal of hard coastal defence structures in favour of soft engineering which enables habitat roll back.

1047. Where positive impacts have been identified, proposals must also assess adverse impacts in line with relevant legislation. Enhancement is not a substitute for avoidance, minimisation or mitigation measures.

1048. Proposals that have a significant adverse impact on the distribution of priority habitats and priority species must demonstrate that they will, in order of preference, avoid, minimise and mitigate significant adverse impacts on the distribution of priority

habitats and priority species within the north west marine plan areas and include supporting information that is proportionate to the proposal. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) and so on. Actions that can be carried out to avoid, minimise or mitigate significant adverse impacts on the distribution of priority habitats and priority species will be specific to the disturbance under consideration.

1049. Where it is not possible to mitigate significant adverse impacts adequately, as a last resort proposals must demonstrate how they will compensate for significant adverse impacts. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate for significant adverse impacts, will not be supported.

1050. Avoidance of significant adverse impacts could be temporal or spatial, ie the activity could take place in a different area or at a different time to avoid significant adverse impacts on the distribution of priority habitats and priority species.

1051. Minimisation of significant adverse impacts can also be spatial, for example reducing the area of impact therefore reducing the extent of priority habitats priority species distribution that will be significantly adversely impacted. Temporal minimisation may involve activities taking place within the distribution of priority species but when they are less sensitive to impacts, for example outside of breeding seasons.

1052. Mitigation of significant adverse impacts will involve a change to the source of the impact, for example a change in technology adopted to reduce the area of impact.

1053. Compensation will be considered on a case-by-case basis by decision-makers for significant adverse impacts that cannot be avoided, minimised or mitigated. Compensation will only be acceptable when in line with the provision present in primary legislation and regulations.

1054. Off-site compensation may be appropriate in some circumstances, primarily where the compensation benefits the same priority habitat or priority species, for example supporting a different area of the same priority habitat or supporting a behaviour of the same population affected by the proposal.

1055. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

1056. Applicants could refer to Figure 27 and Figure 28 which show priority habitats and habitats of conservation importance respectively to inform their proposals.

Decision-makers

1057. Decision-makers will support proposals that enhance the distribution of priority habitats and priority species in the north west marine plan areas where it complies with other policies in this plan and relevant legislation.

1058. Decision makers will assess if the proposal significantly adversely impacts the distribution of priority habitats and priority species on a case-by-case basis. Decision makers will need to apply the best available evidence and the precautionary principle

when considering the potential significant adverse impacts on the distribution of priority habitats and priority species.

1059. Decision-makers will manage activities that require authorisation, such as energy development or aggregates dredging, through existing assessments that are required under national legislation, including but not limited to Habitats Regulations Assessments, Marine Conservation Zone Assessments and Environmental Impact Assessments. These will identify conditions that need to be placed on a licence or permit.

1060. Figure 27 shows areas of priority habitats and Figure 28 shows habitats of conservation importance to assist the application of this policy.

Policy NW-BIO-2 Biodiversity

Proposals that enhance or facilitate native species or habitat adaptation or connectivity, or native species migration will be supported.

Proposals that may cause significant adverse impacts on native species or habitat adaptation or connectivity, or native species migration must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate
d) compensate for significant adverse impacts.

Policy aim

1061. Competition for space, increased levels of development and predicted effects of climate change can affect the north west marine plan areas habitat and species connectivity, ability to adapt to change and migrate. NW-BIO-2 requires proposals to manage negative effects which may not enable the functioning of healthy, resilient and adaptable marine ecosystems. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate, for significant adverse impacts, will not be supported.

1062. NW-BIO-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

1063. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that is subject to management by public authorities.

1064. Proposals whose primary objective is to enhance native habitat and species adaptation or connectivity and species migration should demonstrate how this will be achieved. Enhancement refers to measures taken which have a positive impact. An example of enhancement could include the maintenance of known habitat corridors important for species migration or movement.

1065. Proposals must demonstrate that they will, in order of preference, avoid, minimise or mitigate any significant adverse impacts on native habitat and species adaptation or connectivity and species migration within the north west marine plan areas. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) and so on. Actions that can be carried out to avoid, minimise or mitigate significant adverse impacts on native habitat and species adaptation or connectivity, species migration will be specific to the disturbance under consideration.

1066. Where it is not possible to mitigate significant adverse impacts adequately, as a last resort proposals must demonstrate how they will compensate for significant adverse impacts. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate for significant adverse impacts, will not be supported.

1067. Avoidance of significant adverse impacts could be temporal or spatial, ie the activity could take place in a different area or at a different time to avoid significant adverse impacts on native habitat and species adaptation or connectivity and species migration.

1068. Minimisation of significant adverse impacts can also be spatial, for example reducing the area of impact therefore reducing the extent of priority habitats priority species distribution that will be significantly adversely impacted. Temporal minimisation may involve activities taking place within the distribution of priority species but when they are less sensitive to impacts, for example outside of breeding seasons.

1069. Mitigation of significant adverse impacts will involve a change to the source of the impact, for example a change in technology adopted to reduce the area of impact.

1070. Compensation will be considered on a case-by-case basis by decision-makers for significant adverse impacts that cannot be avoided, minimised or mitigated. Compensation will only be acceptable when in line with the provision present in primary legislation and regulations.

1071. Off-site compensation may be appropriate in some circumstances, primarily where the compensation promotes the connectivity or ability to adapt of the same habitat or population affected by the proposal.

1072. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

1073. Applicants could refer to Figure 27 and Figure 28 which show priority habitats and habitats of conservation importance respectively to inform their proposals, in addition to Figure 29 and Figure 30 which show areas of seabird density and grey and harbour seal distribution respectively.

Decision-makers

1074. Decision-makers should apply this policy proportionally on proposals that will interact with native species or habitat adaptation or connectivity or native species migration. Determination may be informed by a relevant assessment. An assessment to

determine how a proposal can be beneficial to habitat and species adaptation, migration and connectivity should ensure understanding of habitat types within and adjacent to the area of proposal and ensure understanding of importance of these habitats to species – important species are migratory, breeding or roosting birds, spawning and migratory fish, and mobile species such as marine mammals. Consideration should also be given to the ability for habitats to naturally migrate with changing climate and / or if the proposal could assist habitat and species migration.

1075. Figure 27 and Figure 28 show priority habitats and habitats of conservation importance respectively and Figure 29 and Figure 30 show areas of seabird density and grey and harbour seal distribution respectively to assist the application of this policy.

Policy NW-BIO-3 Biodiversity

Proposals that deliver environmental net gain for coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services will be supported.

Proposals must take account of the space required for coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services, and demonstrate that they will in order of preference:

a) avoid
b) minimise
c) mitigate
d) compensate for net habitat loss and deliver environmental net gain.

Policy aim

1076. In the north west inshore marine plan areas there are numerous important coastal habitats. There is competition for space with these coastal habitats, resulting in coastal squeeze, a process where habitats have decreasing space between rigid coastal structures and rising sea level or coastal erosion. NW-BIO-3 requires proposals to manage their impacts on these habitats to support the functioning of healthy and resilient coastal and intertidal ecosystems. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate, for significant adverse impacts, will not be supported.

1077. Policy NW-BIO-3 applies to intertidal habitats down to mean low water the inshore marine plan area only. The policy aligns with the intended mandatory application of biodiversity net gain in the intertidal area for decisions taken under The Town and Country Planning Act 1990 as set out in the government's consultation on proposals to mandate biodiversity net gain.

How will this policy be implemented?

Proponents

1078. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be

for a new activity or a change to an existing activity that is subject to management by public authorities.

1079. Proposals that enhance coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services should include information demonstrating how this will be achieved. Enhancement refers to measures taken which have a positive impact, for example coastal protection works that enhance fish habitat by creating additional saltmarsh. Where artificial structures are used to recreate habitat, these proposals must be in line with relevant policies.

    Where positive impacts have been identified, proposals must also assess adverse impacts in line with relevant legislation. Enhancement is not a substitute for avoidance, minimisation or mitigation measures.

1080. Proposals must demonstrate that they will, in order of preference, avoid, minimise or mitigate any significant adverse impacts on coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services within the north west marine plan areas. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) and so on. Actions that can be carried out to avoid, minimise or mitigate significant adverse impacts on coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services will be specific to the proposal under consideration. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

1081. Where it is not possible to mitigate significant adverse impacts adequately, as a last resort proposals must demonstrate how they will compensate for significant adverse impacts. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate for significant adverse impacts, will not be supported.

1082. Avoidance of significant adverse impacts could be spatial, ie the activity could take place in a different location to avoid significant adverse impacts on coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services.

1083. Minimisation of significant adverse impacts can also be spatial, for example reducing the area of impact therefore reducing the extent of coastal habitats where important in their own right and / or for ecosystem functioning and provision of ecosystem services that will be significantly adversely impacted.

1084. Mitigation of significant adverse impacts will involve a change to the source of the impact, for example a change in technology adopted to reduce the area of impact.

1085. Compensation will be considered on a case-by-case basis by decision-makers for significant adverse impacts that cannot be avoided, minimised or mitigated. Compensation will only be acceptable when in line with the provision present in primary legislation and regulations.

1086. Off-site compensation may be appropriate in some circumstances, primarily where the compensation promotes coastal habitats where important in their own right and /

or for ecosystem functioning and provision of ecosystem services affected by the proposal.

1087. Compensation strategies that deliver environmental net gain are more likely to be supported. The government's approach to deliver environmental net gain in the marine area is being developed. Delivery of environmental net gain as a condition of this policy should be based on the most up-to-date government guidance. In the absence of guidance there will be no requirement to deliver environmental net gain as a requirement of this policy. The intended mandatory application of biodiversity net gain in the intertidal area for decisions taken under The Town and Country Planning Act 1990, as set out in the government's consultation on proposals to mandate biodiversity net gain, will apply as legislation develops. The way in which this policy is implemented may therefore change over time.

1088. To deliver net gain for intertidal habitats the Department for the Environment, Food and Rural Affairs Biodiversity Metric should be used. The Defra Biodiversity Metric has been used on a voluntary basis since 2012. In 2018 the government consulted on the approach to using the metric, whether it should be included as a mandatory requirement and how the net gain approach could be implemented, measured and monitored. The outcome of this consultation must be acknowledged in proposals.

1089. Applicants could refer to Figure 27 and Figure 28 which show priority habitats and habitats of conservation importance respectively to inform their proposals. Additionally, Figure 31 shows areas of potential habitat creation.

Decision-makers

1090. Decision-makers will support proposals that enhance coastal habitats in their own right and / or for ecosystem functioning and provision of ecosystem services where it complies with other policies in this plan and other relevant legislation.

1091. Decision-makers will assess if the proposal affects coastal habitats in their own right and / or ecosystem functioning and provision of ecosystem services on a case-by case basis. Decision-makers should apply these policies proportionately in respect of proposals that will interact with coastal habitats in their own right and / or ecosystem functioning and provision of ecosystem services. Determination may be informed by a relevant assessment. An assessment to determine how a proposal can be beneficial to coastal habitats should ensure understanding of habitat types within and adjacent to the area of proposal and ensure understanding of importance of these habitats to ecosystem functioning and ecosystem services. Consideration should also be given to the space required for effective function of coastal habitats and / or if the proposal could assist coastal habitat enhancement.

1092. Decision-makers will determine the requirement to deliver net gain on a case-by-case basis in line the most up-to-date government guidance. Where there is no statutory or policy requirement to deliver net gain, there will be no mandatory obligation to deliver net gain under this policy.

1093. Figure 27 and Figure 28 show priority habitats and habitats of conservation importance respectively and Figure 31 shows areas of potential habitat creation to assist with the application of this policy.

Signposting

1094. Legislation which relates to and may support the implementation of these policies includes:

- Climate Change Act 2009
- The Conservation of Habitats and Species Regulations 2017[101]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[102]
- Countryside and Rights of Way Act 2000
- Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- The Marine Strategy Regulations 2010
- Marine Works (Environmental Impact Assessment) Regulations 2007
- Natural Environment and Rural Communities Act 2006
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- Wildlife and Countryside Act 1981

1095. Guidance and other materials which relate to and may support the implementation of these policies include:

- 25 Year Environmental Plan
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services
- Conservation Advice Packages
- Designated sites view
- Features of Conservation Importance (FOCI) identified by Joint Nature Conservation Committee
- National Policy Statements
- OSPAR Convention List of Threatened and / or Declining Species and Habitats
- Section 41 List

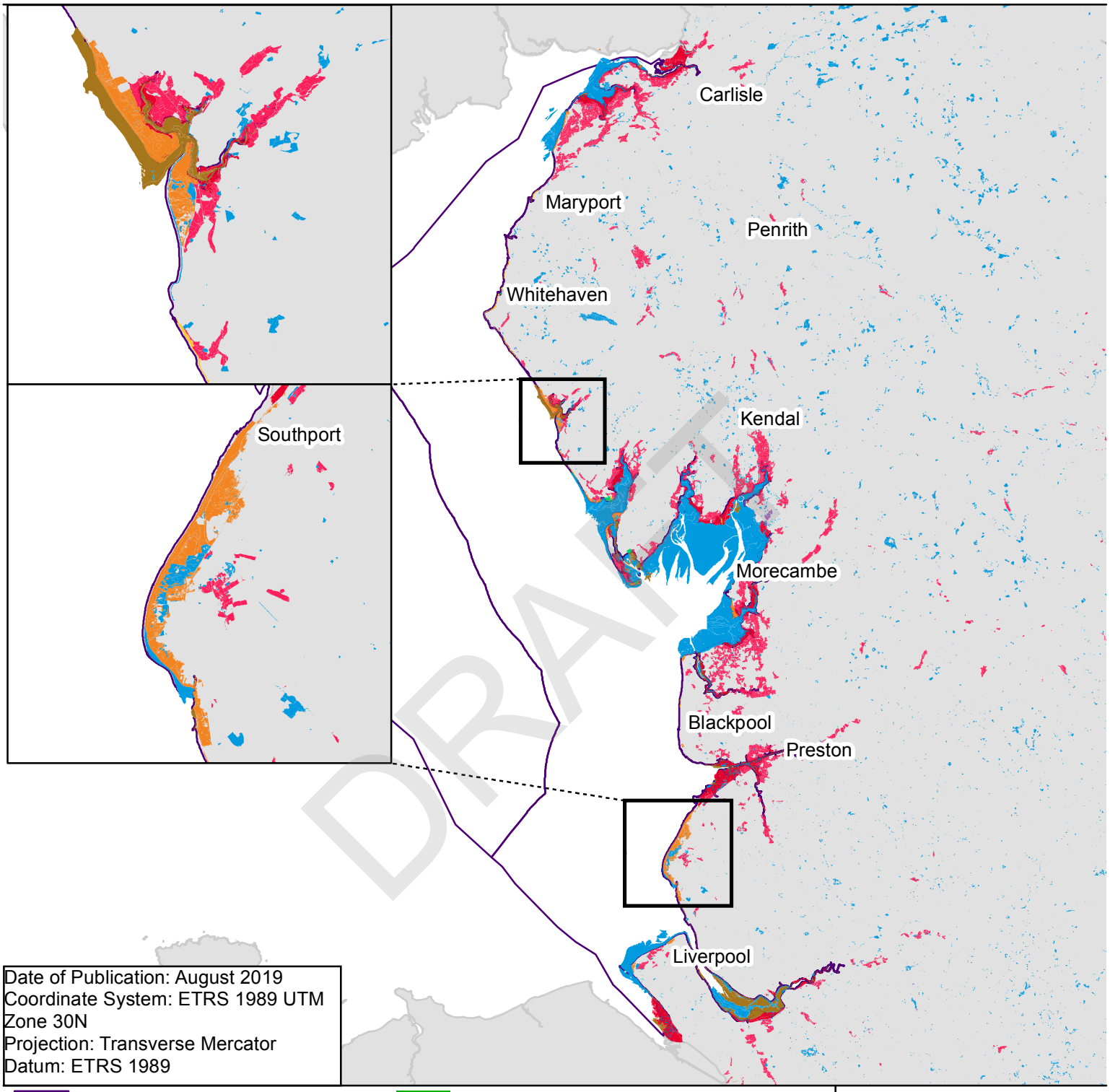
1096. Existing measures which support the implementation of these policies include:

- Estuary Edges: Ecological Design Advice
- River Basin Management Plans
- Shoreline Management Plans

[101] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[102] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Marine Management Organisation

Figure 27 | Priority Habitat Inventory and Seagrass Extent



Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

North West Marine Plan Areas

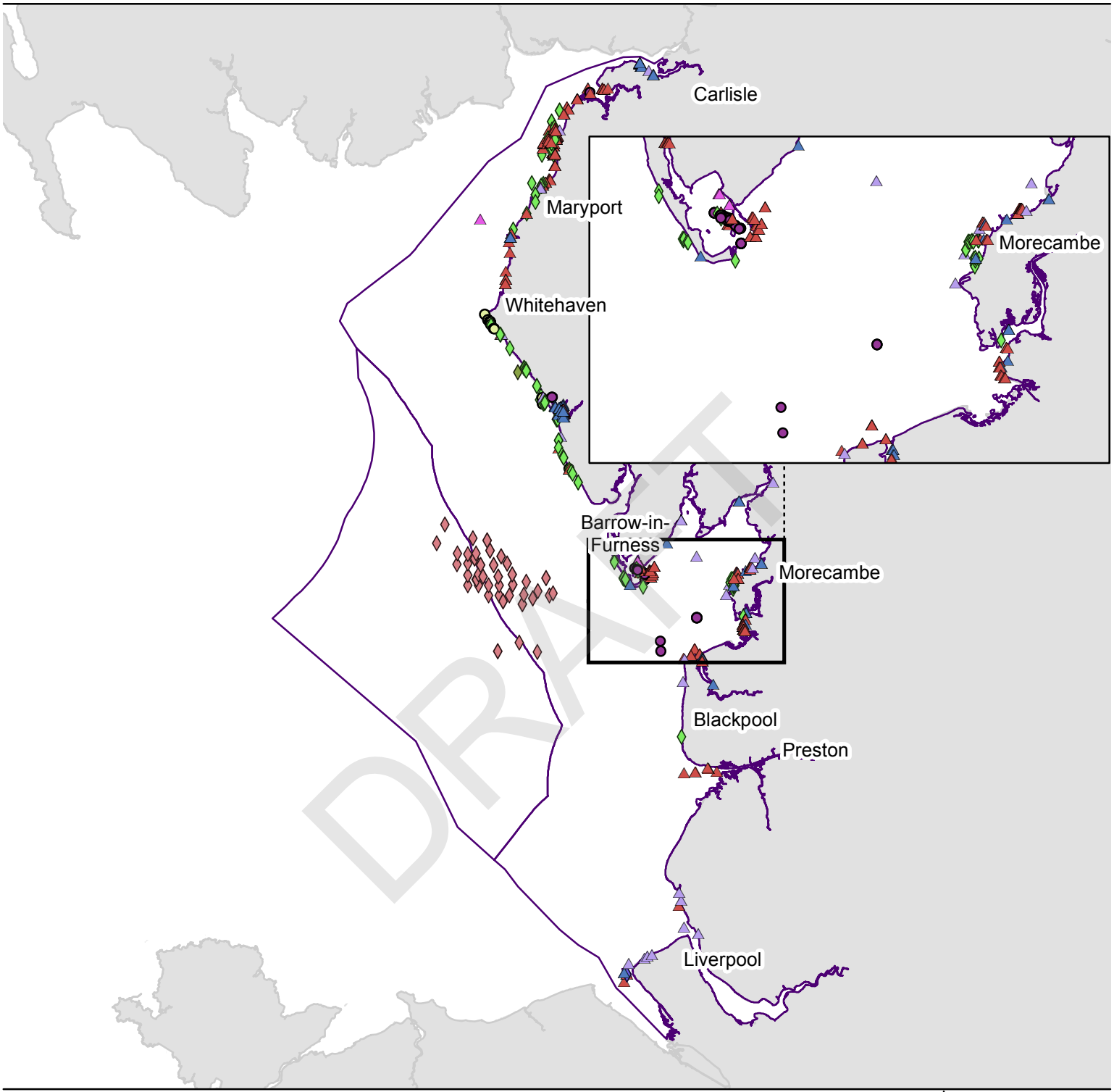
Priority Habitat Inventory

- Coastal and Floodplain Grazing Marsh
- Coastal Saltmarsh
- Coastal Sand Dunes
- Coastal Vegetated Shingle
- Seagrass Extent
- Maritime Cliff and Slope
- Mudflats
- No Main Habitat but Additional Habitats Present
- Reedbeds
- Saline Lagoons

