Port of Mostyn

Mostyn Energy Park Extension

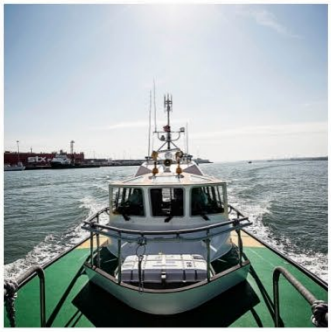
Environmental Statement

Chapter 9: Fisheries

December 2022







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		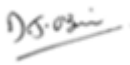

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9.1 Introduction

This chapter provides an assessment of the potential significant effects of the MEPE Project on fisheries. This chapter has been prepared by ABPmer.

The following receptors have been considered as part of the assessment:

- Cockle fishery that operates in the vicinity of the MEPE Project;
- Other commercial fisheries that may operate within the Dee Estuary; and
- Recreational angling

Potential direct effects of the proposed development on fisheries are those that occur as a result of loss or restricted access to fishing grounds, or interference with fishing activities due to vessel movements associated with the proposed development. Indirect effects to the fishing sector are those that may arise as a result of impacts on stocks of target finfish and shellfish species.

Section 9.2 provides a definition of the study area for this topic, Section 9.3 presents the impact assessment approach that has been followed and Section 9.4 details the consultation which has taken place. Section 9.5 describes the legislation, policy and guidance position in respect of this topic and Section 9.6 describes the baseline conditions of the study area. An impact assessment describing changes to the baseline environment is then presented in Section 9.7, mitigation measures and residual effects are reviewed in Section 9.8. Section 9.9 provides an overall final summary of the topic assessment.

A number of figures support the description of the existing environment (baseline), in particular Figure 9.1 which shows the location of surrounding ports with fishing vessel sightings and landings.

- The Nature Conservation and Marine Ecology assessment (Chapter 8) has informed the outcomes of the fisheries assessment, in terms of the knock-on effects on fisheries as a result of potential impacts on fish stocks and fish ecology. The Commercial and Recreational Navigation assessment (Chapter 10) has also informed the fisheries assessment, in terms of the implications of impacts on navigation and steaming times for vessels on fishing activity.

9.2 Definition of study area

The study area for this assessment is the area over which potential direct and indirect effects of the MEPE Project are predicted to occur during the construction and operational periods. For the purpose of the fisheries topic, this is considered to be the body of water and intertidal areas comprising the Dee Estuary, and the adjacent coastline. To align with the availability of fisheries data, the study area has been defined as the body of water comprising the International Council for the Exploration of the Sea (ICES) rectangle 35E6, including adjacent coastlines (see Figure 9.1).

9.3 Impact assessment methodology

9.3.1 Data and information sources

A desk-based review of publicly available data and information has been undertaken to support a detailed understanding of baseline fisheries features in the study area. This has included: a review of recent fish landings and fishing activity sighting data for ICES rectangle 35E6; a review of Dee Estuary Shellfish and Sea Fisheries Byelaws; a review of any relevant fisheries management plans and/or reports; and consultation with stakeholders including Natural Resources Wales (NRW), North Western Inshore Fisheries and Conservation Authority (NWIFCA), the Welsh Government Marine and Fisheries Division (WGMFD), and the Welsh Fishermen's Association (WFA). Any contacts that arose from the preliminary consultation were also subsequently consulted.

Current baseline conditions have been determined by a desk-based review of available information. The main desk-based sources of information that have been reviewed to inform the current baseline description within the vicinity of the proposed development include:

- Fisheries landings by UK vessels from ICES rectangle 35E6 from the Marine Management Organisation (MMO) 2016-2020;
- Fishing vessel activity sightings data (MMO);
- UK fishing vessel lists: Details of registered and licensed fishing vessels over 10 metres and 10 metres and under (MMO, 2022);
- The (Seafish) Kingfisher Information Service (2021);
- Byelaws and other legislation governing shellfish and finfish fisheries in the Dee Estuary and surrounds (provided by NRW where necessary);
- Dee Estuary Cockle Fishery Order (2008) Management Plan (NRW, 2021);
- Cockle fishery reports (NRW, 2016; 2021; 2022);
- ICES-OSPAR Fishing Intensity Data Layers for mobile demersal gears;
- National Statistics: UK sea fisheries annual statistics report 2019, and associated data tables (MMO, 2020);
- Port of Mostyn (2013) Mostyn Energy Park Development at the Port of Mostyn. Environmental Statement Volume 1 - EIA Text July 2013;
- Wales Marine Planning Portal (http://lle.gov.wales/apps/marineportal); and
- North Western Inshore Fisheries and Conservation Authority (NWIFCA) website (https://www.nw-ifca.gov.uk/).