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Marine Management Organisation

Figure 28 | Habitats of Conservation Interest (HOCI)



North W st Marine Plan Areas
Blue Mussel Beds
Cold-Water Coral Reefs
Estuarine Rocky Habitats
File Shell Beds
Fragile Sponge and Anthozoan Communities on Subtidal Rocky Habitats
Honeycomb Worm Reefs
Horse Mussel Beds
Intertidal under Boulder Communities
Littoral Chalk Communities
Maerl Beds
Mud Habitats in Deep Water
Native Oyster Beds
No Value
Peat and Clay Exposures
Ross Worm Reefs
Sabellaria Spinulosa Reefs
Sea Pens and Burrowing Megafauna
Seagrass Beds
Sheltered Muddy Gravels
Subtidal Sands and Gravels
Subtidal Chalk
Subtidal Chalk / Peat and Clay Exposures
Tide-Swept Channels

Indicative map This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

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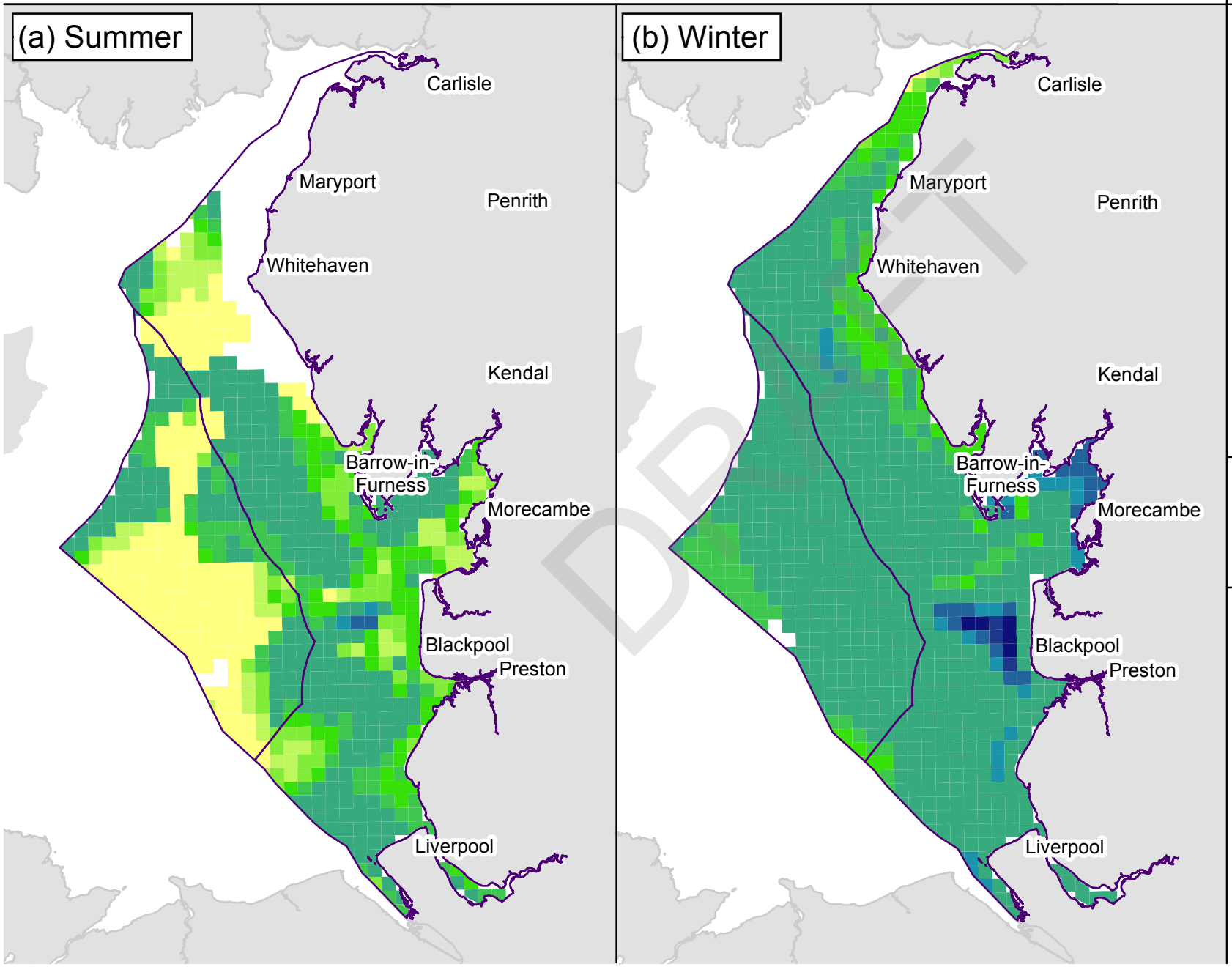
Marine Management Organisation

Figure 29 | Seasonal Seabird Denisty

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.



North West Marine Plan Areas

Total Seabird Denisty (birds per 3km²)

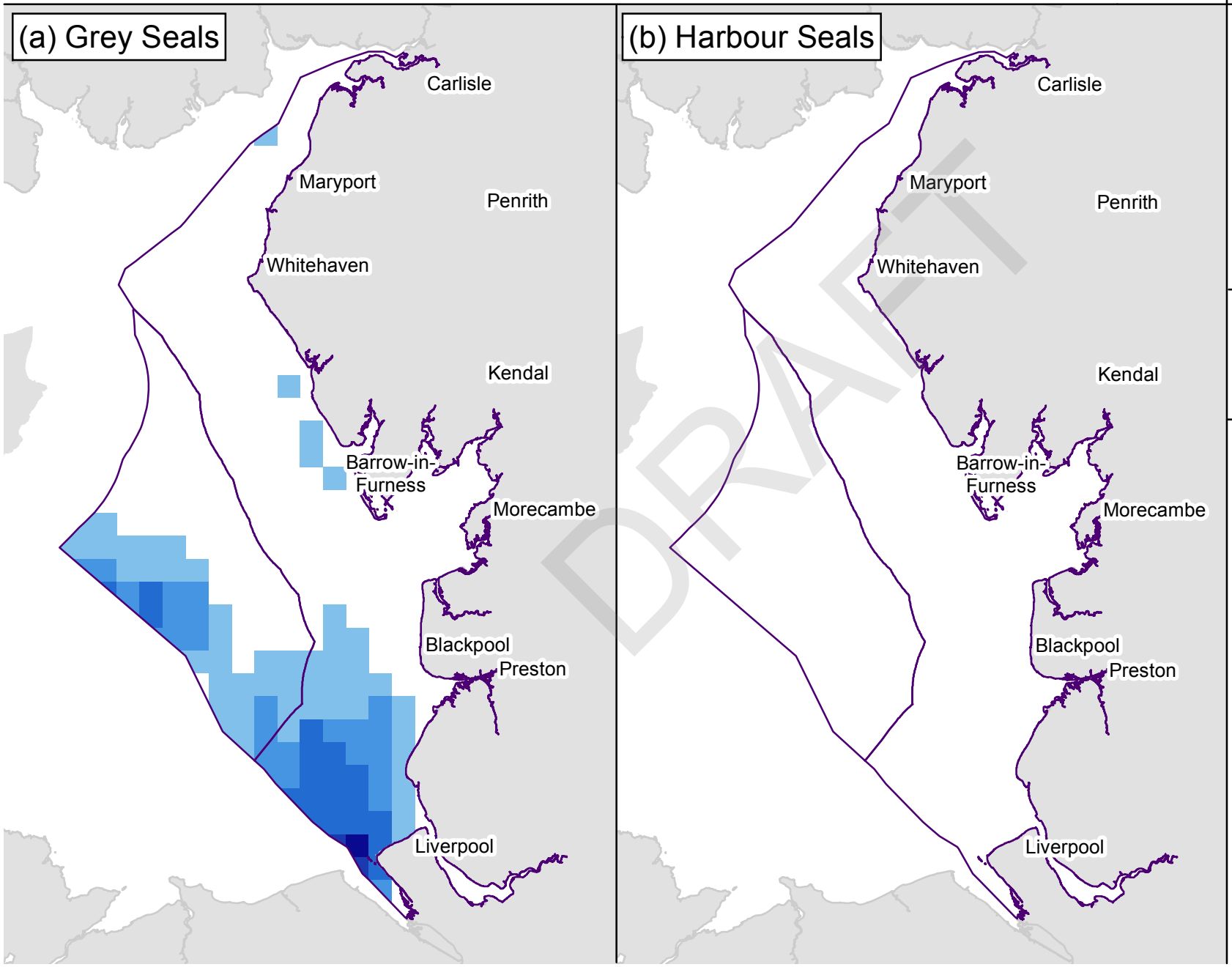
- 0 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 11 - 50
- 51 - 100
- 101 - 250
- 251 - 500
- > 500

Date: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

Marine Management Organisation

Figure 30 | Grey and Harbour Seal Distribution

Indicative map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.



North West Marine Plan Areas

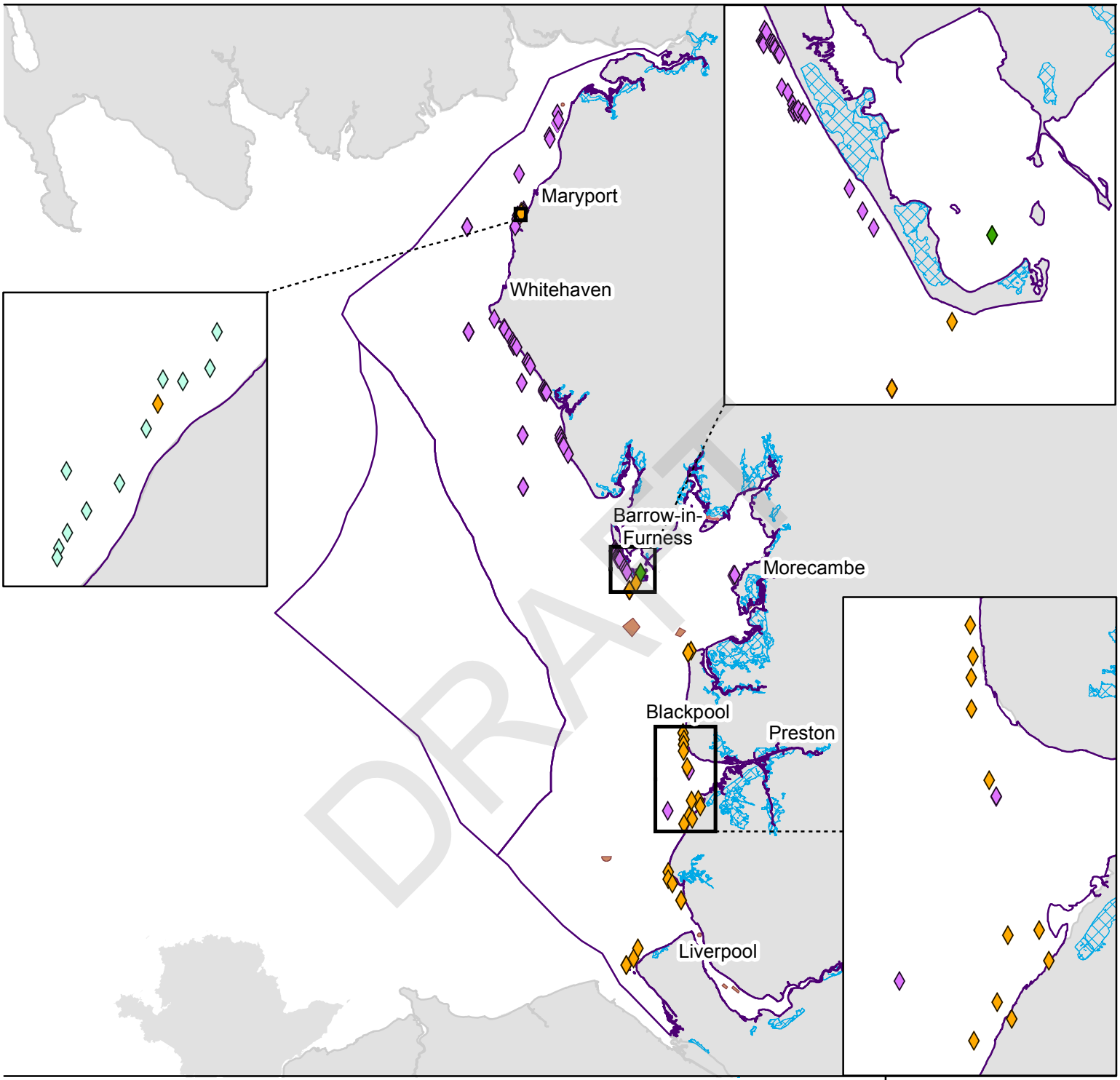
Number of seals

- 1< 5
- 5 < 10
- 10 < 50
- 50 < 100
- > 100

Date: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

Marine Management Organisation

Figure 31 | Location of Significant Sites for Habitat Restoration or Creation



North West Marine Plan Areas

Potential Native Oyster Restoration (Historic and Current Sites)

Potential Sabellaria alveolata Restoration (Historic Sites)

Potential Seagrass Creation Restoration (Historic and Current Sites)

Potential Beneficial use Mud Stretches which may Benefit

Potential Habitat Creation Sites Within the Current Floodplain

Materials Suitable for Mudflat or Saltmarsh Restoration

Policy map
This map is to be used for reference only.
Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

Date of Publication: August 2019
Coordinate System: ETRS 1989 UTM Zone 30N
Projection: Transverse Mercator
Datum: ETRS 1989

5.25 Net gain and natural capital

Policy Code	Policy Wording
NW-NG-1	Proposals should deliver environmental net gain for marine or coastal natural capital assets and services. Proposals that may have significant adverse impacts on marine and coastal natural capital assets and services must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate d) compensate for significant adverse impacts and deliver environmental net gain.

What is net gain and natural capital?

1097. **Net gain** is an evolving approach to development that aims to leave the natural environment in a measurably better state than beforehand.

1098. **Biodiversity net gain** is an approach to development that seeks to leave biodiversity in a better state by protecting habitats and ecological features. The approach to delivering biodiversity net gain in the terrestrial environment, including intertidal areas, is set out in the government's consultation on proposals to mandate biodiversity net gain.

1099. Wider **environmental net gain** is an evolving concept that will expand biodiversity net gain approaches to include wider benefits, such as flood protection, recreation and improved water and air quality. Given the challenges of delivering biodiversity net gain in the marine area, the wider environmental net gain approach will likely be applied.

1100. **Natural capital** is an emerging concept that values the benefits we receive from the natural environment, such as food, recreation, protection, clean air and water. Natural capital assets include all components of the natural environment, including geological elements and functional processes. Natural capital assets deliver a range of services that benefit wildlife and people. The natural capital approach builds on the Ecosystem Approach and Ecosystem Services Approach by determining the value of ecosystem services and the benefits we receive. By valuing these resources and services we can better understand the cost of degradation from human activities, which can help us to apply environmental net gain principles through activities in the marine area.

1101. The approach to identify, value, and consider marine environmental net gain and marine and coastal natural capital in decision-making is developing, with the current focus on building a common and shared knowledge base to enable understanding of marine environments in the context of natural capital assets and associated services. For example, the North Devon Marine Pioneer has developed the first marine natural capital asset and risk register for the North Devon area. The Department for the

Environment, Food and Rural Affairs report Application of the natural capital approach to the marine environment to aid decision-making documents the current level of knowledge on applying the natural capital approach in the marine area. Until the practical detail of a marine natural capital approach is fully understood, the more established ecosystem services approach should be applied.

1102. The Ecosystem Approach and Ecosystem Services Approach are important elements of sustainable development. Ecosystem services are the benefits people obtain from the natural environment. Ecosystem services have been classified by the UK National Ecosystem Approach, see below for specific examples.

Why is net gain and natural capital important?

1103. Delivery of environmental net gain is important to ensure the natural environment is protected and enhance for future generations, and to halt biodiversity decline.

1104. The natural capital approach introduces the valuation of benefits derived from the natural environment, including geological features and functional processes. The approach offers a common measure that allows users to assess the scale of impacts and determine appropriate action needed for mitigation and compensation. Until the practical detail of a marine natural capital approach is fully understood, the more established ecosystem services approach should be applied.

1105. The natural capital of the north west marine plan areas provides a diverse range of ecosystem services and benefits for people, the economy and wildlife. The value chain of these benefits can cross the land sea divide far into the central parts of the country.

1106. **Provisioning services** are the products obtained from the environment such as food provision from marine species such as fish and shellfish. In the north west marine plan areas commercially targeted species include but are not limited to mussels, razor clams, sole and sprat.

1107. **Regulating services** are provided by habitats and ecosystems to regulate natural processes, for example, climate, water purification and flood protection. Saltmarshes, for example in the Duddon and Dee estuaries, provide a natural carbon sequestration service. Climate regulating services can play a vital role for health and well-being, particularly for coastal communities vulnerable to the effects of climate change. Habitats that provide flood protection are particularly important to the north west due to the high number of estuaries which increase the risk of flooding throughout the inshore plan area. Understanding the value of natural capital assets and services which could reduce the risk of coastal erosion in the north west inshore marine plan area could benefit the area.

1108. **Cultural services** in the north west marine plan areas contribute to health and well-being, for example the numerous beaches which encourage people to spend time outdoors and are dependent upon healthy coastal environment to remain attractive.

1109. **Supporting services** underpin all of the other ecosystem services and occur throughout the north west marine plan areas. For example primary production by phytoplankton, seagrasses and seaweeds and nutrient cycling, aided by burrowing

worms in seabed sediments. Functional and resilient ecosystems are considered fundamental to the success of enhancing natural capital assets.

1110. Policy NW-NG-1 contributes to the UK high level marine objectives for living within environmental limits and supports the 25 Year Environment Plan aim to protect and grow natural capital, and support environmental enhancement. NW-NG-1 contributes to the sustainable development aims in the National Planning Policy Framework.

1111. Policy NW-NG-1 will also aid the achievement of Good Environmental Status for Descriptor 1 of the Marine Strategy Part One: UK updated assessment and Good Environmental Status - D1: Biological diversity - cetaceans, seals, birds, fish, pelagic habitats and benthic habitats.

Policy NW-NG-1 Net gain and natural capital

Proposals should deliver environmental net gain for marine or coastal natural capital assets and services.

Proposals that may have significant adverse impacts on marine and coastal natural capital assets and services must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate
d) compensate for significant adverse impacts and deliver environmental net gain.

Policy aim

1112. NW-NG-1 encourages proposals to apply the evolving net gain approach to development that aims to leave the natural environment in a measurably better state than beforehand. The policy also protects marine and coastal natural capital assets and services by ensuring that proposals which are likely to cause harm take measures to prevent, reduce or mitigate significant adverse impacts, with compensation strategies being encouraged to deliver environmental net gain. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate for significant adverse impacts, will not be supported.

1113. Policy NW-NG-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

1114. NW-NG-1 applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that is subject to management by public authorities.

1115. Proposals should include measures to deliver environmental net gain for marine and coastal natural capital assets and the services they provide following government

guidance and relevant legislation[103]. Such measures can include but are not limited to actions that:

- increase ecosystem service provision
- improving natural capital assets
- remove a threat to or prevent the decline of condition of habitats or species
- restoration, improvement, or creation of natural capital assets

1116. The approaches and metrics to define, identify and value marine natural capital assets and services, and to calculate environmental net gain are being developed. For intertidal habitats the Defra Biodiversity Metric is currently being developed and tested. Once adopted the Defra Biodiversity Metric may be used to assess changes in biodiversity value brought about by activities.

1117. Proposals must demonstrate that they will firstly avoid significant adverse impacts on marine and coastal natural capital assets and the services they provide. Significant adverse impacts to a service may still occur even if the asset is not significantly impacted. Where significant adverse impacts cannot be avoided proposals must show how the impacts will be minimised and mitigated. Significant adverse impacts that cannot be mitigated can, as a last resort, be compensated. Proposals that cannot avoid, minimise and mitigate, or as a last resort compensate for significant adverse impacts, will not be supported. Compensation strategies should include measures to deliver environmental net gain in line with government guidance to leave the environment in a measurably better state than before the proposal.

1118. Actions to avoid, minimise and mitigate significant adverse impacts on marine and coastal natural capital assets and the services they provide will be specific to the activities being proposed and the natural capital benefits under consideration.

1119. Avoidance of significant adverse impacts could be temporal or spatial, ie the activity could take place in a different area or at a different time to avoid significant adverse impacts on marine and coastal natural capital assets and services.

1120. Minimisation of significant adverse impacts can also be spatial, for example reducing the area of impact therefore reducing the area of marine and coastal natural capital being significantly adversely impacted. Temporal minimisation may involve activities taking place when the marine and coastal natural capital receptor is present but less sensitive to impacts.

1121. Mitigation of significant adverse impacts will involve a change to the source of the impact, for example a reduction in the number of vessels participating in the activity or a change in technology adopted to reduce the impact.

1122. Compensation for significant adverse impacts on assets and services can be provided as a last resort and must deliver net gain in line with and where required in current legislation and policy.

[103] The most up to date government guidance and legislation must be applied at the time the proposal is determined. The way in which this policy applies may therefore change over time. Emerging guidance and legislation will not be applied retrospectively.

1123. Off-site compensation to deliver biodiversity net gain may be appropriate in exceptional circumstances, for example where compensation supports an area used by, or a behaviour of the population affected by the proposal. It is important to be aware that there is no currently agreed approach to deliver off-site compensation in the marine environment. Proposal specific discussions will be necessary.

1124. Consideration of how off-site compensation might be managed when moving natural capital assets or services from one area to another is important and must be considered on a case-by-case basis with advice from the relevant statutory nature conservation bodies.

1125. Inclusion of this information does not indicate that approval for the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

Decision-makers

1126. Decision-makers should support proposals that deliver environmental net gain for marine or coastal natural capital assets and the services they provide.

1127. Decision-makers will assess if the proposal affects marine and coastal natural capital assets and services on a case-by-case basis. Decision-makers must identify the most up-to-date guidance and seek advice on how to consider marine and coastal natural capital and the requirements to deliver biodiversity or environmental net gain from the statutory nature conservation bodies.

1128. The natural capital approach is a system approach that should be applied to the whole marine area and not just designated areas or species. It is also very reliant on social and economic values relating to the supply chains and flow of services and benefits as well as people's qualitative and quantitative assessments of the natural capital. Where guidance or advice states that it is not possible to assess the impact there will be no further requirements for decision-makers to consider marine and coastal natural capital beyond that which is required by the Ecosystem Approach.

1129. Decision-makers will determine the requirement to apply a natural capital approach and deliver environmental net gain on a case-by-case basis in line with the most up-to-date government guidance. Where there is no statutory or policy requirement to apply the natural capital approach or deliver net gain, there will be no mandatory obligation to implement this policy.

1130. The consideration of marine and coastal natural capital and environmental net gain under policy NW-NG-1 may change as new guidance is issued. New and evolving advice will not be applied retrospectively to activities that have already been consented. Licensing conditions on consented activities can be amended if deemed appropriate.

1131. Policy NW-NG-1 must be applied within the regulatory framework that governs marine protected areas and in line with policy NW-MPA-1.

Signposting

1132. Legislation which relates to and may support the implementation of this policy includes:

- The Conservation of Habitats and Species Regulations 2017[104]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[105]
- Countryside and Rights of Way Act 2000
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- The Marine Strategy Regulations 2010
- Marine Works (Environmental Impact Assessment)Regulations 2007
- The Town and Country Planning (Environmental Impact Assessment) Regulations 2017[106]
- Environmental Assessment of Plans and Programmes Regulations 2004
- Wildlife and Countryside Act 1981

1133. Guidance and other materials which relate to and may support the implementation of this policy include:

- Defra Biodiversity Metric
- 25 Year Environment Plan
- The North Devon Marine Pioneer marine natural capital asset and risk register
- Application of the natural capital approach to the marine environment to aid decision-making
- Natural Capital Committee advice on marine and the 25 Year Environment Plan
- UK Natural Capital: interim review and revised 2020 roadmap
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services
- Conservation Advice Packages
- Delivering a Golden Legacy: a growth strategy for inbound tourism 2012-2020
- Features of Conservation Importance (FOCI) identified by JNCC
- JNCC Ecosystem Approach
- Natural Capital Indicators: for defining and measuring change in natural capital
- Natural England Ecosystem Services Transfer Toolkit
- Section 41 List
- The Marine Life Information Network

1134. Existing measures which support the implementation of these policies include:

[104] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[105] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[106] As amended by The Town and Country Planning and Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2018

- Estuary Edges: Ecological Design Advice
- River Basin Management Plans
- Shoreline Management Plans

5.26 Invasive non-native species

Policy Code	Policy Wording
NW-INNS-1	Proposals that reduce the risk of introduction and / or spread of invasive non-native species should be supported. Proposals must put in place appropriate measures to avoid or minimise significant adverse impacts that would arise through the introduction and transport of invasive non-native species, particularly when: 1) moving equipment, boats or livestock (for example fish or shellfish) from one water body to another 2) introducing structures suitable for settlement of invasive non-native species, or the spread of invasive non-native species known to exist in the area.
NW-INNS-2	Public authorities with functions to manage activities that could potentially introduce, transport or spread invasive non-native species should implement adequate biosecurity measures to avoid or minimise the risk of introducing, transporting or spreading invasive non-native species.

What are invasive non-native species?

1135. Non-native (sometimes referred to as non-indigenous) species are those introduced (for example, by human action) outside of their natural past or present distribution, and includes any part, gametes, seeds, eggs, or propagules of such species which might survive and subsequently reproduce. In many cases non-native species do not cause harm to the local environment or economy. The Great Britain Non-Native Species Secretariat describes invasive non-native species as any non-native species that has the ability to spread, causing damage to the environment, economy, human health or the way we live.

1136. Non-native species can become 'invasive' when they cause significant adverse impacts. For example, the Leathery sea squirt is established from the Clyde in Scotland but is distributed around the coast of England as far as the Humber on the east coast. It attaches to solid surfaces in shallow water, especially in harbours and marinas, but also on wrecks and natural rock. It can smother oysters and mussels, compete for food, and foul boat hulls, buoys, moorings, ropes and harbour and marina infrastructure. Highly invasive species do not always establish or become invasive immediately – there may be a significant lag phase – but once they have, they often reproduce quickly, can adapt quickly to a broad range of situations (such as water quality or food availability), have a diverse gene pool, and / or are associated with human activities. Invasive non-native species threaten biodiversity globally, particularly on islands and other areas where the number of endemic species is higher and the tolerance to invasive species is lower. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) global assessment identified NNS as one of the top 5 direct drivers of

biodiversity loss worldwide. Pathogens, plants, invertebrates and vertebrates are all capable of becoming invasive species.

Why is the management of invasive non-native species important?

1137. There is a high risk of invasive non-native species being introduced and spread within the north west marine plan areas over the period covered by the plan due to climate change and an expected increase in high risk pathways. This risk is further exacerbated in the north west marine plan areas due to the semi-enclosed nature of the Irish Sea and the close proximity to other marine plan areas. The Great Britain Invasive Non-Native Species Framework Strategy and the Marine Strategy encourages a stronger sense of shared responsibility across government, key stakeholder organisations, land managers and the general public for actions and behaviours that will reduce the threats posed by invasive non-native species and the impacts they cause.

1138. The North Western Inshore Fisheries and Conservation Authority Biosecurity Plan reports the following marine invasive non-native species in the north west inshore marine plan area:

- Acorn barnacle
- Chinese mitten crab
- Common cord grass
- Green sea fingers
- Japanese skeleton shrimp
- Leathery sea squirt
- Orange tipped sea-squirt
- Pacific oyster
- Tube worm
- Wakame
- Wireweed

1139. There may be a different assemblage of species present in other parts of the north west marine plan areas, or species yet to be discovered and recorded. The assemblage and geographical range of species may change over the period covered by this plan. Looking at areas beyond the north west marine plan areas could be indicative of the species that may become a problem in the future. The most up-to-date evidence should be used when applying these policies. The National Biodiversity Network Atlas aggregates data from multiple sources and shows were species have been recorded in the UK. The RAPID LIFE project (Reducing and Preventing Invasive Alien Species Dispersal) has produced Regional Invasive Alien Species Management Plans providing tailored recommendations on prevention, early warning, rapid response, eradication and control of invasive species throughout England.

1140. High-risk species that may move into the north west marine plan areas in the future are identified in the North Western Inshore Fisheries and Conservation Authority Biosecurity Plan and in the Solway Firth Partnership report on marine invasive species in the Solway. They are high risk due to their proximity and include:

- Slipper limpet
- Carpet sea squirt
- Asian shore crab
- Killer shrimp
- Zebra mussel

1141. The north west plan areas are a major manufacturing base and key area for UK exports which receives a large amount of shipping traffic. According to the final sea passenger statistics of 2015, produced by the Department for Transport, stated that the total freight traffic by tonnage handled by ports in the north west was around eleven percent of the total of all ports in England with the majority transported through Liverpool and Heysham. There are several international passenger route from Liverpool and numerous commercial shipping routes across the region with international connections. The Port of Barrow is also capable of accommodating large cruise ships. The Superport Project is an integration or port, road, rail and air logistics that will deliver faster, greener global market access for business to and from the northern UK and Ireland via an enlarged deep water container terminal at Liverpool. Increased international shipping could increase the risk of introduction and spread of non-native species.

1142. Invasive non-native species are most likely to establish in areas where activities that are known to introduce and / or spread invasive species occur. Such activities are referred to as pathways of introduction and spread. High risk pathways in the north west marine plan areas include:

- aquaculture (unintentional escape of species, introductions of other species as 'hitch-hikers' when stocking, or conditions become favourable for species establishment)
- aquaculture (intentional release (which may not be legal), unintentional escape of species, introductions of other species as 'hitch-hikers' when stocking, or conditions become favourable for species establishment)
- aquariums (escape of plants and animals)
- coastal protection infrastructure (species can colonise structures)
- commercial and recreational boating (through hull fouling and ballast water)
- commercial and recreational fishing (fouling of gear and equipment)
- dispersal of species/propoagules/spat etc. on marine currents, from areas where they are non-native – eg northern Europe
- ‘hitchhiking’ of species with goods transported for trade
- marine litter and debris (species attached to floating material)
- movement of waste and materials
- naval and commercial freight shipping (through hull fouling and ballast water)
- offshore installations and equipment (species can colonise structures)
- port, harbour and marina infrastructure (species can colonise structures and equipment)
- recreational boats and water activities (fouling of equipment)
- relocation of structures and equipment

1143. Measures are in place to help reduce the risks associated with some of these activities:

- contingency plans are being developed for new arrivals of non-native species
- non-native species Pathway Action Plans are being developed for recreational boating and for angling
- species factsheets and identification sheets are available at http://www.nonnativespecies.org/factsheet/index.cfm and published by the MBA
- the Check, Clean, Dry aquatic biosecurity campaign includes targeted awareness raising materials for the marine environment
- the Great Britain Non-Native Species Secretariat on-line training is available but does not currently focus on the marine environment

1144. The presence of Chinese mitten crab makes estuarine river banks particularly vulnerable due to the burrowing nature of this species. At present there are very few records of the species in the north of the plan areas, with most record occurring south of Formby (National Biodiversity Network Atlas, 2018).

1145. The Futures Analysis for the North West Marine Plan Area suggests that freight and passenger shipping and offshore structures are the highest risk pathways in the north west marine plan areas due to the high level of these activities compared to other pathways like recreational boating and aquaculture.

1146. Coastal marina berths in the inshore north west marine plan area represent four percent of all coastal berths in England (British Marine Federation Tourism, 2014[107]). Charter boats for sea fishing represent two percent of the total across England as a whole (Department for Environment, Food and Rural Affairs, 2012[108]). Although the north west marine plan areas have the smallest number of marina berths and sea fishing charter boats of all of the marine plan areas, it does have a relatively high proportion of cruise passengers with sixteen percent of the English total visiting north west ports. The total level of freight and passenger ships and the relatively well-connected nature of the Irish Sea make the north west marine plan areas particularly vulnerable to invasive non-native species.

1147. The ports at Liverpool and Heysham account for majority of the shipping traffic that occurs in the north west marine plan areas. A large proportion of the shipping in this area follows well-defined routes to and from the ports, but vessels engaged in other activities, such as fishing and leisure, tend to navigate more freely within the area.

1148. The north west marine plan areas has a high number of offshore structures compared to other marine plan areas due to wind energy generation and oil and gas installations which could be used as ‘stepping stones’ for the spread of invasive non-native species. Large areas of the north west marine plan areas are also identified as areas of potential for future oil and gas installation and for wind energy

[107] British Marine Federation Tourism (2014). Economic Benefits of UK Boating Tourism
[108] Department for Environment, Food and Rural Affairs (2012). Sea Angling 2012 – a survey of recreational sea angling activity and economic value in England.

generation. Offshore wind infrastructure can act in the same way and is also present across the plan areas.

1149. The Futures Analysis for the North West Marine Plan Area suggests that aquaculture production in the north west poses a lower risk compared to other marine plan areas based on the expected level of future activity. Although there is potential for expansion of the oyster production sector, this primarily occurs in the south east and south west marine plan areas due to the shorter growing times related to warmer sea temperatures.

1150. Registered aquaculture businesses in the north west marine plan areas produce Native oyster, Pacific oyster, mussel and Manila clam with the main activity off Morecambe Bay in the area between Fleetwood and Barrow-in-Furness. While aquaculture is present in the plan areas, activity is low compared to other marine plan areas.

1151. While the activities above provide high risk pathways for the introduction and / or spread of invasive non-native species, they are also important economic activities for the north west and are promoted through this plan. The risk associated with these activities also makes them particularly vulnerable to the impacts caused by invasive non-native species and highlights the importance of responsible management. Invasive species can have adverse impacts on or outcompete commercially valuable species. They can affect fish and shellfish directly through competition, predation or by bringing disease and parasites, or indirectly by affecting food sources or the availability of habitat. They can also smother vessels and equipment associated with intakes and out falls, marinas, ports, harbours and aquaculture. Control methods, where applied to nuisance species, are fairly ineffective, can be costly, and no non-native marine species has yet been successfully eradicated from British waters.

1152. It is apparent that invasive species also have a damaging impact on the economy. The Great Britain Invasive Non-Native Species Strategy has stated that invasive non-native species have an annual cost of £1.7 billion to the British economy.

1153. Invasive species can also cause significant adverse impacts on local biodiversity, making ecosystems less resilient to change. Through lack of natural predators, competition for space, food or other factors, non-native species can impact local food webs, replace or prey on native species in the area, or introduce diseases to a local system, to which native species are not resistant. The north west marine plan areas support a diverse range of internationally significant habitats and species which are potentially vulnerable to the introduction of invasive non-native species. A Natural England Commissioned Report Investigating the Impacts of Marine Invasive Non-Native Species (NECR223) found that Morecambe Bay Special Area of Conservation and Morecambe Bay Special Protection Area support a number of habitats that are susceptible to the colonisation of invasive non-native species.

1154. The Convention on Biological Diversity acknowledges invasive non-native species as one of the most significant threats to marine biodiversity, especially in light of climate change and increasing global trade, transport and tourism. This threat is recognised by a wide range of international and domestic legislation.

1155. Due to the difficulties in managing invasive non-native species once they establish, particularly in the marine area, the Great Britain Invasive Non-Native Species Framework Strategy promotes the importance of prevention, and of early detection and rapid eradication before the species can become established. The Convention on Biological Diversity details prevention, detection/surveillance and control/eradication as the three main ways of dealing with invasive species, with prevention given the highest priority. The government's 25 Year Environment Plan commits to continuing to implement the GB INNS Strategy, highlighting the importance of biosecurity, early pre-emptive action, and the development of action plans for all high-priority pathways of introduction. The Wildlife and Countryside Act 1981 also includes measures to prevent the introduction or spread of non-native species. The Invasive Alien Species (Enforcement and Permitting) Order 2019 imposes strict restrictions on a list of species of concern which have been risk-assessed and whose impacts justify concerted action.

1156. The Marine Strategy Part One: UK updated Assessment and Good Environmental Status lists invasive non-native species (referred to as invasive non-indigenous species) as a descriptor of environmental health. NW-INNS-1 and NW-INNS-2 can support the implementation of the Marine Strategy by ensuring proposals reduce the risk of introduction and spread of invasive non-native species through reducing the risk of pathways and promoting the management of high risk pathways and vectors.

1157. The Marine Strategy Part Three: UK programme of measures recognises that marine planning will make a positive contribution towards the achievement of Good Environmental Status and has the potential to contribute to all descriptors, including Descriptor 2 – non-indigenous species. Due to the expected increased risk and impacts caused by invasive non-native species policies NW-INNS-1 and NW-INNS-2 will contribute towards the prevention of further introduction and spread caused by human activities.

Policy NW-INNS-1

Proposals that reduce the risk of introduction and / or spread of invasive non-native species should be supported.

Proposals must put in place appropriate measures to avoid or minimise significant adverse impacts that would arise through the introduction and transport of invasive non-native species, particularly when:

1) moving equipment, boats or livestock (for example fish or shellfish) from one water body to another
2) introducing structures suitable for settlement of invasive non-native species, or the spread of invasive non-native species known to exist in the area.

Policy aim

1158. The north west marine plan areas are particularly busy and as a result, there is a high risk of introducing or spreading invasive non-native species which may damage the marine area and harm populations of native flora and fauna. NW-INNS-1 aims to avoid or minimise damage to the marine area from the introduction or transport of

invasive non-native species and will only support proposals that attempt to avoid or minimise the risk of the planned activities introducing or spreading invasive non-native species.

1159. NW-INNS-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

1160. This policy applies throughout the north west marine plan areas. In applying this policy the term adjacent is taken as to be close by, by the side of, or bordering on the marine plan area.