9.3.2 Determining significance of effects

To facilitate the impact assessment process and ensure consistency in the terminology of significance, a standard assessment methodology has been applied, as described in the Impact Assessment Approach ES Chapter (Chapter 5). To assess the significance of effects, the magnitude of the impact and the probability of it occurring is evaluated to understand the exposure to change, and this is assessed against the sensitivity of a receptor/feature to understand its vulnerability. Finally, this is compared against the importance of a receptor/feature to generate a level of significance for effects resulting from each impact pathway. The criteria for magnitude and sensitivity are applied to the assessment of fisheries receptors (different fleet segments), tailored to the fisheries context as set out below:

- Magnitude: scale of the change taking into account aspects such as the area affected as a proportion of the fishing grounds for the fishery and the relative importance of the fishing ground; and

- Sensitivity: based on the degree to which fishing vessels may be able to adapt to changing circumstances.

9.4 Consultation

Consultation with regard to the outcomes of the formal scoping process and whether there are any likely effects of the MEPE Project on the fisheries topic has been undertaken as appropriate, with various high-level stakeholders, namely the Marine Management Organisation (MMO), Natural Resources Wales (NRW) and Welsh Government Marine and Fisheries Division (WGMFD). The North Western Inshore Fisheries Conservation Authority (NWIFCA) and Welsh Fisherman's Association (WFA) has also both been contacted on several occasions, but no response has been received to date.

The consultation that has been undertaken, along with the outcome of such consultation and how it has influenced this assessment is provided in Table 9.1.

Table 9.1. Summary of consultation to date

Consultee	Reference, Date	Summary of Response	How Comments have Been Addressed in this Chapter
MMO	Email, 09 May 2022	WGMFD deal with sightings records from the Dee Estuary and ICES rectangle 35E6.	Noted. WGMFD was contacted on 27 April 2022 and 09 May 2022 for any available sightings data for ICES rectangle 35E6.
NRW	Scoping Opinion, 06 January 2022	The Dee Estuary has a stock of cockles which is commercially fished. No other comments were received from consultees in relation to commercial fisheries and the ES should therefore include an assessment of impacts on commercial fisheries, as set out in the scoping report.	Noted. An assessment of the potential effects of the MEPE Project on commercial fisheries, including the cockle fishery, has been undertaken and is presented in this chapter.
	Email, 26 April 2022	Provided byelaws and fisheries reports.	Incorporated relevant information in baseline and legislation, policy and guidance sections of this chapter.
	Telephone call, 29 April 2022	Discussion on fisheries activity in the Dee Estuary.	Incorporated relevant information into baseline section of this chapter.
WGMFD	Email, 01 July 2022	Sightings spreadsheet for ICES rectangle 35E6 provided with latitude/longitude information.	Information was reviewed and further details requested from WGMFD regarding specific fishing activity taking place within ICES rectangle 35E6. No response received to date.

9.5 Implications of legislation, policy and guidance

This section sets out key aspects and implications of policy and guidance that are relevant to the assessment of likely impacts on fisheries. It builds upon the overarching chapter covering Legislative and Consenting Framework (Chapter 4).

Since the end of the transition period after the UK left the EU, from 1 January 2021, UK fisheries are governed under the UK Fisheries Act 2020 (UK Government, 2020), which gives the UK the power to regulate fisheries, set quotas and modify any European regulations that were transferred across and became part of UK law. It establishes the framework for fisheries policy and management in the UK and sets out eight fisheries objectives which encompass the overall aims of the Act: sustainability; precautionary; ecosystem; scientific evidence; bycatch; equal access; national benefit; and climate change. Fisheries is predominantly a devolved matter, and therefore the four fisheries administrations will produce a Joint Fisheries Statement (JFS) setting out how the objectives will be achieved. The Draft JFS has been published for consultation and the final version is expected to be published in November 2022 (Defra, 2022). It sets out the ambition to deliver world-class, sustainable management of fisheries and aquaculture, and the importance of science and evidence to inform management decisions, partnership working and participatory decision making. A list of stocks for which Fisheries Management Plans (FMPs) will be developed is set out. The criteria for determining whether a stock should be covered by an FMP include: commercial interest where there is a risk of significant over-exploitation; economic value of the fishery and its wider economic contribution to coastal communities; socio-economic importance; and ecosystem significance.