1161. The distribution of many invasive non-native species is currently limited by water temperature (Marine Climate Change Impacts Partnership: Science Review), but species are spreading and becoming established through a combination of climate change, migration and human introduction.

1162. Aquaculture sites, together with the locations of ports, harbours, marinas and slipways in the north west inshore marine plan area can be found on the Explore Marine Plans digital service. Maps showing recreational and commercial vessel activity are also available, along with areas of current and potential offshore wind, oil and gas activities.

Proponents

1163. Proposals that reduce the risk of introduction and / or spread of non-native species should include information demonstrating how this will be achieved.

1164. Proposals related to high risk pathways must demonstrate how they will avoid or minimise significant adverse impacts on the marine areas from the introduction and transport of non-native species, or the spread of invasive non-native species known to exist in the area. Avoiding or minimising the introduction and spread of non-native species should be achieved through improved management of high risk pathways and the development of action plans.

1165. Proposals must identify non-native species that are at risk of colonising or spreading, as a result of that proposal, and the pathways that cause the greatest risk.

1166. Examples of how to avoid the risk of introduction, transportation and / or spread of invasive non-native species include, but are not limited to:

- cleaning boats and equipment (for example. aquaculture cages, fouled buoys and lines) before transporting them from one water body to another
- maintaining boat hulls clear of fouling organisms, particularly when moving to and from different areas

1167. Examples of how to minimise the risk of introduction, transportation and / or spread of invasive non-native species include, but are not limited to:

- biosecurity action planning, implementation and monitoring during the operational stages of a proposal

- cleaning and drying recreational gear (for example dive and fishing gear) after use minimising the amount of vessel traffic to offshore platforms (check clean dry campaign)
- providing freshwater wash-down facilities in new marinas, clubs and training centres with appropriate training facilities

1168. A marine licence is not needed to deposit into the marine area a substance removed from that part of the hull of a vessel which is normally submerged, subject to the condition that the removal of the substance is undertaken by hand, using only a soft cloth, a sponge, the bristles of a soft brush, or sandpaper with grit size of at least P2000 (Article 27A of the Marine Licensing (Exempted Activities) Order 2011). A marine licence is required under Section 66 of the Marine and Coastal Access Act 2009 to deposit any other substance into the marine environment from cleaning vessels or equipment . More heavily fouled vessels should be removed from the water for cleaning.

1169. The UK Marine Pathways Project and the Reducing and Preventing Invasive Alien Species Dispersal LIFE project have developed guidance and best practice to reduce the risk of introduction and spread of invasive non-native species, and a number of training tools on biosecurity planning. Marine Biosecurity Planning Guidance for Wales and England (Natural England and Natural Resources Wales 2015) also provides guidance for writing of biosecurity plans.

1170. Proposals are required to be in compliance with relevant legislation and regulations including the Aquatic Animal Health (England and Wales) Regulations 2009, Marine and Coastal Access Act 2009, Water Environment Regulations Assessment, Habitats Regulations Assessment, Environmental Impact Assessment, the Ballast Water Management Convention and National Policy Statements where they apply.

1171. Proposals considered under NW-BIO-2 which incorporate features that enhance or facilitate natural habitat and species adaptation, migration and connectivity must comply with policy NW-INNS-1.

Decision-makers

1172. Public authorities should support proposals that reduce the risk of introduction and / or spread of non-native species within the north west marine plan areas and adjacent plan areas where they comply with other policies in this plan and other relevant legislation such as relevant local and regional biosecurity plans.

1173. Public authorities must assess new proposals for measures to avoid or minimise significant adverse impacts on the marine area from the introduction and transport of non-native species, or the spread of invasive non-native species known to exist in the area.

1174. Appropriate statutory bodies should work closely together to ensure the risk of invasive non-native species in the marine environment is avoided and nationally and internationally important species and habitats are protected against adverse impacts.

1175. Monitoring and management of invasive non-native species in the north west marine plan areas poses significant challenges due to the length of the coastline and the different ways in which species are introduced and spread. Public authorities should use the best available up-to-date evidence and apply the precautionary principle as a way of approaching decision-making in the absence of full scientific certainty in line with the Convention on Biological Diversity Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that threaten Ecosystems, Habitats or Species.

1176. Non-native species records can be submitted directly to iRecord or through local schemes and societies. The Carpet Sea Squirt is an Alert species and should be reported to the Carpet Sea Squirt recording page.

Policy NW-INNS-2

Public authorities with functions to manage activities that could potentially introduce, transport or spread invasive non-native species should implement adequate biosecurity measures to avoid or minimise the risk of introducing, transporting or spreading invasive non-native species.

Policy aim

1177. NW-INNS-2 aims to avoid or minimise the introduction and spread of marine invasive non-native species by encouraging public authorities with relevant functions throughout the north west to implement adequate biosecurity measures, increase awareness of invasive non-native species and provide suitable guidance to help reduce their adverse impacts to the marine environment.

1178. NW-INNS-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

1179. This policy applies throughout the north west marine plan areas. In applying this policy the term adjacent is taken as to be close by, by the side of, or bordering on the marine plan area.

1180. The distribution of many invasive non-native species is currently limited by water temperature (Marine Climate Change Impacts Partnership: Science Review), but species are spreading and becoming established through a combination of climate change, migration and human introduction.

1181. Aquaculture sites, together with the locations of ports, harbours, marinas and slipways in the north west inshore marine plan area can be found on the Explore Marine Plans digital service. Maps showing recreational and commercial vessel activity are also available, along with areas of current and potential offshore wind, oil and gas activities.

Decision-makers

1182. Public authorities with access management functions, particularly ports, harbours and those responsible for marinas, as well as ports and harbours that are not classified as public authorities, are encouraged to raise awareness of invasive non-

native species prevention amongst users. This should include awareness of the potential for artificial structures to become platforms or 'stepping stones' that can facilitate the settlement or spread of non-native species, and the potential risks from moving equipment between water bodies. Measures could also include the promotion of codes of conduct such as the Check, Clean Dry campaign for recreational anglers and boat users, or the development of biosecurity management plans and monitoring.

1183. Measures could also include:

- INNS biosecurity training, compliance with biosecurity measures and recording of INNS species found within all contracts.
- the development of biosecurity management plans and monitoring;
- the promotion of codes of conduct such as the Check, Clean Dry campaign for recreational anglers and boat users

1184. Authorities responsible for shoreline management should also be aware of the risks posed by the placement of hard structures on the coastline and build in adequate biosecurity measures during strategic planning. Biosecurity measures associated with individual coastal protection schemes are addressed by policy NW-INNS-1.

1185. The UK Marine Pathways Project and the Reducing and Preventing Invasive Alien Species Dispersal LIFE project have developed guidance and best practice to reduce the risk of introduction and spread of invasive non-native species, and a number of training tools on biosecurity planning. Marine Biosecurity Planning Guidance for Wales and England (Natural England and Natural Resources Wales 2015) has been produced, to guide the writing of biosecurity plans.

1186. Monitoring and management of invasive non-native species in the north west marine plan areas poses significant challenges due to the length of the coastline and the different ways in which species are introduced and spread. The Convention on Biological Diversity Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that threaten Ecosystems, Habitats or Species discuss the precautionary principle as a way of approaching decision-making in the absence of full scientific certainty.

1187. Public authorities should apply this policy to functions that are capable of effecting adjacent marine plan areas due to the transboundary nature of invasive non-native species.

Signposting

1188. Legislation which relates to and may support the implementation of these policies includes:

- Aquatic Animal Health (England and Wales) Regulations 2009
- The Conservation of Habitats and Species Regulations 2017[109]

[109] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

- The Conservation of Offshore Marine Habitats and Species Regulations 2017110
- The Marine Licensing (Exempted Activities) Order 2011
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- Wildlife and Countryside Act 1981

1189. Guidance and other materials which relate to and may support the implementation of these policies include:

- Check, Clean, Dry biosecurity for boat and kayak users
- Biosecurity guidance for ribs, sports boats and outboard engines
- Clearing the Waters for All
- The Great Britain Invasive Non-Native Species Framework Strategy
- Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that threaten Ecosystems, Habitats or Species the Great Britain Invasive Non-Native Species Framework Strategy
- International Convention for the Control and Management of Ships' Ballast Water and Sediments
- Marine Biosecurity Planning guidance and tools
- Marine online assessment tool (MOAT)
- Marine Strategy Part One: UK updated assessment and good environmental status
- Marine Strategy Part Three: UK programme of measures
- Regional Invasive Alien Species Management Plans

[110] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

5.27 Disturbance

Policy Code	Policy Wording
NW-DIST-1	Proposals that may have significant adverse impacts on highly mobile species through disturbance or displacement must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts

What is disturbance?

1190. **Disturbance** is when human activity causes a behavioural response in an individual or group of individuals, causing the expenditure of extra time or energy to avoid the human activity or output. The expenditure of extra energy affects the ability of individuals to survive, breed, rear or nurture young which can affect the local distribution or abundance of the species. Displacement and avoidance are types of behavioural response. Highly mobile species are displaced such that they cannot access habitats essential to their success, such as foraging areas or breeding grounds.

1191. This policy applies to visual and physical disturbance. Visual disturbance occurs when highly mobile species respond to visual stimuli including but not limited to the presence of vessels, vehicles, people or lighting on offshore structures. Physical disturbance occurs when highly mobile species respond to non-visual stimuli such as electromagnetic fields or underwater noise. These types of disturbance can cause displacement of highly mobile species. Disturbance resulting from underwater noise is discussed in detail in NW-UWN-1 and NW-UWN-2.

1192. **Highly mobile species** are those that range over large distances and include fish, sharks, birds, marine mammals and turtles. Individuals are often part of more widespread international populations and may only be present in the north west marine plan areas on a seasonal basis or for part of their life cycle.

1193. Highly mobile species occurring in the north west marine plan areas include fish, sharks, birds, marine mammals and turtles. The Natural Environment and Rural Communities Act 2006 (Section 41), requires the Secretary of State to publish a list of habitats and species of principal importance for the conservation of biodiversity in England. The Section 41 list and Features of Conservation Importance should be used to prioritise species when applying this policy.

Why is disturbance important?

1194. Highly mobile species are resident or regular visitors to waters of the north west marine plan areas. Many highly mobile species are charismatic and bring value for tourism and recreation through wildlife watching and employment at reserves or businesses, while appropriate recreation and tourism may bring opportunities for protection of species through increased public awareness and additional funding.

1195. The north west marine plan areas are seasonally home to breeding, migrating and over wintering seabirds, waders and waterfowl. Grey seals occur in the marine and coastal areas of the north west marine plan area. There are several haul out sites including in the Dee and Solway estuaries and Walney Island which is home to a breeding population of grey seals. Basking sharks are a seasonal visitor to the north west marine plan areas as neighbouring Isle of Man is a global hotspot for the species. Low densities of basking shark occur in the north west marine plan areas from May to August. Leatherback turtles are the only turtle species which occur in colder waters such as in the UK. This species are most likely to be sighted in the summer months in the north west marine plan areas albeit at low numbers. Atlantic salmon migrate through the north west marine plan area as they move to and from their river habitats as adults and juveniles respectively. Similarly, adult sea lamprey and river lamprey occur in the north west marine plan areas but little is known about their at sea distribution.

1196. The north west marine plan areas are also home to breeding, migrating and over wintering waterbirds and seabirds as well as fish spawning and nursery grounds. Seabirds moult annually at sea, during which time they are flightless and movement is restricted. Disturbance can affect the viability of a population or habitat and continued disturbance can result in a loss of habitat or a reduction in population resilience.

1197. Tourism and recreation is important to the economy in the north west marine plan areas and is highlighted here because they can exert significant disturbance, as noted in the Marine Policy Statement. Tourism and recreational activities are often not subject to the same statutory regulation compared to other types of proposals as many activities can take place without having to apply for an authorisation or consent. Disturbance induced from tourism and recreation activities is rarely deliberate in the UK and other mechanisms are required to manage these impacts.

1198. Tourism that could interact with highly mobile species in the north west marine plan areas includes birdwatching for example at St Bees Head and sailing, for example in Morecambe Bay. Disturbance from tourism and recreation can be particularly problematic for water birds and marine mammals. In localised areas there are also issues of collision with recreational sea users.

1199. Marine development, including coastal development and offshore industry is important to the north west economy and promotes investment in the region. Offshore energy, renewable and gas, is an important activity in the north west marine plan areas. Such developments have the potential to disturb mobile species if not managed appropriately, for example from disturbance caused by construction, the physical presence of vessels and lighting.

1200. The Marine Strategy Regulations 2010 require the UK to take necessary measures to achieve or maintain Good Environmental Status of our seas by 31 December 2020 through the development of a Marine Strategy. The objective of the Marine Strategy reflects the UK's vision for clean, healthy, safe, productive and biologically diverse oceans and seas. The updated Marine Strategy Part One includes 11 qualitative descriptors to assess progress towards Good Environmental Status. NW-

DIST-1 supports the delivery the objectives associated with two descriptors directly: D1 (Biological diversity (cetaceans, seals, birds, fish, pelagic and benthic habitats)) and D4 Food webs (cetaceans, seals, birds, fish and pelagic habitats).

1201. The 25 Year Environment Plan from the Department for Environment, Food and Rural Affairs commits to achieving good environmental status in our seas while allowing marine industries to thrive.

Policy NW-DIST-1

Proposals that may have significant adverse impacts on highly mobile species through disturbance or displacement must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts.

Policy aim

1202. Disturbance and displacement from activities, including those that do not require authorisation such as tourism and recreation, has caused declines in some highly mobile species. NW-DIST-1 reduces the effects of disturbance and displacement by requiring proposals to manage impacts, highlighting good practice and encouraging strategic management of un-authorised activities. NW-DIST-1 enables people to appreciate the marine biodiversity and act responsibly to protect and recover populations of rare, vulnerable and valued species. Proposals that cannot, avoid, minimise and mitigate for significant adverse impacts will not be supported.

1203. Policy NW-DIST-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

Proponents

1204. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal can be for a new activity or a change to an existing activity that is subject to management by public authorities.

1205. Proposals that have a significant adverse impact on highly mobile species must demonstrate that they will, in order of preference, avoid, minimise or mitigate significant adverse impacts on highly mobile species caused by disturbance within the north west marine plan areas and include supporting information that is proportionate to the proposal. Proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) and so on. Actions that can be carried out to avoid, minimise or mitigate significant adverse impacts on highly mobile species will be specific to the disturbance under consideration. Proposals that cannot avoid, minimise and mitigate significant adverse impacts will not be supported.

1206. Avoidance of significant adverse impacts could be temporal or spatial. The activity could take place in a different area or at a different time to avoid significant adverse

impacts on highly mobile species, for example when the species is not present in the area because of migration.

1207. Minimisation of significant adverse impacts can also be temporal or spatial. The activity could take place over a smaller area than originally planned and thereby impact fewer highly mobile species. Temporal minimisation could be if activities take place when highly mobile species are present but less sensitive to disturbance, for example outside of breeding seasons.

1208. Mitigation of significant adverse impacts will involve a change to the source of the impact, for example a reduction in the number of vessels participating in the activity or a change in technology adopted to reduce the impact.

1209. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

Decision-makers

1210. Decision makers will assess if the proposal disturbs highly mobile species on a case-by-case basis. Decision makers will need to apply the best available evidence and the precautionary principle when considering the potential significant adverse impacts on highly mobile species.

1211. Decision-makers will manage activities that require authorisation, such as energy development or aggregates dredging, through existing assessments that are required under national legislation, including but not limited to Habitats Regulations Assessments, Marine Conservation Zone Assessments and Environmental Impact Assessments. These will identify conditions that need to be placed on a licence or permit.

1212. Figure 29 and Figure 30 which show areas of seabird density and grey and harbour seal distribution respectively.

Signposting

1213. Legislation which relates to and may support the implementation of this policy includes:

- The Conservation of Habitats and Species Regulations 2017[111]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[112]
- Conservation of Seals Act 1970
- Dockyards Ports Regulation Act 1865
- Environmental Protection Act 1990
- Harbours Act 1964

[111] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[112] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
- Natural Environment and Rural Communities Act 2006
- The Environmental Assessment of Plans and Programmes Regulations 2004
- The Marine Strategy Regulations 2010
- The Marine Works (Environmental Impact Assessment) Regulations 2007
- The Town and Country Planning Act 1990
- Wildlife and Countryside Act 1981

1214. Guidance and other materials which relate to and may support the implementation of this policy include:

- Conservation Advice Packages
- Joint Nature Conservation Committee Offshore Industry Advice
- Guidelines for minimising the risk of injury to marine mammals from geophysical surveys
- Guidelines for minimising the risk of injury to marine mammals from using explosives
- Offshore renewable energy
- Guidelines to reduce the impact of offshore installations lighting on birds in the OSPAR maritime area – Agreement 2015/08e
- OSPAR Convention Intermediate Assessment 2017 Biodiversity Status
- Seals Guidance
- Standard Marking Schedule for Offshore Installations
- The deliberate disturbance of marine European Protected Species
- Wildlife Licences - Guidance

1215. Existing measures which support the implementation of this policy include:

- The Green Blue Guides
- The United Kingdom Turtle Code

5.28 Underwater noise

Policy Code	Policy Wording
NW-UWN-1	Proposals that result in the generation of impulsive sound must contribute data to the UK Marine Noise Registry as per any currently agreed requirements. Public authorities must take account of any currently agreed targets under the Marine Strategy Part One Descriptor 11.
NW-UWN-2	Proposals that result in the generation of impulsive or non-impulsive noise must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse impacts on highly mobile species d) if it is not possible to mitigate significant adverse impacts, proposals must state the case for proceeding.

What is underwater noise?

1216. All marine activities introduce sound into the marine environment to a greater or lesser extent. Noise generally refers to anthropogenic sound. Underwater noise occurs either as non-impulsive noise (including ambient noise, shipping propulsion and operational vibrational noise) or as discrete impulsive sounds (including detonation of explosives, seismic surveys, geophysical surveys, construction piling and acoustic deterrent devices).

1217. There are natural sources of sound in the marine environment, such as communication between marine fauna, wave action and lightening, but growing human use has increased background non-impulsive noise levels over the last 50 years. While impulsive sound has also increased, less is known about its temporal and spatial distribution and the magnitude of trends.

1218. Noise is often used to describe unwanted anthropogenic sound, however, for the purposes of this plan, sound and noise are deemed to have the same meaning and therefore are used interchangeably.

Why is underwater noise important?

1219. Impulsive sound is a consideration in the north-west plan area as there are oil and gas licensed blocks throughout both the inshore and offshore north west marine plan areas, this means that there is an increased likelihood of seismic surveys being undertaken to explore the geology of the seabed. The offshore area also features large military exercise and practice areas run by the Ministry of Defence which have the potential to cause underwater noise through, for example, detonation of explosives. Offshore wind resource areas are distributed throughout the inshore and offshore areas indicating the potential for further development in the future. Offshore energy projects often involve geophysical surveys, piling and detonation of unexploded ordnance which emit impulsive noise. There is also the potential for future port and harbour development along the north west coast within the inshore plan area with association construction noise

1220. The north west marine plan areas have significant shipping traffic activity including ferry routes across the Irish Sea and fishing activity as well as some recreational activity and all of this contributes to non-impulsive noise generation.