9.5.1 Legislation

Due to the cross-border nature of the Dee Estuary, responsibilities for inshore fisheries management are divided between Welsh and English authorities.

Prior to 1 April 2010, the inshore fisheries area around North Wales was regulated by the North Western and North Wales Sea Fisheries Committee (NWNWSFC), established under the Sea Fisheries Regulation Act 1966. On 1 April 2010, the Marine and Coastal Access Act 2009 Order 2010 (Sea Fisheries England and Wales, SI 2010 No. 630) repealed the 1966 Act in relation to Wales with the effect that the Sea Fisheries Committees were abolished (Welsh Government, 2011). Since then, the Welsh Government (Marine and Fisheries Division) have taken over the old NWNWSFC's duties as they relate to Welsh waters and are responsible for management of the byelaws including those on the Welsh side of the Dee. Responsibility for historical byelaws of the Environment Agency (made whilst exercising the powers of a local fisheries committee pursuant to section 18(1) of the 1966 Act), which were in force before 1 April 2010, and which related to Wales, were also transferred to the Welsh Government. These mainly relate to salmon fisheries.

Management of inshore fisheries in England, defined as those within the 6 nautical mile (NM) limit, is primarily the responsibility of the Inshore Fisheries and Conservation Authorities (IFCAs). Together with the MMO, they work to achieve sustainable fisheries management and marine conservation. The North Western IFCA (NWIFCA) took on the relevant byelaws of the NWNWSFC as they relate to English waters. Between the 6 NM and 12 NM limits, the MMO has primary responsibility for fisheries management in English waters under the guidance of Defra.

A number of byelaws are in place in the Dee Estuary, either under NWIFCA, Welsh Government or NRW responsibility:

- The NWIFCA Byelaw 3 Permit to Fish for Cockles and Mussels - requires a permit for gathering of cockles and mussels, which may only be gathered by hand or using hand-held rakes, and cockles may not be gathered from 1 May to 31 August;
- NWIFCA Byelaw 6 Protection for European Marine Site (EMS) Features – prohibits bottom towed gear in the Dee Estuary EMS Hilbre Island *Sabellaria alveolata* reef closed area;
- NWIFCA Byelaw Restrictions on the Use of a Dredge – requires a permit to use a dredge for fishing;
- NWIFCA Byelaw Prohibition of Foul Hooking – prohibits the practice of foul hooking of fish;
- NWNWSFC Byelaws 1 – 31 (Welsh Government, 2011): Includes Byelaw 3 (Prohibition of Seine Netting – prohibits anchor seining or fly dragging); Byelaw 5 (permit to fish for cockles and mussels); Byelaw 6 (Shrimp and Prawns – Restriction On Fishing (gear and mesh restrictions, return of by-catch)); Byelaw 8 (Small Mesh Nets – Other Than Trawl Nets); Byelaw 9 (Mechanically Propelled Vessels – prohibits vessels over-15 m from fishing in the area east of Great Ormes Head, with the exception of mussel dredging or rod and line); Byelaw 12 (Restrictions On Fishing For Bivalve Molluscan Shellfish (gear use, minimum size for cockles)); Byelaw 30 (Fishing For Lobster, Crawfish, Crab, Prawn And Whelk (non-licensed catches, permit for pot use)).
- National Rivers Authority (NRA) Byelaw 5 Use of Instruments – introduces spatial and temporal restrictions on the use of different gears (nets, beam trawl length, trawl headline);
- NRA Byelaw 6 Shellfishery Temporary Closure – allows the temporary closure of a shellfish bed from fishing, removal or disturbance;
- NRA Byelaw 12 Use of Nets – Beam Trawl or Otter Trawl – restricts the type and size of trawl that can be used to fish prawns and shrimps;
- Welsh Government Scallop Order 2010: within 0-1 NM of baselines (closed season 1 May to 31 October; gear restrictions; minimum size limit); and
- Cockle Fishery Order 2008 – regulates the exploitation of the cockle fishery (see below).

Cockle Fishery Order

From 1 April 2013, NRW and the Environment Agency became two separate Grantees with responsibility for the management of the fishery pursuant to the Dee Estuary Cockle Fishery Order 2008. NRW became the Grantee in relation to that area of the fishery located in Wales with the Environment Agency the Grantee for that area of the fishery located in England. As Grantees under The Order, NRW and the Environment Agency have powers to regulate the Fishery until 30 June 2028. To ensure continuity of the management and regulation across the Fishery, NRW and the Environment Agency agreed that NRW will take the lead on day-to-day management and regulation of the whole of the fishery. The management plan for the fishery identifies NRW's aims and objectives in the management of the fishery and sets down detailed arrangements for its management of the fishery for cockles (*Cerastoderma edule*) (NRW, 2021).

9.5.2 National policy

Fisheries is a devolved matter and Welsh Ministers have a wide range of functions in relation to freshwater and marine fisheries throughout Wales and the Welsh zone. Responsibility for the administration of freshwater fisheries in Wales is shared between the Welsh Ministers and NRW (Welsh Government, 2021).

The Welsh Government develops central fisheries policies and is responsible for the implementation and enforcement (including bringing prosecutions) of relevant UK and Welsh fisheries legislation. Welsh Ministers have also assumed responsibility for inshore marine fisheries following the abolition of the Welsh Sea Fisheries Committees on 1 April 2010 (Welsh Government, 2021).

Senedd Cymru can pass laws relating to fisheries and fishing in relation to Wales, however, a small number of areas relating to fisheries are still dealt with at a UK level, including the regulation of scientific or other experimental procedures on fish, certain import and export controls and the authorisation of veterinary medicines and medicinal products (Welsh Government, 2021).

2013 Strategic Action Plan for Wales Marine and Fisheries

The 2013 Strategic Action Plan for Wales Marine and Fisheries (Welsh Government, 2013) set out a framework for achieving clean, healthy, safe, productive and biologically diverse seas. For fisheries, this sets out the aim to help build a sustainable industry in a way that does not compromise the future for a healthy and diverse marine environment.

Welsh National Marine Plan (WNMP)

The WNMP (Welsh Government, 2019), in relation to fisheries, sets out an objective 'to support and safeguard a sustainable, diversified and profitable fishing sector including promoting sustainable capture fisheries and optimising the economic value of fish caught as a supply of sustainable protein'. The Plan recognises the diverse nature of the Welsh commercial sea fishing sector, which is predominantly made up of small vessels (under 10 m length) operating from dispersed coastal locations. This makes them particularly constrained and, therefore, vulnerable to disruption and possible displacement. The Plan also recognises the contribution the sector makes to many rural coastal communities, the cultural and heritage linkages, and importance of fish and shellfish to food security.

Policy SAF_01 b of the WNMP seeks to enable established activities to continue and thrive wherever possible. Public authorities should, wherever possible, encourage opportunities for coexistence between established fishing activities and any new proposals. It also recognises that fishing activity is often very localised and dependent upon a particular area or habitat, with opportunities for displacement and permanent relocation of fishing vessels to other areas unlikely to be a viable option for individual fishers. Any disruption to fishing activity, even temporary, may impact upon the financial viability of small, location-based businesses.

The implications of the proposed development on WNMP policies are reviewed in the marine plan conformance assessment included in Appendix 4.1.

9.6 Description of the existing environment

The Welsh commercial sea fishing sector is a diverse industry active across the inshore and offshore regions with most activities occurring within 6 NM of the coast. The focus for most vessels is principally on crustacean and molluscan shellfish but a range of finfish, notably sea bass, plaice, sole and rays are also caught. A thriving recreational sea angling sector also exists in Wales. A particular characteristic of the Welsh fishing sector is that it comprises mainly small businesses operating from the shore or from small vessels (under 10 m length) operating from dispersed coastal locations.

Small vessels and fixed location operations are particularly constrained and, therefore, vulnerable to disruption and possible displacement (Welsh Government, 2019). The WNMP recognises the availability of fishing activity data in inshore waters is a limiting factor in understanding and taking account of the importance of different fishing grounds.

Fisheries in the area that are proposed to be included in a Fisheries Management Plan (FMP) under the UK Fisheries Act 2020 (see Section 9.5) are:

- Bass (all gears), English and Welsh waters;
- Cockles (hand-gathering), Welsh waters; and
- Whelks in Welsh waters (pots and traps), Welsh waters.