1221. Underwater noise resulting from activities and developments can have adverse impacts on marine life and is a growing concern. Chronic noise disturbance has the potential to result in long-term negative impacts particularly for highly mobile species including fish, birds, marine mammals and turtles[113]. Noise impacts may include masking communication, disruption of navigational ability, impaired hunting ability and disorientation. At higher levels, noise may change behaviour resulting in avoidance of areas including important feeding and breeding areas or present chronic stress. Impulsive sounds may also cause temporary or permanent hearing damage to individuals and at high intensities can result in death. Marine noise has the potential to mask biologically relevant signals; it can lead to a variety of behavioural reactions, affect hearing organs and injure or even kill marine life (Marine Policy Statement (2.6.3)).

1222. In UK law The Marine Strategy Regulations 2010 set out the requirements for Good Environmental Status in UK waters. The management of underwater noise is a key component of this. The government has published a Marine Strategy that sets how this will achieve or maintain Good Environmental Status in UK waters. The Marine Strategy Part Three: UK programme of measures recognises that marine planning will make a positive contribution towards the achievement of Good Environmental Status including underwater noise. Regulations, such as those mentioned above, which begin to address underwater noise in this way**,** reflects a growing concern over the increase of noise generated by human activity in the marine environment. Considerable uncertainty exists around the spatial and temporal elements of noise as well as the magnitude of it and resulting impacts.

1223. The noise registry aims to monitor man-made impulsive noise to quantify the pressure on the environment by making available an overview of relevant impulsive sound sources, throughout the year. This in turn will aid in the definition of a baseline level for impulsive noise in UK waters and ensure pressures are managed effectively.

1224. Management of noise and its sources can also bring additional benefits, for example making the human working environment less dangerous and improving the efficiency, integrity and life of vessels and structures.[114]

[113] As set out in the Marine Strategy Part Three: UK programme of measures
[114] As set out in the Marine Strategy Part Three: UK programme of measures

Policy NW-UWN-1 Underwater Noise

Proposals that result in the generation of impulsive sound must contribute data to the UK Marine Noise Registry as per any currently agreed requirements.

Public authorities must take account of any currently agreed targets under the Marine Strategy Part One Descriptor 11.

Policy aim

1225. Impulsive sounds can have an adverse effect on marine life and human enjoyment of marine areas. NW-UWN-1 supports the established noise registry to determine baselines, levels of impulsive sound and management options through the recording and assessment of the distribution and timing of impulsive sound sources in the marine environment. This will enable effective marine management and protection of biodiversity or viable populations of species.

1226. NW-UWN-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

1227. Implementation of NW-UWN-1 will ensure that proposals that result in the generation of impulsive sound contribute data to the Marine Noise Registry.

1228. The Marine Strategy outlines the measures that contribute to the achievement and maintenance of good environmental status in UK seas by 2020. It sets a target 'to establish a noise registry' to 'record, assess, and manage the distribution and timing of anthropogenic sound sources'. The contribution of data to the Marine Noise Registry on impulsive noise will help determine current baseline levels of impulsive noise, including providing the spatial and temporal distribution of impulsive noise generating activities.

Proponents

1229. Proposals must provide information to the Marine Noise Registry on the projected noise generated from the proposed activity prior to it taking place. Proposals must define expected noise types, levels and dates, considering all stages of the development and the Marine Noise Registry provides guidance and signposting at each stage of data input. Following the completion of the activity, data for the actual noise generated may be contributed in line with the requirements of the consenting regime under which the proposals are approved, or on a voluntary basis where no consenting process is currently in place. Regulatory bodies will detail specific requirements during the consenting process. For example, it is a condition of the consent issued by the Department for Business, Energy and Industrial Strategy for any geological survey undertaken by the oil, gas and carbon capture and storage sectors that, following completion of the survey, survey logs and a close out report must be submitted and this data informs the Noise Registry.

Decision-makers

1230. Decision-makers must take account of any currently agreed targets under the Marine Strategy Part One Descriptor 11 and ensure any proposals being consented are in line with these targets before providing any authorisation.

Policy NW-UWN-2 Underwater Noise

Proposals that result in the generation of impulsive or non-impulsive noise must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse impacts on highly mobile species
d) if it is not possible to mitigate significant adverse impacts, proposals must state the case for proceeding.

Policy aim

1231. Underwater noise levels have increased with marine space use. Noise can affect highly mobile species, including causing chronic stress and death at higher intensities. NW-UWN-2 supports management of underwater noise, requiring proposals to take appropriate noise reduction actions. NW-UWN-2 enables clear and proportionate regulation to make sure marine activity respects environmental limits and protects biodiversity.

1232. NW-UWN-2 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

1233. Implementation of NW-UWN-2 will help make sure that the collective pressures created by underwater noise are considered in line with the Marine Strategy and The Marine Strategy Regulations 2010.

Proponents

1234. Proposals must demonstrate that they will, in order of preference, avoid, minimise or mitigate significant adverse impacts of underwater noise on highly mobile species - proposals cannot proceed to (b) unless they have first demonstrated why they cannot meet (a) and so on throughout the hierarchy.

1235. Where it is not possible to mitigate, proposals must state the case for proceeding including how the proposal supports the North West Marine Plan vision, objectives and other plan policies. Inclusion of this information does not indicate that approval of the proposal will follow by default. That will also depend on other material considerations to be taken into account by the decision-maker which may include, for example, other plans.

1236. For impulsive noise, measures could include:

- avoid – eliminating noise at source through use of different methods.
- minimise – controlling noise at source, for example using alternative quieter approaches like drilling foundations instead of piling and the use of marine

mammal observers or passive acoustic monitoring to ensure no sensitive species are nearby prior to the start of noise generation. Not generating impulsive noise generating during sensitive periods (such as breeding, rearing, hibernation, migration)
- mitigate – soft start piling allowing sensitive species to avoid the area or attenuation measures, for example bubble curtains or pile collars

1237. For non-impulsive noise, these measures could include:

- avoid – eliminate some vessel traffic through consolidation of services or routes
- minimise – design specifications to reduce operational vibration (for example, in vessels or infrastructure) or imposing speed restrictions in sites of sensitivity that reduce noise generated
- mitigation – use attenuation measures, for example acoustic baffles

1238. Proposals should use best available evidence and, where knowledge gaps exist, use expert judgement and create internal guidance for noise management.

1239. Where protected species are involved, the case for proceeding must be based on the requirements set out in relevant legislation and regulations. For example, when interest features of European sites are involved the case for proceeding must be based on a) imperative reasons of overriding public interest (IROPI) and b) no alternatives to delivering the objectives of the project.

Decision-makers

1240. In determining the proposal, decision-makers will take account of a range of relevant considerations including compliance with legislation and regulations and potential impacts highlighted in project level assessments. Decision-makers should be aware that in some cases noise is used as a mitigation measure for other pressures, for example the use of acoustic deterrents in some fisheries to reduce bycatch.

1241. Responsibility for regulation of noise resides with the licensing authority. For example the Department for Business, Energy and Industrial Strategy regulate noise associated with oil and gas activities and carbon capture and storage. The Marine Management Organisation regulates noise for marine licences and deemed marine licences including renewable energy.

1242. Decision-makers should use best available evidence and, where knowledge gaps exist, expert judgement.

Signposting

1243. Legislation which relates to and may support the implementation of these policies includes:

- Environmental Protection Act 1990
- Marine Strategy Part Three: UK programme of measures
- The Environmental Assessment of Plans and Programmes Regulations 2004
- The Marine Works (Environmental Impact Assessment) Regulations 2007

- The Marine Strategy Regulations 2010
- Wildlife and Countryside Act 1981

1244. Guidance and other materials which relate to and may support the implementation of these policies include:

- JNCC piling guidelines
- JNCC seismic guidelines
- Managing underwater noise in European waters (JNCC)
- Marine Noise Registry

Promoting good governance

5.29 Cumulative effects

Policy Code	Policy Wording
NW-CE-1	Proposals which may have adverse cumulative effects with other existing, authorised or reasonably foreseeable proposals must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate significant adverse cumulative and / or in-combination effects.

What are cumulative effects?

1245. **Cumulative effects** are the combined, similar, effects that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the current proposal. Cumulative effects may extend beyond the geographical site boundaries of proposals. Cumulative effects are made up of additive effects (the magnitude of the combined effects equal the sum of the individual effects) and synergistic effects (combined effects lead to an increased effect, greater than the individual effects).

1246. **In-combination effects** refer to the, differing, additive or synergistic effect from multiple projects or activities on a single **receptor** (environmental or social). In-combination assessment ensures holistic protection by preventing many different projects or activities causing minor adverse impacts alone, but having a significant overall adverse impact to a **receptor**.

1247. The terms “cumulative” and “in-combination” can be considered interchangeable (ie describe the overall impact on single or multiple receptors from single or multiple pressures). ‘In-combination’ could be considered a type of ‘cumulative’. The term ‘in-combination effects’ is particularly used in the context of Habitats Regulations Assessment.

1248. **Effect** is distinct from i**mpact**. An impact occurs only when a pressure is present and acts on a receptor that is sensitive to that pressure. A cumulative impact refers to the combined impact of such pressures over time in the marine area.

1249. Environmental legislation, such as The Conservation of Habitats and Species Regulations 2017[115] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[116] refer to ‘in-combination effects’ which is commonly understood to mean the same environmental receptor being impacted in different ways from one or more schemes. For example, an infrastructure project and a dredging scheme may occur on or around a biogenic reef. The infrastructure project may remove parts of the reef whilst the dredge projects may increase suspended sediments which

[115] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[116] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

have the potential to smother the reef. Individually, these activities may not significantly impact the feature however, together, they could cause a significant adverse impact to the overall condition of the reef.

1250. The Marine Works (Environmental Impact Assessment) Regulations 2007 describes 'cumulative effects' as similar impacts from multiple schemes on the same environmental receptor. For example, multiple offshore wind farms piling at the same time could cause significant disturbance or injury to marine mammals. One or two piling events happening at the same time may not breach the animals' hearing thresholds but many events occurring simultaneously may disturb or injure individuals.

1251. Cumulative effects can impact environmental and social receptors. For example one development may not devalue the intrinsic natural beauty of a designated area, such as an Area of Outstanding Natural Beauty, however, several developments may significantly impact the visual aspect of the area. In addition, cumulative and / or in-combination effects can be a risk in terms of coastal protection and / or sea defences. Small individual interventions could link up over time to form a more major intervention, which could potentially impact on natural erosion rates, cause beach draw-down or create linear transfer of wave energy, thereby enhancing flood risk in a across boundaries.

1252. Cumulative effects can arise from a range of pressures, such as, increases in underwater noise, pollution and marine litter and disturbance or damage to the seabed. Cumulative effects can occur both spatially and temporally. The effect of such pressures and whether or not they have an impact will depend on the sensitivity of the local area that is affected.

Why are cumulative effects important?

1253. The north west is important for energy production, via discrete gas reserves, nuclear power and more recently through renewable energy production and there are extensive MOD firing areas. The high amount of marine activity means that this area is particularly at risk to cumulative and in-combination effects.

1254. The north west marine plan areas contains and is adjacent to many sites of significant social and environmental importance. Sites such as, but not limited to, Morecambe Bay, Lake District, the calcareous dunes at Sandscale and Haverigg Haws, the cities of Liverpool and Blackpool, areas of shoreline management plans and coastal change management areas can all be negatively impacted as a result of adverse cumulative effects.

1255. Specific activities and sectors can be subject to cumulative effects. The accumulation of proposals in certain locations can disrupt fishery activity. For instance, the combination of presence of structures at sea or on the sea floor, closed areas resulting from other uses, and loss of access through transit restrictions may accumulate and reduce or prevent access for fisheries. Consequently, the consideration of the co-location of activities is important when attempting to reduce cumulative effects.

1256. Coastal and marine habitats of the north west marine plan areas consist of intertidal sand and mudflats such as those in Duddon Estuary. This protected area supports invertebrate populations and is very important for the large numbers of overwintering wildfowl and waders on the site. Furthermore, the subtidal sand and mud ecosystems of West and Walney Marine Conservation Zone contains threatened sea-pens and burrowing megafauna communities. It is important to protect areas such as these from adverse cumulative and in-combination effects particularly in areas of high activity and development where cumulative effects are amplified. In accordance with the Marine Policy Statement and the 25 Year Environment Plan it is vital that biodiversity is maintained in order to ensure that resources are sustained in a productive state for use in future as well as achieving protection of nature for its intrinsic value.

1257. Singular activities analysed in isolation may have little to no impact upon marine areas. However, the cumulative pressure of multiple activities within or adjacent to marine areas can threaten the maintenance and restoration of favourable conservation status. This policy intends to ensure that cumulative effects are considered in the application and decision making process. Even small scale proposals could induce a tipping point where cumulative effects become critically detrimental.

1258. Compared to terrestrial environments, cumulative effects can be exaggerated in the marine area due to the lack of physical boundaries. Therefore, it is important for any marine proposal to proactively avoid, minimise or mitigate significant negative cumulative effects to prevent wide ranging negative impacts to the environment both within and adjacent to the north west marine plan areas.

1259. As the north west offshore marine plan areas share a border with the Welsh National Marine Plan, Scotland's National Marine Plan and the Isle of Man Marine Plan area, it is even more important to consider cumulative effects at boundary limits and encourage cross-border planning.

1260. As set out in the Marine Policy Statement (2.3.1.6 and 2.3.2.1), marine plans should contribute to considering cumulative impacts, for example 'Marine plans should ... identify how the potential impacts of activities will be managed, including cumulative effects' and 'when considering the potential benefits and adverse effects, decision-makers should also take into account any multiple and cumulative impacts of proposals, in the light of other projects and activities'.

1261. The Marine Strategy Regulations 2010 require the UK to take account of cumulative effects when conducting their assessments of Good Environmental Status.

1262. The Marine Strategy Part One in 2012 noted that improving the evaluation of the cumulative effects of human activities on marine ecosystems was an important priority to ensure that the best possible evidence supports management decisions.

Policy NW-CE-1

Proposals which may have adverse cumulative effects with other existing, authorised or reasonably foreseeable proposals must demonstrate that they will, in order of preference:

a) avoid
b) minimise
c) mitigate significant adverse cumulative and / or in-combination effects**.**

Policy aim

1263. Whilst cumulative effects are considered in relevant assessments and decision-making, the increasing use of the marine area reinforces the need to consider and address cumulative effects, in line with the aims set out in the Marine Policy Statement. In conjunction with and in support of other relevant north west plan policies, this policy is intended to ensure relevant effects, including those that may seem less significant in their own right, are taken account of and addressed. In doing so, the policy will help to ensure that the cumulative effect on the wider environment of the north west marine area and other relevant receptors is effectively managed.

1264. Policy NW-CE-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

1265. Cumulative and in-combination effects can occur anywhere throughout the north west marine plan areas but may be more pronounced in areas of high marine activity. The Explore Marine Plans digital service should be consulted to identify local habitats and species in areas that could be at risk to cumulative effects.

Proponents

1266. Proposals must demonstrate that they have considered the cumulative and in-combination effects they may have on the north west marine plan areas. Proposals that are likely to have significant cumulative or in combination impacts on the north west marine areas must demonstrate that they will, in order of preference, avoid, minimise or mitigate any significant adverse cumulative or in-combination effects. Proposals cannot proceed to (b - minimise) unless they have first demonstrated why they cannot meet (a - avoid). Proposals cannot proceed to (c – mitigate) unless they have first demonstrated why they cannot meet (b). For example:

- avoid – through alternative locations
- minimise – minimising the size of structures or the amount of time work is undertaken to make sure natural processes can continue
- mitigate – innovative engineering design, sediment bypassing to avoid sediment loss or reductions to the overall size and scope of a project

1267. Proposals must consider the cumulative and in-combination effects of past, present and reasonably foreseeable projects (proposals where the appropriate decision has been made, eg a lease or licence granted, but the proposal has yet to be put into practice, eg a development that has yet to be built) and implement measures to restrict and / or prevent the accumulation or intensification of significant adverse

impacts (social or environmental). Information to help inform these considerations can be found on The Explore Marine Plans digital service and the Marine Licence Public Register.

1268. Proposers must provide adequate assessment of their effects, they must clearly illustrate the negative and / or positive cumulative and in-combination effects that the project will have.

1269. When considering environmental cumulative and in-combination effects, proposals should consider other projects or activities likely to negatively affect habitats and species. Proposals must consider the natural pressures upon the marine environment where possible, in addition to the proposed activity and any current and forecasted future use of the area. Consideration needs to be given to the short and long term cumulative and / or in-combination effects of these activities upon marine species and habitats. Proposals should provide consideration of their impact in combination with other projects on all habitats and species whether they are designated or not. It is important to note that where evidence is not available there may still be habitats and species that are sensitive or of conservation concern. Proposals may require additional, more specific evidence.

1270. Proposals should consider how cumulative effects, as a result of the proposed project, will impact on the Welsh National Marine Plan, Scotland's National Marine Plan, the future Northern Irish Marine Plan area, Isle of Man Marine Plan, as well as local terrestrial plans.

1271. Proposals should identify and provide information on how cumulative and in-combination effects, as a result of the proposed project, will impact on neighbouring plan areas. As proposals provide information on cumulative and in-combination effects, issues may be mapped on the Explore Marine Plans digital service providing baseline data on cumulative effects that can be considered in future proposals. In addition, an evidence base can then be developed to record and track shifting baselines of cumulative effects.

Decision-makers

1272. Public authorities should work together with relevant statutory nature conservation bodies to review guidance on cumulative effects, and ensure that current and future guidance is accessible.

1273. Decision makers should fully assess current and reasonably foreseeable use of the marine plan areas and consider the short and long term cumulative and / or in-combination effects of these activities upon the marine area. Information to help inform these decisions can be found on the Explore Marine Plans digital service and the Marine Licence Public Register.

1274. In examining and determining applications for Nationally Significant Infrastructure Projects, examining authorities must have regard to this policy.

Signposting

1275. Legislation which relates to and may support the implementation of this policy includes:

- Energy Act 2016
- Environmental Protection Act 1990
- Marine Works (Environmental Impact Assessment) Regulations 2007
- Planning Act 2008
- The Conservation of Habitats and Species Regulations 2017[117]
- The Conservation of Offshore Marine Habitats and Species Regulations 2017[118]
- The Environmental Assessment of Plans and Programmes Regulations 2004
- The Marine Strategy Regulations 2010
- The Offshore Petroleum Production and Pipelines (Assessment of Environmental Effects) Regulations 1999
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
- Wildlife and Countryside Act 1981

1276. Guidance and other materials which relate to and may support the implementation of this policy include:

- Development of a generic framework for informing Cumulative Impact Assessments (CIA) related to Marine Protected Areas through evaluation of best practice
- Explore Marine Plans digital service
- Marine Strategy Part One: UK updated assessment and good environmental status
- National Planning Policy Framework
- National Policy Statements for Energy Infrastructure

[117] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

[118] As amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

5.30 Cross-border co-operation

Policy Code	Policy Wording
NW-CBC-1	Proposals must consider cross-border impacts throughout the lifetime of the proposed activity. Proposals that impact upon one or more marine plan areas or impact upon terrestrial environments must show evidence of the relevant public authorities (including other countries) being consulted and responses considered.

What is cross-border cooperation?

1277. **Cross-border matters** are those physical, environmental, social and / or economic matters where there is a significant interaction between what occurs in the north west marine areas and the bordering terrestrial environment or marine plan areas. These include significant adverse or positive impacts on the terrestrial environment or bordering marine plan areas that are caused by activities or decisions made in the north west marine plan areas.

1278. The north west marine plan areas share a border with Scotland, the Isle of Man and Wales. It is important to ensure cross-border impacts are minimised across UK and international borders.

Why is cross-border co-operation important?

1279. Alignment of marine planning with other planning, regulation and management that affects the use of the marine area and its resources is important in order to manage pressures, further environmental health and achieve sustainable development across the coastal area of the north west plan areas.

1280. Integration between terrestrial and marine planning and between management systems across plan boundaries should provide more consistency, for example in the management of ecosystems such as the Ravenglass, Wyre and Mersey estuaries as a single system. Conflicting decisions between decision-makers working in different planning systems could have significant adverse impacts in these areas, leading to failure for one or more authorities to reach their plan objectives. Similarly it is important that north west marine plan areas proposals that could have significant positive effects on the land and on adjacent marine plan areas inform the relevant authority so that they may optimise this positive opportunity.

1281. The north west inshore marine plan area shares a border with 21 local planning authorities and one national park authority. There is an overlap in authority between the low mean water spring mark and the high mean water spring mark. The overlap in jurisdiction means that decisions made regarding activities or development in this intertidal zone can have adverse impacts upon the plan objectives of the reciprocal authorities. Additionally, activities that occur wholly below the low mean water spring mark or wholly above the high mean water spring mark can have adverse impacts upon the reciprocal area and thus it is important for public authorities to consult with

all authorities who may be affected by an authorisation or enforcement decision. The Coastal Concordat provides a framework to assist in the co-ordination of the processes that exist for the consent of coastal developments in England.

1282. The Marine Policy Statement notes the commitment and requirement to co-ordinate marine planning across administrative boundaries and to sit alongside existing terrestrial planning regimes. The National Planning Policy Framework states: 'In coastal areas, planning policies and decisions should take account of the UK Marine Policy Statement and marine plans. Integrated Coastal Zone Management should be pursued across local authority and land/sea boundaries, to ensure effective alignment of the terrestrial and marine planning regimes'. An example of cross border co-operation is the proposed development of a subsea fibre-optic cable infrastructure network in the Irish Sea that will connect the Republic of Ireland to mainland England and Europe via Dublin and Blackpool and incorporate a branching unit to include the Isle of Man.

Policy NW-CBC-1

Proposals must consider cross-border impacts throughout the lifetime of the proposed activity.

Proposals that impact upon one or more marine plan area or impact upon terrestrial environments must show evidence of the relevant public authorities (including other countries) being consulted and responses considered.

Policy aim

1283. NW-CBC-1 requires a considered approach to enhance cross-border co-operation between the terrestrial and marine planning systems in the north west plan areas, the neighbouring countries of Scotland, the Isle of Man and Wales.

1284. Policy NW-CBC-1 applies to the inshore and offshore marine plan areas.

How will this policy be implemented?

1285. Decisions or activities must be made with due regard to the vision and objectives of all adjacent planning areas, both marine and terrestrial, to ensure activities and development within the north west marine plan areas do not cause direct or indirect impacts to these neighbouring areas and vice versa.

1286. Alignment of marine planning will be important to manage coastal change and sustainability. Inter-organisational consultation and sharing of information is determined by this policy to ensure effective use of the marine environment to create sustainable development and infrastructure that best benefits the physical, economic and social environment of the coastline and adjacent areas. For example, a decision causing displacement of activities to an adjacent plan area could increase adverse impacts upon the environment or conflicts between sectors in the adjacent plan area.

1287. The north west marine plan areas shares a marine border with the following:

- Scottish national marine plan area
- the Isle of Man

- Wales

Proponents

1288. This policy applies to any organisation or individual putting forward a proposal including, but not restricted to, those applying for an authorisation. A proposal (construction, operation and decommissioning) can be for a new activity or a change to an existing activity that is subject to management by public authorities.

1289. Applicants with proposals that occur below the high mean water spring mark should consider the terrestrial environment upon the marine plan area including economic, social and environmental impacts.

1290. Applicants with proposals that occur in the north west marine plan areas should consider the cross-border impacts upon adjacent marine plan areas and the terrestrial environment including economic, social and environmental impacts.

1291. In accordance with the Marine and Coastal Access Act 2009 (Section 58(3)), proposals within the north west marine plan areas and within a terrestrial area that has a coast or tidal river should consider all marine plan policies and not take any policy within the plan in isolation. In the context of cross-border considerations, proponents should consider if marine plans other than the North West Marine Plan are relevant (in accordance with the Marine and Coastal Access Act 2009 (Section 59)).

1292. Applicants will provide evidence of consultations conducted with the different sectors, and with local and international authorities, bordering the north west plan areas affected by the proposed development and will make the evidence available to decision makers. This evidence may take the form of, but not be limited to, meeting minutes, consultation and survey reports that are available in the public domain (for example, forming part of an application to a public authority).

Decision-makers

1293. Local planning authorities should consider the cross-border impacts of any activity affecting the north west marine plan areas; they should consider all the policies in the North West Marine Plan and any other relevant marine plans to ensure that decisions do not cause significant adverse impacts between terrestrial and marine plan areas and with bordering authorities of Scotland, the Isle of Man and Wales. These impacts include decisions or local plan policies that would result in economic decline, a reduction in social benefit or detrimental impacts upon the marine environment. Development, adoption and use of the Coastal Concordat, shoreline management plans and coastal change management areas, aligned with this policy, will aid the management of these cross-border effects.

1294. In accordance with the Localism Act 2011, marine planning and licensing authorities should consider the cross-border impacts of marine developments upon the area above the mean high water spring mark; they should consider the relevant local plan(s) in their decision making to ensure that marine based activities do not conflict with the policies, objectives and vision of terrestrial local plans and neighbourhood plans.

1295. Decision makers must consult with relevant bordering authorities when developing plans or making decisions that may impact bordering plan areas. Public authority decisions and plans should be compliant with the relevant local development plans.

1296. Decision makers should also consider non-statutory plans and strategies in plan making and decision making and allow for integration of policies where relevant to the local area. For example, shoreline management plans and estuary management plans.

1297. Local authorities, when considering terrestrial development, will consult terrestrial planning policy and development plan documents which already include policies addressing coastal and estuarine planning, but they will need to consider marine policy guidance and the two will complement each other to ensure liaison between respective responsible authorities for terrestrial and marine planning, including in plan development, implementation and review stages. This will help ensure, for example, that developments in the marine environment are supported by the appropriate infrastructure on land and reflected in terrestrial development plans and vice versa.

1298. Local authorities, similarly will need to consider marine policy guidance to support the mutual co-operation of sharing the evidence base and data where relevant and appropriate so as to achieve consistency in the data used in plan making and decisions. When developing or reviewing regional marine plans and coastal change management policies, local and public authorities should consider relevant statutory and non-statutory plans or strategies to allow for integration of policies of local relevance. Sharing of data between plan authorities and cross-border and the timely development of marine plans for any area will assist in managing cross-border impacts.

1299. Figure 32 is a map of the north west plan areas and all other areas that border it. These are Scotland, the Isle of Man and Wales.

1300. There is an overlap in authority between the north west inshore marine plan area and the terrestrial local authorities. The overlap in authority is due to the marine plans extending to the mean high water spring mark and terrestrial planning authority extending to the mean low water spring mark. The following terrestrial local planning authorities relevant to NW-CBC-1 are:

- Allerdale
- Barrow-in-Furness
- Blackpool
- Carlisle
- Cheshire West and Chester
- Chorley
- Copeland
- Cumbria
- Fylde
- Halton
- Lake District National Park Authority

- Lancashire
- Lancaster
- Liverpool
- Preston
- Sefton
- South Lakeland
- South Ribble
- Warrington
- West Lancashire
- Wirral
- Wyre

1301. Figure 32 is a map of district, unitary and county authority areas in the north west marine plan area.

Signposting

1302. Legislation which relates to and may support the implementation of this policy include:

- Localism Act 2011

1303. Guidance and other materials which relate to and may support the implementation of this policy include:

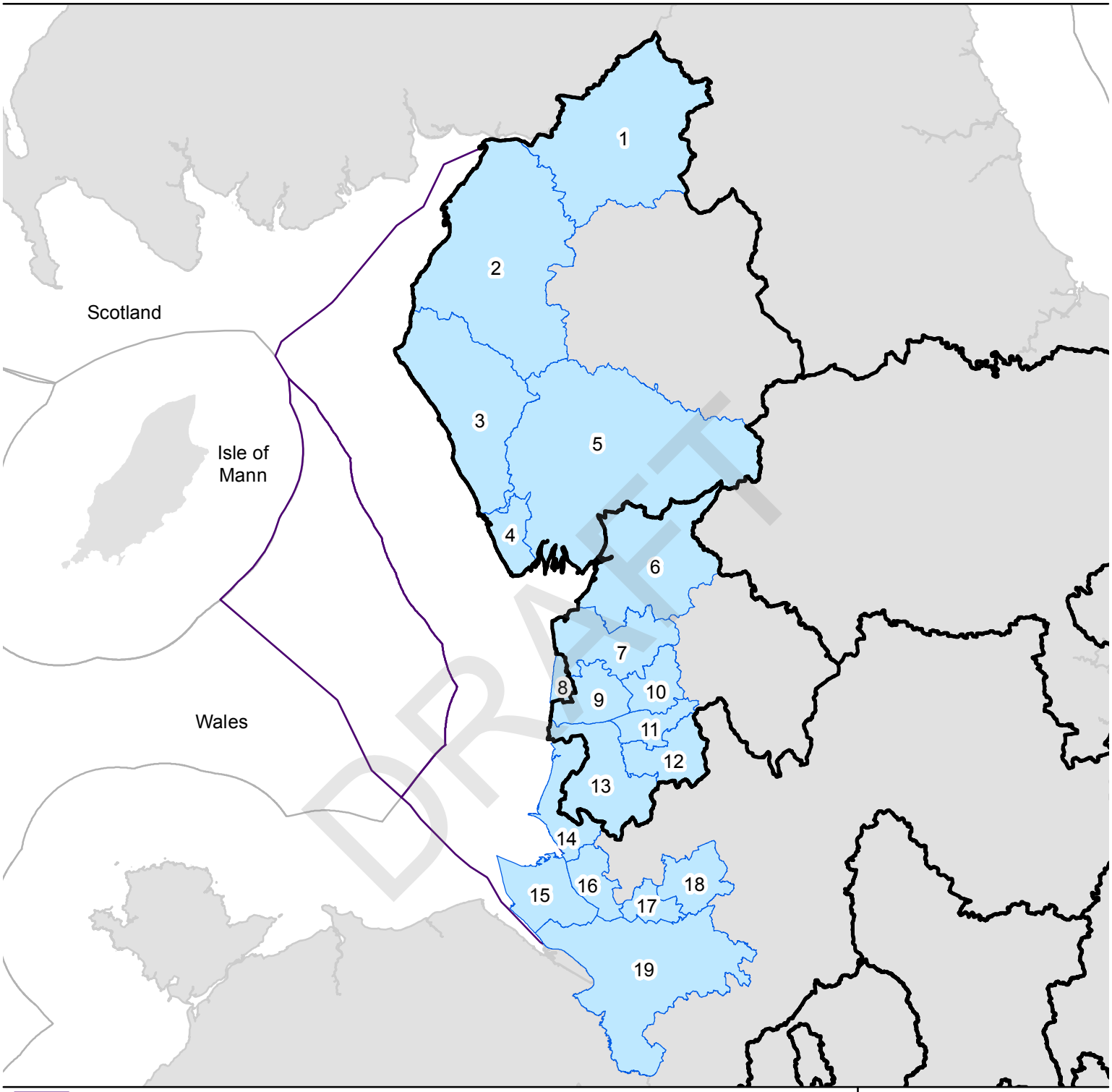
- National Planning Policy Framework
- Shoreline management plans

1304. Existing measures which support the implementation of this policy include:

- Coastal concordat

Marine Management Organisation

Figure 32 | District, Unitary and County Authority Areas and International Boundaries



North West Marine Plan Areas
County Councils
District & Unitary Authorities
UK Territorial Sea Limits

1 - Carlisle District (B)
2 - Allerdale District (B)
3 - Copeland District (B)
4 - Barrow-in-Furness District (B)
5 - South Lakeland District
6 - Lancaster District (B)
7 - Wyre District (B)
8 - Blackpool (B)
9 - Fylde District (B)
10 - Preston District (B)
11 - South Ribble District (B)
12 - Chorley District (B)
13 - West Lancashire District (B)
14 - Sefton District (B)
15 - Wirral District (B)
16 - Liverpool District (B)
17 - Halton (B)
18 - Warrington (B)
19 - Cheshire West and Chester (B)

Information map
This map is to be used for reference only. Please refer to Explore Marine Plans for a detailed view of the data and to interrogate plan policies.

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Chapter Six
6 Monitoring, review and reporting

6.1 Approach to monitoring

1305. The North West Marine Plan Approach to Monitoring describes how the North West Marine Plan will be monitored. The Approach to Monitoring is supported by a separate Annex of Indicators that sets out detailed indicator descriptions, including quality assurance undertaken.

1306. The approach to monitoring adopted by the Marine Management Organisation is informed by the Governments Magenta Book, and incorporates recommendations made in the Sustainability Appraisal and Habitats Regulations Assessment. It also includes an evaluation of the effectiveness of plan monitoring to date.

6.2 Reporting

1307. The duties for monitoring and reporting in relation to marine plans and marine planning are set out in the Marine and Coastal Access Act 2009 Sections 61(1)(b) and (c).

1308. Section 61(1) sets out a duty to prepare and publish, and lay before parliament, a copy of, a report on the following matters (set out in the Marine and Coastal Access Act 2009, Section 61(3)):

(a) the effects of policies in the marine plan;
(b) the effectiveness of those policies in securing the objectives for which the marine plan was prepared and adopted are met;
(c) the progress being made towards securing those objectives;
(d) if a Marine Policy Statement governs marine planning for the marine plan authority's region, the progress being made towards securing that the objectives for which the Marine Policy Statement was prepared and adopted are met in that region.

1309. Reporting must occur at intervals of not more than three years from the date of a marine plan being adopted, successive reports must be published at intervals of no more than three years following the date of publication of the previous report. After a report is published, the marine plan authority must decide whether or not to amend or replace the marine plan.

1310. Additional information within the three-yearly report may include:

- a review of changes in the context in which the plans were developed since adoption
- evidence demonstrating effective marine implementation of the plan

- evidence demonstrating plan effects

1311. Section 61(1)(c) sets out a duty to prepare, and lay before parliament, at intervals of not more than six years ending before 1st January 2030, a report which:

(a) identifies any marine plans which the authority has prepared and adopted;
(b) describes any intentions the authority may have for the amendment of any marine plans which it has prepared and adopted;
(c) describes any intentions the authority may have for the preparation and adoption of any further marine plans.

1312. Activities in relation to monitoring and reporting duties under Marine and Coastal Access Act 2009 Section 61 must be carried out in such a way so as to also fulfil duties under Section 54 that specifies a duty to keep relevant matters under review.

Annex 1 Glossary

Activities – a general term that includes development and uses, examples of uses might include fishing or recreation.

Adaptation - the ability of habitats, species and populations to respond to changes in the environment. Adaptation includes the natural succession of habitats and range shifts in response to climatic and other environmental changes.

Adjacent - close by, by the side of, or bordering on the marine plan area.

Aggregates Exploration and Option Agreements - are issued by The Crown Estate following acceptance of a marine aggregates tender bid for a defined area. The Agreement provides exclusive rights to explore the defined area and carry out activities in that areas to support a marine licence application. The Exploration and Option Agreement is for a period of 5 years from the date of grant.

Air pollution - a mixture of gases and particles that have been emitted into the atmosphere by man-made processes.

Air quality - a measure of how polluted the air we breathe is.

Anoxic – to be without oxygen (for example anoxic sediments are sediments without oxygen).

Applicant – organisation or individual that applies for an authorisation, for example those applying for an authorisation in relation to a development or activity (see 'Development').

Aquaculture – the controlled rearing of aquatic shellfish and finfish, the cultivation of aquatic plants and algae and the restocking of wild populations, for example using lobster hatcheries where individuals are grown from eggs and released into the marine environment. Aquaculture can take place in both the inshore and offshore marine environment.

Area of search – a broad area (of seabed and associated water column) within which some development or other activity may be acceptable, subject to detailed consideration, for example mineral extraction, or renewable energy generation. Can refer to areas of search used by Joint Nature Conservation Committee for offshore Special Areas of Conservation and may be defined in map format by the relevant organisations involved depending on the sector concerned.

Areas of geological extraction potential - are where undeveloped oil and gas discoveries are located that have been identified through exploration work, but have not yet seen any production, extraction or development, but might have potential for future oil and gas extraction activities.

Areas of high potential aggregate resource - describes spatial areas where there is a high potential for marine aggregate resource, which can be used to guide future decisions on marine aggregate extraction, exploration and optioning. Areas of high potential aggregate resource were developed by the British Geological Survey, in conjunction with The Crown Estate in 2014.

Authorisation – normally relates to something which can be applied for. See also 'Decisions'.

Avoid – to avoid an impact the proposal should be altered so that it no longer exerts a pressure (for example creates no noise), or the pressure produced cannot be received by a receptor (for example move proposal location to where no marine mammals will be able to hear the noise).

Biodiversity - the variety of all life on earth, including the diversity within and between all plant and animal species and the diversity of ecosystems.

Biodiversity net gain is an approach to development that seeks to leave biodiversity in a better state by protecting habitats and ecological features. The approach to delivering biodiversity net gain in the terrestrial environment, including intertidal areas, is set out in the government's consultation on proposals to mandate biodiversity net gain.

Capital dredging – can be deepening or widening an existing navigable area, or enabling an entirely new channel for access to a new facility. Capital dredging allows improvement of access, for example to allow bigger and deeper vessels, longer optimum tidal windows and the provision of passing places. This area will not have been dredged during the preceding 10 years.

Climate change adaptation measures - help developments or activities to reduce or protect against the impact of climate change.

Coastal change - the physical changes to the shoreline, for example erosion, coastal landslip, permanent inundation and coastal accretion.

Coastal squeeze - one form of coastal habitat loss, where intertidal habitat is lost due to the high water mark being fixed by a defence or structure (for example the high water mark residing against a hard structure such as a seawall) and the low water mark migrating landwards in response to sea level rise.

Co-existence – where multiple development, activities or uses can exist alongside or close to each other in the same area and / or at the same time.

Co-location – where multiple development (often structures), activities or uses co-exist in the same place by sharing the same marine footprint or area. Footprint can include both the physical location of a development or activity, for example a built structure, and a wider area associated with the development or activity, for example a surrounding safety zone.

Co-operation - the positive working relationship between sectors, developers or users through communication to ensure an outcome is beneficial for all.

Cross-border impacts - originate from a source that has the ability to extend and effect a sector, activity or use across terrestrial and / or marine borders in a negative or positive manner.

Cumulative effects are the combined, similar, effects that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the current proposal. Cumulative effects may extend beyond the geographical site boundaries of proposals. Cumulative effects are made up of additive effects (the magnitude of the combined effects equal the sum of the individual effects) and synergistic effects (combined effects lead to an increased effect, greater than the individual effects).

Cumulative impact – an impact occurs only when a pressure is present and acts on a receptor that is sensitive to that pressure. A cumulative impact refers to the combined impact of such pressures over time in the marine area.

Decisions – there are two types of 'decision' specified in Section 58 of the Marine Coastal Access Act 2009 that are to be made by public authorities and will involve consideration of the marine plans.