9.6.1 Regional overview

Landings of 6,662 tonnes of fish and shellfish, worth £12.3 million, were received at Welsh ports in 2019[1] (MMO, 2020). Excluding Fishguard and Milford Haven, landings into other Welsh ports totalled 3,874 tonnes worth £8.2 million. Landings at these other Welsh ports were dominated by shellfish, specifically whelks, which comprised 69 % of shellfish landings and 64 % of landings for all species (by tonnage). Whelks constituted 45 % of total shellfish value and 40 % of total landings value for all species. Lobsters, scallops and crabs also make up a large proportion of the value of shellfish landings. Demersal and pelagic fish encompassed only 6 % of total landings by volume and 9 % by value, with bass being the most valuable species.

The Port of Mostyn is not a key port for landings of fish and shellfish, having received landings of only 0.19 tonnes of fish and shellfish in 2019 worth a total £1,172 (MMO, 2020).

The Dee Estuary and its vicinity supports a range of fishing types. Of these fisheries, the cockle fishery is the largest that is organised and regulated, spanning both English and Welsh sides of the estuary and managed by NRW on behalf of the Environment Agency. There are also mussel fisheries (mostly on the English side; no mussel fisheries are currently open on the Welsh side), a prawn beam trawl fishery (*Palaemon serratus*) in the gutters on both English and Welsh sides of the estuary, a small stern trawl flounder fishery (that also lands catches of some plaice) in the main channel of the estuary (Welsh waters, prosecuted by Welsh vessels), drift netting for plaice and sole, bass fishing (with seasonal time restrictions) and general angling (R. Sharp & C. Charman, NRW, *pers. comm*.). There is no salmon netting in the estuary.

In total, 64 commercial fishing vessels were registered in the eight ports within the Dee Estuary and nearby coastal areas outside of the estuary in 2022 (Figure 9.1) with approximately 85 % of them belonging to the 10 m or less size class (Table 9.2). According to the MMO (2022) data, there were seven under-10 m vessels registered at the Port of Mostyn, however, none of them operate from the Port (Port of Mostyn, *pers. comm*.). There are further vessels registered in Bagillt (six) and Connahs Quay (eight) within the estuary. For the purpose of the fisheries topic, fishing activity in the study area of the Dee Estuary and its vicinity is defined as that which takes place within ICES rectangle 35E6, irrespective of vessel home port or landing location.

[1] 2020 data are available, but due to the effects of the Covid-19 pandemic on fishing activity, 2020 has not been considered as part of the baseline.