Firstly, 'an authorisation or enforcement decision which is defined in Section 58(4) the Marine Coastal Access Act 2009 as:

a) the determination of any application (whenever made) for authorisation of the doing of any act which affects or might affect the whole or any part of the UK marine area,
b) any decision relating to any conditions of such an authorisation,
c) any decision about extension, replacement, variation, revocation or withdrawal of any such authorisation or any such conditions (whenever granted or imposed),
d) any decision relating to the enforcement of any such authorisation or any such conditions,
e) any decision relating to the enforcement of any prohibition or restriction (whenever imposed) on the doing of any act, or of any act of any description, falling within paragraph (a).

It does not include any decision on an application for an order granting development consent under the Planning Act 2008 (c. 29) (in relation to which subsection (3) has effect accordingly).

Examples include a decision to grant or refuse a marine licence in accordance with Part 4 of the Marine Coastal Access Act 2009, or a planning permission granted by a local planning authority if the permission is capable of affecting part of the marine area. Such decisions must be taken 'in accordance with' the marine plans (Marine Coastal Access Act 2009, Section 58(1)) unless relevant considerations indicate otherwise. An exception is a decision under the Planning Act 2008 on applications for development consent for Nationally Significant Infrastructure Projects, where public authorities are required to have regard to marine plans.

Secondly, any other decision which relates to the exercise of any function capable of affecting the United Kingdom marine area, but which is not an authorisation or enforcement decision. Examples include designation of Marine Protected Areas or bylaws that do not extend/replace/vary/revoke or withdraw an authorisation. A public authority must 'have regard to' the marine plans when taking any such decision (Marine Coastal Access Act 2009, Section 58(3)).

Decommissioning - decommissioning is the process of removing infrastructure that has come to the end of its production life, eg for oil and gas or offshore renewable energy generation. In the case of offshore oil and gas installations and pipelines, the process consists of several stages, including the safe plugging and abandonment of wells, the removal of infrastructure, the storage, disposal, or processing of materials and pollutants and finally the clearance of the site.

Delivery activities – Activities undertaken to deliver marine planning which also contribute to achievement of the objectives and represent the wider benefits of planning. For example; sub-national policy analysis should lead to better integration of decision-making; delivery of workshops, meetings and training should improve awareness of existing requirements and those within the plan and Marine Policy Statement; evidence collation and commissioning should improve the marine evidence base to inform decisions. It is important that such activities are recognised and included when measuring the success of the plans through the use of appropriate process indicators.

Development – built infrastructure and certain activities listed under Section 66 of the Marine Coastal Access Act 2009 and other legislation, for example oil and gas activities (under Petroleum Act 1998) and carbon dioxide storage (under Energy Act 2008) and includes Nationally Significant Infrastructure Projects under the Planning Act 2008 (Section 14).

The definition is analogous to that in Section 55 of The Town and Country Planning Act 1990 of 'carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any buildings or other land'. Encompasses, but is not restricted to, what is sometimes commonly called 'development'. Examples include built or fixed structures, such as a gas platform or a wind farm comprising pilings, turbines, and associated structures (convertor stations etc), and activities such as aggregate extraction and maintenance dredging.

Displacement – the action of causing the moving of a development, or activity from its current place or position, for example shipping traffic can no longer occur in an area due to the placement of built infrastructure.

Disposal areas – designated sites in which sediment is discarded. New sites may be proposed.

Disposal of dredged material – disposal of any substance or object, from dredging activity, within English waters either in the sea or on or under the sea bed, if the deposit is made from a vehicle, vessel, aircraft, marine structure, floating container

or structure for the purpose of depositing solids in the sea as per Section 66(2)of the Marine Coastal Access Act 2009.

Disturbance is when human activity causes a behavioural response in an individual or group of individuals, causing the expenditure of extra time or energy to avoid the human activity or output. The expenditure of extra energy affects the ability of individuals to survive, breed, rear or nurture young which can affect the local distribution or abundance of the species. Displacement and avoidance are types of behavioural response. Highly mobile species are displaced such that they cannot access habitats essential to their success, such as foraging areas or breeding grounds.

Diversification in fisheries – is the establishing of new types of activity that have traditionally occurred in a community or new ways to undertake an existing activity. Diversification in fisheries can take different forms, including but not limited to; undertaking multi-activities (for example continuing to obtain some income from fishing whilst carrying out complementary activities) or using new fishing techniques and gear that alter how or what species are targeted.

Dredging activity – involves the use of any device to remove material (whether or not suspended in water) from the sea or sea bed. It includes the removal of material from the sea bed entirely.

Ecologically coherent network - a network of well-managed, resilient, and adequately sized marine protected areas that are ecologically connected and which represent a range of replicated marine habitats and species.

Ecosystem approach – an ecosystem-based approach to the management of human activities means an approach which ensures that the collective pressure of human activities is kept within the levels compatible with the achievement of Good Environmental Status; that does not compromise the capacity of marine ecosystems to respond to human induced changes and that enables the sustainable use of marine goods and services.

Ecosystem function is dependent on the relationship within, among and between species and the non-living environment as well as the physical and chemical interactions within the environment. Effective ecosystem function is reliant upon solar energy flow, for example photosynthesis by phytoplankton, mineral and nutrient cycling such as the absorption of carbon dioxide from the atmosphere, for example by saltmarsh and water cycling. Ecosystem function can also include geomorphological processes that contribute towards geodiversity.

Ecosystem services - the benefits people obtain from the natural environment. The classification of ecosystem services adopted by the UK National Ecosystem Approach categorises services as follows: regulating, provisioning, cultural and supporting services.

Environmental net gain is an evolving concept that will expand biodiversity net gain approaches to include wider benefits, such as flood protection, recreation and improved water and air quality.

Essential fish habitat - aquatic habitats which are necessary to fish for spawning, breeding, feeding or growth to maturity. Essential fish habitat also encompass migration routes.

Evidence – for the purpose of marine planning, evidence includes policy, data, information, surveys, maps, and any other relevant material.

Exclusive economic zone - an exclusive economic zone is a sea zone extending up to 200 nautical miles prescribed by the United Nations Convention on the Law of the Sea over which a state has special rights regarding the exploration and use of marine resources, including energy production from water and wind.

Geodiversity - the term used to describe the variety of landforms, rocks, minerals, fossils, soils and natural processes that underlie and determine the character of our landscape and seascape.

Greenhouse gases - gases that gases contribute directly to climate change owing to their positive radiative forcing effect including:

Direct greenhouse gases:

- carbon dioxide (CO_2)
- methane (CH_4)
- nitrous oxide (N_2O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulphur hexafluoride (SF_6)
- nitrogen trifluoride (NF_3)

Indirect greenhouse gases:

- nitrogen oxides (NO_x)
- carbon monoxide (CO)
- non-methane volatile organic compounds (NMVOC)
- sulphur dioxide (SO_2)

Gross value added – gross value added is the value generated by any unit engaged in a production activity. It is measured at basic prices, excluding taxes (less subsidies) on products. Regional gross value added is measured using the income approach. The main components of income based gross value added are:

- compensation of employees (wages)
- gross operating surplus (the sum of self-employment income, gross trading profits)
- surpluses, non-market capital consumption, rental income (less holding gains)
- taxes (less subsidies) incurred as a result of engaging in production, independently of the quantity or value of goods and services produced such as business rates

Habitat connectivity - allows the movement of nutrients and supports species connectivity through the presence of continuous suitable habitat.

Habitats Regulations Assessment – the Conservation of Habitats and Species Regulations 2017 require a Habitat Regulations Assessment to be carried out on any proposed plan or project that has potential to cause impacts on a Natura 2000 site. The decision about whether a plan or project can proceed following a habitats regulation assessment will be made by the relevant competent authority.

Heritage assets – elements of the historic environment such as buildings, monuments or landscapes that have been identified as holding a degree of significance.

High density navigation routes - are areas at sea along which shipping traffic travels. This reflects routes used by vessels of 300 gross tonnes or more, including cruise services. Passenger ferry services are regular routes for these vessels (which may or may not overlap with high density navigation routes).

Highly mobile species - are those that range over large distances and include fish, sharks, birds, marine mammals and turtles. Individuals are often part of more widespread international populations and may only be present in an area on a seasonal basis or for part of their life cycle.

Historic environment –includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged.

In-combination effects - the differing, additive or synergistic effect from multiple projects or activities on a single receptor. These are examples of cumulative effects (see above). The term 'in-combination effects' is particularly used in the context of Habitats Regulations Assessment (see above).

Independent Investigation – once the consultation draft of the marine plans has been published, and the Marine Management Organisation has assessed comments received, resolved any issues where possible and identified any issues that remain unresolved, the Marine Management Organisation will consider whether or not to recommend the need for an Independent Investigation. The Secretary of State will then determine (in accordance with paragraph 13 of Schedule 6 of the Marine Coastal Access Act 2009) whether or not to appoint an independent person to investigate the draft marine plans' proposals, to make any recommendations and the reasons for those recommendations will be published.

Infrastructure - the fundamental facilities serving a development or activity for example wharves for offloading of fish or aggregates, as well as connections to land for example such as pipelines or cables.

Infrastructure for aquaculture - those structures and facilities that are required to enable and support aquaculture. Shellfish are often relayed from natural beds to areas better suited for on-growing and can be farmed intensively using trestles and racks. For fish and algal aquaculture, intensive growing is often the preferred method, using ropes, cages and other fixed marine infrastructure.

Shoreside infrastructure includes but is not limited to:

- Local food establishments
- Markets, including infrastructure that helps build supply chain resilience
- Ports and harbours with offloading facilities (vessel berths for dry goods landing)
- Repair and chandlery facilities
- Storage and processing facilities (including depuration plants for shellfish and storage for wet fish, dry goods and other produce)
- Transport of produce to shore and once on shore (logistics companies)

International Maritime Organization (IMO) - the United Nations agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships.

International maritime organization routing systems - are established to maintain navigational safety by managing shipping traffic in busy areas and / or in response to prevailing hydrographic features.

Landfall sites - areas on the coast where subsea cables come ashore.

Landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors.

Licensing round – period during which government offers and then allocates a number of specified areas (blocks or part blocks) within its national boundaries for exploration to oil and gas companies, typically in return for fees and / or a commitment to carry out a work programme.

Local planning authority (or local authority) – an organisation that has powers under The Town and Country Planning Act 1990 to determine applications for planning permission and prepare local plans for its area.

In England local authorities are:

- district councils
- London borough councils
- metropolitan district councils
- county councils in relation to any area in England for which there is no district council
- the broads' authority

A national park authority is the local planning authority for the whole of its area.

Marine aggregates - sand and gravel removed from the seabed, commonly intended for use in the construction industry, but also used in flood defence and other industries.

Marine Conservation Zone – specific areas designated under the Marine Coastal Access Act 2009 for the purposes of conserving marine flora or fauna, marine habitats or features of geological or geomorphologic interest.

Marine litter - is any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment. Marine litter

consists of items that have been made or used by people and deliberately discarded into the sea or rivers or on beaches; brought indirectly to the sea with rivers, sewage, storm water or winds; accidentally lost, including material lost at sea in bad weather (fishing gear, cargo); or deliberately left by people on beaches and shores.

Marine protected areas - areas of the sea protected by law for nature conservation purposes.

Minimise – reduce to the smallest possible amount or degree. Minimisation is a reduction in the level of pressure generated. Minimising pressure to effectively zero is the same as avoidance.

Mitigate – make less severe. Mitigation is a reduction of how a given pressure level is experienced by the receptor.

Monitoring plan – a document which includes the approach and indicators that will be used to measure the effectiveness of the policies, and review process.

Nationally Significant Infrastructure Project – Major infrastructure developments in England and Wales as defined in Section 14 of the Planning Act 2008. In England and Wales, consents for Nationally Significant Infrastructure Projects, including the larger offshore renewable energy (> 100Megawatts) and port developments, need to be determined in accordance with the Planning Act 2008. However, where a relevant National Policy Statement has been published, Nationally Significant Infrastructure Project applications must be determined in accordance with the National Policy Statement, subject to certain exceptions, and having regard to the Marine Policy Statement and relevant marine plans. The determining authority is the relevant Secretary of State (for example, the Department for Business, Energy and Industrial Strategy in the case of offshore wind energy) on a recommendation supplied by the National Infrastructure Directorate within the Planning Inspectorate (to whom the Marine Management Organisation is a statutory consultee).

Natural capital - is defined as the elements of nature that produce value to people, for example ecosystems, species, freshwater, land, soils, minerals, our air and our seas. A 'natural capital approach' is one that values the benefits we receive from the natural environment, such as food provision, clean air and water, flood protection, and opportunities for recreation, including appreciation of wildlife, that support health and well-being.

Net gain - an approach to development that aims to leave the natural environment in a measurably better state than it was pre-development.

Non-marine planning matters – non-marine planning matters are best addressed by a response other than marine plans. Such responses may include other plans, decisions and management measures affecting the marine plan area already in existence under development or required without need for an operative marine plan. These measures, established under other influences, together with the plan objectives, contribute to achievement of the high level marine objectives as set out in the Marine Policy Statement. In some cases, information, institutional or market failure may mean that the achievement of the goal may be constrained. In such

cases, it may be that a plan objective is not required; rather signposting is used within the marine plans to raise awareness or to encourage improved implementation of existing influences. This avoids replication of both objectives and policies; ensuring marine plans focus on issues where they add value or where matters are not otherwise addressed.

Objectives – desired outcomes of the marine plans. Objectives form the link between the vision and the detailed strategy, including policies.

Oil and gas activity - in the marine area includes exploration for and production of oil and gas from below the seabed. Oil and gas deposits are located in spatially discrete areas where the deposits were formed and the associated infrastructure required to explore for or exploit the resource usually has a limited spatial footprint.

Exploration activities include various boat-based surveys and discrete sampling works, which are of limited duration. Production activities utilise infrastructure such as a fixed platform or floating production facilities, where hydrocarbons may be processed prior to being exported ashore via pipelines or using shuttle tankers, production facilities are installed for the duration of the field life.

Oil and gas licenses - fall into several categories. The principal distinctions are between landward and seaward licences, and between exploration licences (which cover exploration alone and are not exclusive to a particular area) and production licences (which may include an element of exploration during the first phase of the development).

Licenses are granted by the oil and gas authority. Except in special circumstances, production licences run for three successive periods or terms. These terms are commonly associated with a particular activity, the initial term for exploration, the second term for the approval of a development plan and the third term for production. Licenses expire at the end of these terms if the specified work has not been completed.

Options – in planning terms, this is the part of the planning process for considering different ways of achieving the objectives of a plan and addressing any significant issues.

Plan policies – support the marine plan objectives and address the issues outlined for the sustainable development of the plan area. With SMART (Specific, Measurable, Attainable, Relevant and Timely) objectives, there is a greater focus on the added value of marine plans, paving the way for further specificity in plan policies. When developing SMART (Specific, Measurable, Attainable, Relevant and Timely) plan policies, consideration can be given to a number of different factors such as becoming more local, spatial or prescriptive.

Ports and harbours - a port is a commercial facility based on both land and water and provides facilities for shipping vessels to load and unload their cargo. A harbour is a place of safety for ships and other waterborne vessels. A harbour is a mooring place and offers safe anchorage for shipping, both commercial and recreational. Ports are generally man-made, harbours can be man-made or natural. Ports and

harbours are diverse and support a wide range of activities and infrastructure including, but not limited to, provision of marinas, ferries, commercial shipping, fishing, recreational activities, ship manufacturing and maintenance, and aggregate loading and unloading facilities.

Precautionary principle – where evidence is inconclusive, decision-makers should make reasonable efforts to fill evidence gaps but will also need to apply precaution within an overall risk-based approach, in accordance with the sustainable development policies of the United Kingdom administrations. This means that if the risks from an activity are uncertain, preventative measures may be required if there is concern that human activities may harm human health, living resources and marine ecosystems or interfere with other legitimate uses of the sea, or have other social and economic impacts. This would need to be considered based on risk.

Pressure – the effects from any given activity over time in the marine area. Pressures can be physical, chemical or biological. The same pressure can be caused by a number of different activities, for example fishing using bottom gears and aggregate dredging both cause abrasion.

Priority habitats and species - are those recognised as being of 'principal importance' for the conservation of biological diversity in England under the Natural Environment and Rural Communities Act 2006 (Section 41). Priority habitats and species have been identified through additional organisations and legislation.

Features of conservation importance including marine habitats are identified by the Joint Nature Conservation Committee and listed in the Ecological Network Guidance. The Conservation of Habitats and Species Regulations 2017[119] and The Conservation of Offshore Marine Habitats and Species Regulations 2017[120] require protection for Annex I Habitats and Annex II Species. The Convention for the Protection of the North-East Atlantic has developed a list of threatened and / or declining species and habitats.

Proponent – organisation or individual putting forward a 'proposal' (see below). Includes but is not restricted to 'applicant'.

Proposals – general term, usually for something new but could also be for a change that encompasses development and uses, subject to management by public authorities, for example fishing or certain recreation activity, together with management measures. Proposals may relate to either type of decision specified in the Marine Coastal Access Act 2009 (see 'decisions').

Public authority – this means a Minister of the Crown, a public office-holder or a public body (Marine Coastal Access Act 2009, Section 322(1)). A 'public body' includes government departments, The Crown Estate, local authorities, inshore fisheries conservation authorities and statutory undertakers. A 'public office holder' means a person holding an office under the Crown, an office created by an Act or

[119] As amended by The Conservation of Habitats Conservation and Species (Amendment) (EU Exit) Regulations 2019
[120] As amended by The Conservation of Habitats Conservation and Species (Amendment) (EU Exit) Regulations 2019

devolved legislation, or an office paid for by Parliament. Public authorities are responsible for ensuring that relevant decisions (see 'decisions') take appropriate account of the marine plans and plan policies.

Recreation - refers to leisure activities undertaken for enjoyment by local residents in their free time, near where they live.

Renewable energy zone – the renewable energy zone was declared under Section 84 of the Energy Act 2004. It extends up to a maximum of 200 nautical miles from the baseline (usually the low water mark but with exceptions such as straight baselines across the mouths of some bays). The United Kingdom has claimed exclusive rights in this area with respect to production of energy from water or wind.

Resilience - the ability of an ecosystem to recover from disturbances within a reasonable timeframe.

Resilience to climate change - in relation to proposals is the ability of a proposal to respond to changes in climate so that it retains much of its original function and form, such as absorbing stresses including sea level rise and maintain function in the face of external stresses imposed upon it by climate change.

Re-use of oil and gas infrastructure - involves repurposing existing oil and gas infrastructure for an alternative use. The infrastructure referred to can broadly be grouped under either wells, trunk pipelines or platforms, which through re-use can facilitate the transport and storage of captured carbon dioxide and the associated atmospheric benefits.

Seascape - are landscapes with views of the coast or seas and the adjacent marine environment with cultural, historical and archaeological links with each other.

Seascape character - is the perception of an area and the combination of characteristics at the surface, within the water column and on the seabed.

Short sea shipping - is the movement of cargo and passengers by sea over short distances including along the coast between domestic ports and to and from the United Kingdom to European ports. Short sea shipping reduces congestion caused by terrestrial road transport and can provide air quality improvements through greater fuel economy and lower emissions of CO_2. Short sea shipping is one of the most sustainable and economically competitive modes of transport.

Signposting – highlights or points to existing plans, policies, measures or information, relevant to a specific plan policy or sector/topic, particularly if they are critical to addressing an issue identified in the planning process.

Site condition - the condition of the qualifying features of a marine protected area.

Species connectivity - allows the movement of individuals, juveniles and groups preventing individual or group isolation.

Species migration - is the seasonal movement of populations of animals, for example for breeding or feeding purposes. Migration may occur over a small distance or over a much larger international distance.

Strategically important navigation routes - are those routes which are essential to regional, national and international trade.

Subsea cables - are cables underneath the surface of the sea, used for several purposes, including connecting offshore infrastructure to land-based infrastructure, connecting different electricity markets and ensuring telecommunication between separate landmasses.

Sustainability appraisal - an appraisal of the sustainability of proposals for inclusion in the marine plan, a report of the results of which is published under paragraph 10 of Schedule 6 of the Marine and Coastal Access Act 2009 alongside the consultation draft of the marine plan. It incorporates the requirements of The Environmental Assessment of Plans and Programmes Regulations 2004 (commonly referred to as the 'Strategic Environmental Assessment Regulations') on the assessment of the effects of certain plans and programmes on the environment and ensures that potential environmental effects are given full consideration alongside social and economic issues.

Sustainable development – development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.

Sustainable tourism - is defined by the United Nations World Tourism Organisation as "tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities".

Tourism - a general term that encompasses any time spent away from home to pursue leisure or relaxation activities. It is defined by the United Nations World Tourism Organisation as a social, cultural or economic experience that involves the movement of people to countries or places outside their usual environment for personal (or professional) purposes.

Under-keel clearance - is the minimum clearance available between the deepest point on a vessel and the bottom in still water.

Use – generally a purpose for which the marine area is used, for example fishing or recreation. Distinguished from 'development', which has a specific meaning in legislation and in marine management.

Vision – includes a short statement of the overall aim for the plan area (based on a 20 year time horizon). It also includes a description of what will characterise the plan area in 20 years' time. It should be noted that this is a vision for the plan area and there will be numerous other factors which contribute to its success.

Visual resource – can be interpreted primarily as views of the coast and sea from land. Views from the sea to land, and sea to sea, are also relevant.

Waste - any substance or object which the holder discards or intends or is required to discard.

Waste hierarchy - ranks waste management options according to what is best for the environment in order of prevention, re-use, recycling, recovery then disposal.

Water quality - is a measure of the condition of water and its suitability to sustain a range of uses for both biotic and human benefits.

Appendix 1 Marine planning requirements, background and context

Appendix 1.1 Marine Planning requirements and background

1. Through the Marine and Coastal Access Act 2009[121], the UK Government introduced a number of measures to achieve its vision of 'clean, healthy, safe, productive and biologically diverse oceans and seas'. There included provision for a marine planning system, establishing the Secretary of State as the marine planning authority for the English Inshore and English Offshore marine planning regions, with the power to delegate certain marine planning functions. The Secretary of State delegates a number of functions to the Marine Management Organisation in March 2010, retaining the decision to publish the plans, the decision to lay reports in relation to the Marine and Coastal Access Act 2009 (Section 61) reporting requirements and the decision to withdraw the plan.

2. Marine plans, together with the Marine Policy Statement, underpin this planning system for England's marine area. Plans will formulate and present outcomes for a marine plan area consistent with the Marine Policy Statement informed by evidence relevant to the plan area. In 2011 the Department for Environment, Food and Rural Affairs recommended a series of marine plan areas for the English inshore and offshore marine areas to the Marine Management Organisation. The boundaries for these areas were identified following stakeholder and expert input and a specific consultation in 2010 resulting in 11 plan areas covering the seas around England[122]. Plans have been produced for each of these areas: the first plans adopted in April 2014 were for the east inshore and offshore plan areas. The second plans adopted in July 2018 were for the south inshore and offshore plan areas. The North West Marine Plan covers the north west inshore and offshore plan areas. Alongside the development of the North West Marine Plan, separate plans have been developed for the north east inshore and offshore plan areas, and the south west inshore and offshore plan areas, and the south east inshore plan area.

3. The process of marine planning will contribute to the achievement and integration of sectoral activity through specific policies within a framework of economic, social and environmental considerations, to support the high level marine objectives set out in the Marine Policy Statement. This approach will help make sure that sustainable development of the English marine areas is consistent with the UK Sustainable Development Strategy (see Box 3) in the context of the government's current

[121] HM Government Marine and Coastal Access Act 2009
[122] There is a map on the Marine Management Organisation's webpages: https://www.gov.uk/government/publications/marine-plan-areas-in-england

priorities including a focus on enabling sustainable economic growth, be the first generation to leave the environment in a measurably better state for the next generation, and move towards a net zero carbon target. In doing so the North West Marine Plan provides a clear approach to managing relevant aspects of the north west marine plan areas, their resources, and the activities and interactions taking place within them.

Box 3: Sustainable development

The Marine Policy Statement defines sustainable development in line with the UK Sustainable Development Strategy 'Securing the Future' (reiterated in the government's refreshed vision), which sets out five guiding principles of sustainable development:

- living within the planet's environmental limits
- ensuring a strong, healthy and just society
- achieving a sustainable economy
- promoting good governance
- using sound science responsibly

The National Planning Policy Framework, which incorporates a presumption in favour of sustainable development, reiterates these principles. It also reinforces the government's view of sustainable development and that the English planning system has an economic, social and environmental role.

Appendix 1.2 Marine Planning – national context

4. The Marine Policy Statement was adopted by all UK administrations and published in March 2011. It built upon the shared UK wide high level marine objectives published in 2009[123], and provides the policy framework for the preparation of marine plans, establishing how decisions affecting the marine area should be made to enable sustainable development. It sets out a high level approach to developing marine plans. The process should be participative, based on an ecosystem approach[124], and apply precaution within an overall risk-based approach: a particular issue highlighted is cumulative effects of impacts (see Box 4). The Marine Policy Statement also lists the high level principles for decision-making, including that it should be consistent with existing legislation, streamlined where possible, and seek to avoid or mitigate negative impacts where possible in a proportionate manner and using sound science responsibly.

[123] Objectives in Our seas – a shared resource: high level marine objectives

[124] A review concluded that the majority of the principles of the ecosystem approach are already incorporated in the existing marine planning process with recommendations for further application relating mainly to data availability (including in relation to cumulative impacts) and some elements of stakeholder engagement. https://www.gov.uk/government/publications/integration-of-ecosystem-approach-into-marine-planning-mmo-1048

Box 4: Cumulative effects

The north west marine plan areas are busy in places with a large and diverse range of human activities occurring, which exert pressure to varying degrees. Cumulative effects can arise from a range of pressures, such as (but not limited to) disturbance or damage to the seabed, increases in underwater noise, pollution and increases in marine litter. Cumulative effects can occur both spatially and temporally. The effect of such pressures and whether or not they have an impact will depend on the sensitivity of the components of the ecosystem that are affected and the level of exposure to those pressures.

Cumulative effects are considered through existing processes such as Environmental Impact Assessment and Strategic Environmental Assessment. In addition a Habitats Regulations Assessment is required where a plan or project is likely to have a significant effect on a feature (habitats and species) of a Natura 2000 site, either individually or in combination with other plans or projects (inter project cumulative effects).These processes also consider the need to avoid, minimise or mitigate impacts caused by cumulative effects, and this also is reflected in the principles of the National Planning Policy Framework and the Marine Policy Statement (2.6.1.3) on conserving and enhancing the natural environment.

As set out in the Marine Policy Statement (2.3.1.6 and 2.3.2.1), marine plans should contribute to considering cumulative impacts, for example 'Marine plans should ... identify how the potential impacts of activities will be managed, including cumulative effects' and 'when considering the potential benefits and adverse effects, decision-makers should also take into account any multiple and cumulative impacts of proposals, in the light of other projects and activities'.

When taken as a whole, the policies set out in the North West Marine Plan will contribute to the consideration of cumulative effects, including the specific policy requiring cumulative effects to be addressed but also other policies such as those to manage the use of space effectively and reduce adverse impacts.

A variety of work is being undertaken by different organisations to develop our knowledge of environmental sensitivity to pressure, as well as on how this information can be best analysed to develop our knowledge of areas at greater risk of cumulative effects. For example, the Marine Management Organisation has developed a framework for scoping cumulative effects strategically. The Marine Management Organisation will continue to work together with third parties to make sure that any developments in knowledge can be considered in future marine planning. This may result in a more prescriptive approach to management of cumulative effects at such time as the evidence base is deemed sound enough to support it. Public authorities should look to make sure that current and future guidance as it becomes available is clearly highlighted, applied, and reviewed (where required), working with, for example, the Joint Nature Conservation Committee and Natural England, The Crown Estate and industry.

5. All marine plans must be in conformity with the Marine Policy Statement unless relevant considerations indicate otherwise[125]. The Marine Policy Statement also provides an overview and summary of national policy relevant to marine planning and decision-making in the marine plan areas, set within the context of international policy. The plans take account of this and other UK national policy particularly that under the Planning Act 2008, including the National Planning Policy Framework, National Policy Statements such as those for ports, energy for example nuclear power generation, and the process for Nationally Significant Infrastructure Project consents[126]. Relevant provisions in the National Planning Policy Framework and National Policy Statements were identified and incorporated into the marine plans where appropriate.

6. The Marine Policy Statement (1.3.5), marine plans and the planning process will contribute to an integrated and holistic approach to the management of marine and coastal areas in line with the principles of Integrated Coastal Zone Management. The Marine Management Organisation has taken all reasonable steps, as required by the Marine and Coastal Access Act 2009, to make sure that the North West Marine Plan is compatible with marine plans for marine areas related to the north west marine plan areas[127], including Scotland's National Marine Plan, the Welsh National Marine Plan and the Marine Plan for Northern Ireland. Compatibility testing was carried out in summer 2018 once the preferred policy options for the north west marine plan areas were confirmed. Policy interactions across plans were rated red, amber or green depending on their compatibility. For red and amber interactions, compatibility issues were addressed either through adjusting the weighting of developing policies, providing spatial information to explain where policies apply, or through advice provided in the implementation text. The Marine Management Organisation has taken all reasonable steps, as required by the Marine and Coastal Access Act 2009 to make sure that the North West Marine Plan is compatible with any related relevant development plans[128] (or their equivalent). The Marine Management Organisation is also working with public and local authorities responsible for other plans affecting the north west marine plan areas[129], for example through review of River Basin Management Plans.

7. Table 5 in Appendix 2 provides a summary of findings from this analysis. The Coastal Concordat, an agreement between the Department for Environment, Food and Rural Affairs, the Ministry for Housing, Communities and Local Government, the Department for Transport, the Marine Management Organisation, the Environment Agency, Natural England and the Local Government Association's Coastal Special Interest Group, sets out how regulatory and advisory bodies propose to work with local planning authorities to enable sustainable growth in the coastal zone in support of efficient consenting and decision-making.

[125] Marine and Coastal Access Act 2009 sSection 51(6)
[126] Planning Act 2008, Section 14
[127] HM Government Marine and Coastal Access Act 2009 Schedule 6 3(1)
[128] HM Government Marine and Coastal Access Act 2009 Schedule 6 3(2)
[129] HM Government Marine and Coastal Access Act 2009 Schedule 6 9(2)(h)

8. The Planning and Compulsory Purchase Act 2004 (as amended by the Localism Act 2011) places a duty to co-operate on the Marine Management Organisation and other public authorities in the preparation of marine plans, local development plans, and other plans (so far as they relate to a strategic matter). It requires local authorities and other public bodies[130] to engage constructively, actively and on an ongoing basis[131]. That duty applies to the marine plans, their implementation and any subsequent revisions. These requirements, together with the options for communities to formulate their own Neighbourhood Plans, bring new opportunities for an integrated planning system for land and sea.

9. In fulfilment of the above requirements and policy aims, the Marine Management Organisation worked with planning and other authorities to identify policies in their plans with marine relevance for consideration in the development of the North West Marine Plan (see Table 5 for a summary of findings). Spatial information on those other plans can also be found on the Explore Marine Plans digital service.

Appendix 1.3 Marine Planning – international context

10. Marine planning sits within an international regulatory framework which governs a number of aspects of marine management. The national policy documents referred to above describe most of these as part of their context. They range from the United Nations Convention on the Law of Sea (UNCLOS) to a number of European Union Directives and policies, which have previously been transposed into UK law, for example The Marine Strategy Regulations 2010 transpose the European Union Marine Strategy Framework Directive. The UK Government has published a Marine Strategy that sets how 'Good Environmental Status' will be achieved or maintained in our waters. It is likely that in general the relevant commitments made under EU legislation will become part of UK law. References in marine plans to European legislation, insofar as it is currently or will become part of UK law after the UK leaves the EU, may require some changes in relation to our obligations under EC Directives. Any such changes will be addressed at the most appropriate point during plan drafting or revision, as required.

11. The relevant EU legislation and commitments are detailed at appropriate points in the North West Marine Plan, whereas the Maritime Spatial Planning Directive is considered here. The North West Marine Plan has been prepared in accordance with, and gives consideration to the EU Maritime Spatial Planning Directive (2014/89/EU) which came into force in July 2014 in support of the Integrated Maritime Policy for the European Union. The UK made a decision to leave the EU in 2016, however during the development of the North West Marine Plan the UK remained a member of the EU. As such a number of minimum requirements as set out by the EU Maritime Spatial Planning Directive have been addressed in the North West Marine Plan. The framework for maritime spatial planning and the aims of the EU Maritime Spatial Planning Directive to support the sustainable development of

[130] ie a body or person prescribed under Ssection 33A(1)(c) Planning and Compulsory Purchase Act 2004. Prescribed bodies are currently set out in Regulation 4 of The Town and Country Planning (Local Planning) (England) Regulations 2012 (SI 2012/767)
[131] A Plain English Guide to the Localism Act

marine areas and the sustainable use of marine resources are also reflected in national legislation.

Appendix 2 Evidence base

1. The Marine Policy Statement (2.3.1.2) states that 'marine plans will be based on a sound evidence base, as far as possible'. The Marine Management Organisation has been working closely with many partners and stakeholders since the start of the planning process to gather and apply the best available evidence to better understand the activities, resources and ecosystem in the north west marine plan areas.

2. The Marine planning issues and evidence database holds information about the issues raised for the north west marine plan areas and the evidence used for marine planning. Issues include challenges and opportunities that occur at a spatial and temporal scale appropriate for a marine planning response. Evidence used for marine plan preparation included spatial data (presented on the Explore Marine Plans digital service), third party research reports/guidance documents, specifically commissioned research[132] and national/sub-national policy.

3. Core development documents produced during the development of the North West Marine Plan include iteration outputs, details of engagement and feedback.

4. The Habitat Regulations Assessment and Sustainability Appraisal are independent assessments carried out to inform the development of marine plans and are also a source of evidence.

5. The Habitat Regulations Assessment was carried out and informed development of the draft North West Marine Plan. The assessment includes:

    - pre-screening review
    - screening review
    - an appropriate assessment information report

6. The Sustainability Appraisal ran alongside the development of the draft North West Marine Plan and included:

    - scoping report
    - options assessment
    - sustainability appraisal report

[132] All published reports can be viewed at the following website: https://www.gov.uk/government/publications/evidence-and-the-marine-management-organisation-mmo/evidence-projects-register

7. Although the marine planning issues and evidence database contains and summarises the issues and evidence base to be considered throughout the planning process, evidence gathering continued throughout the process with the opportunity for stakeholders to comment at each iteration via workshops and online engagement. Stakeholders were able to view and provide comments on the evidence base at any point throughout the planning process, including submitting new or alternative evidence. All evidence used has gone through a quality assurance process and this has informed how the evidence has been used to support decision-making.

8. To support integration between land and sea, there is a duty to make sure all marine plans are compatible with plans developed by local planning authorities. There is also a duty to have regard to all other plans prepared by public bodies for the management and / or use of the sea or coast[133]. The plans assessed to fulfil this requirement included local transport plans, waste and mineral plans, river basin management plans, beach management plans, heritage coast plans and shoreline management plans. Spatial information related to sub-national plans can also be found on the Explore Marine Plans digital service. For certain activities, such as marine aggregates, this compatibility and influence may extend to plans and authorities outside of the marine plan area.

9. By involving planning authorities and other stakeholders, the Marine Management Organisation developed a process for assessing sub-national policies and plans, to identify policies with marine relevance for consideration in the development of the North West Marine Plan.

10. Table 5 provides a summary of findings from this analysis of public plans. Please note some of the plans do not appear in the table as they were not considered of a scale suitable for consideration in development of the North West Marine Plan or are taken account of in other plans which were reviewed. It indicates those plans that include provisions that relate to the Marine Policy Statement (chapters 2 and 3) 'detailed considerations' and 'key activities'. This can be considered as an overview of the extent to which matters relevant to the marine area are addressed in terrestrial planning.

[133] HM Government, Marine Policy Statement (2011) directs the evidence base to take in a wide range of sources including existing plans. The 'Description of the Marine Planning System for England' states that as much as possible the marine planning system should facilitate the process of land-sea integration, build on and reinforce existing terrestrial policies. Please see chapter 6 for a list of statutory and non-statutory plans in the description document.

Table 5: Local plan policy related to the marine area

	Ecology and biodiversity	Air Quality	Noise	Water Quality	Seascape	Historic Environment	Climate Change	Coastal Change and Flooding	Marine Protected Areas	Defence	Energy Production	Ports and Shipping	Aggregates	Dredging and Disposal	Cables	Fisheries	Aquaculture	Surface Water Management	Tourism and Recreation
Local Plans / Core Strategies / Minerals and Waste Strategies																			
Allerdale	X	X	X	X	X	X		X	X		X	X			X			X	X
Barrow-in-Furness	X					X	X		X			X							X
Blackpool					X	X	X	X										X	X
Carlisle	X	X	X	X		X	X	X			X				X				X
Cheshire West and Chester	X				X	X		X				X	X					X	X
Chorley	X		X								X								
Copeland	X					X		X			X							X	X
Cumbria						X	X				X	X	X					X	X
Flitshire	X	X		X		X		X	X		X	X	X		X				X
Fylde	X			X	X	X		X	X			X				X		X	X
Halton					X	X	X	X			X								X
Lancaster	X	X			X	X		X			X							X	X
Lake District National Park	X		X		X	X	X	X	X		X							X	
Liverpool	X	X	X			X	X	X	X		X	X	X					X	X
Preston						X		X			X	X			X			X	X
Sefton	X				X	X	X	X	X			X	X					X	X
South Lakeland				X		X	X				X		X						X
South Ribble	X				X	X	X	X											
Warrington	X			X		X		X			X	X	X		X			X	X
West Lancashire	X				X		X	X			X				X			X	X
Wirral	X			X	X	X	X	X			X	X	X						X
Wyre	X			X	X	X		X			X	X				X		X	X
Joint Lancashire Minerals and Waste														X					
Joint Merseyside and Halton Minerals and Waste	X						X											X	
Arnside and Silverdale AONB Management Plan	X			X	X	X													X
The Solway Coast AONB Management Plan	X			X	X	X		X	X		X			X		X	X	X	X

Table 6 The devolved administrations and non-UK bordering nations that have been notified and engaged with in relation to the draft North West Marine Plan

Bordering Nation	Organisation	Date Notified	Ongoing Engagement[134]
Scotland	Marine Scotland	2016 (SPP)	Yes
Northern Ireland	Department of Agriculture, Environment and Rural Affairs	2016 (SPP)	Yes
Wales	Welsh Government	2016 (SPP)	Yes
Isle of Man	Isle of Man Government	2018	Yes

[134] Ongoing engagement includes receipt of all communications from the marine planning team (including regular newsletters and engagement notifications throughout the development of marine plans), informal engagement, and formal meetings