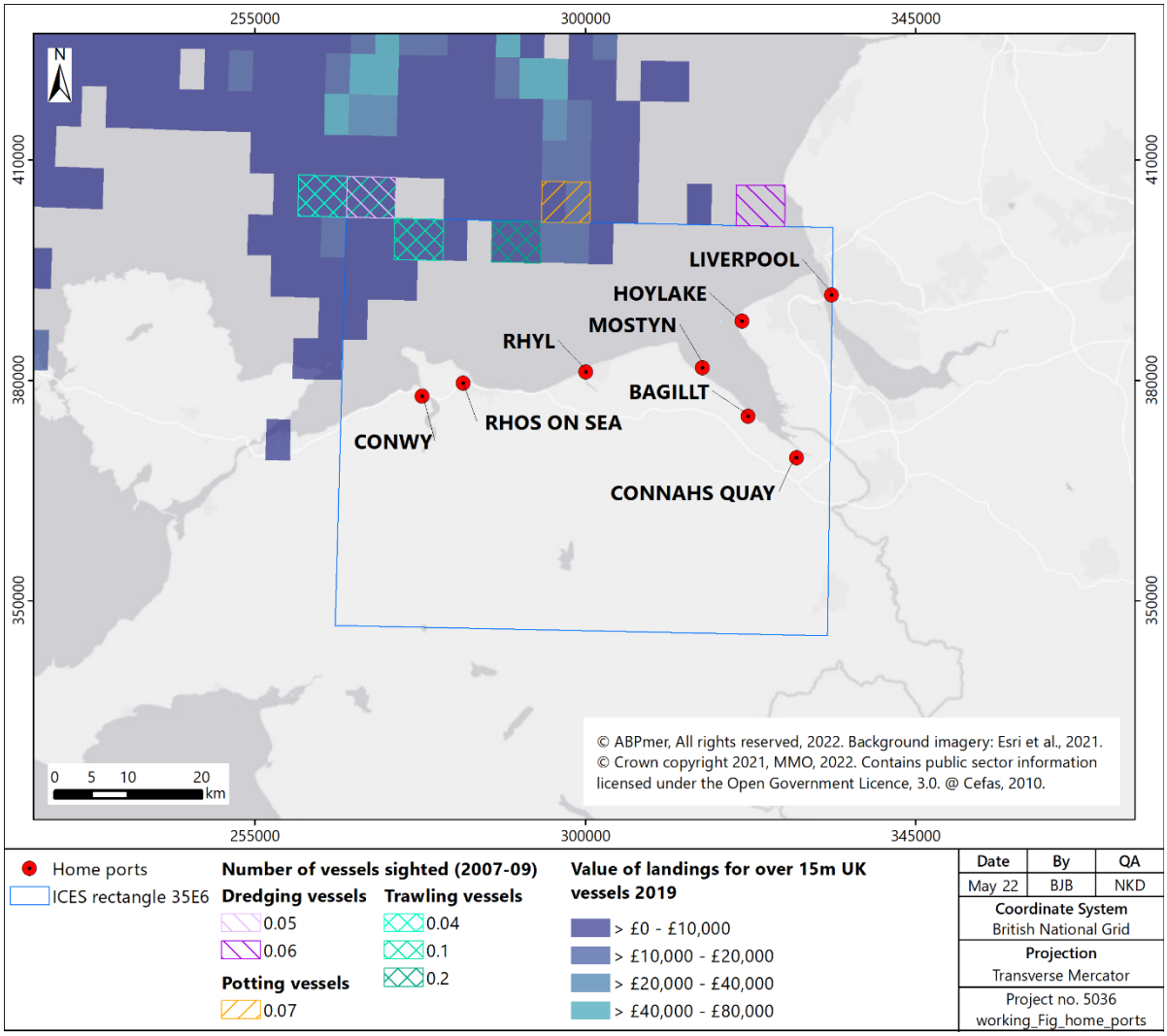

Figure 9.1. **Map illustrating location of ICES rectangle 35E6 in relation to Mostyn and surrounding ports with vessel sightings (2007-2009) and landings (2019)**

Table 9.2. **Number and size class of fishing vessels registered at main fishing ports in the vicinity of the Dee Estuary as of April 2022**

Home Port	Area	10 m and under	Over 10 m
Bagillt	Dee Estuary (Wales)	6	0
Connahs Quay	Dee Estuary (Wales)	8	0
Conway	North Coast (Wales)	14	2
Fleetwood	North Coast (UK)	8	8
Hoylake	Dee Estuary (UK)	1	0
Liverpool	North Coast (UK)	2	0
Mostyn	Dee Estuary (Wales)	7	0
Rhyl	North Coast (Wales)	8	0

Source: UK fishing vessel registry (MMO, 2022)

9.6.2 Fishing activity within ICES rectangle 35E6

In order to characterise the importance of the wider study area for different fishing sectors (e.g. by vessel size and gear type), recent landings and sightings data from ICES rectangle 35E6 were obtained (Figure 9.1). With regard to landings data, the data represent landings by UK registered vessels into UK

and foreign ports, recorded as being caught in ICES rectangle 35E6. Due to the inshore location of the ICES rectangle, no foreign vessels are permitted to fish in this area. A limitation of the data is that not all landings or sales by under 10 m vessels are recorded and, therefore, actual landings may be underrepresented in the data. Additionally, vessel length is only categorised as 10 m and under or over 10 m and, hence, does not enable further breakdown of the data into more specific vessel length categories. ICES rectangle 35E6 extends beyond the Dee Estuary and along the North Wales coast, and, therefore, the data reflect catches from a much wider geographic area than the area likely to be affected by the proposed development. The specific fishing activity that currently takes place within the Dee Estuary is described in Section 9.6.3.

Table 9.3 firstly shows total landed value by year, broken down into vessel length and gear type for ICES rectangle 35E6. The top three gear types for the 10 m and under vessel size class are pots/traps, drift/fixed nets and gears using hooks respectively, with smaller amounts landed by beam trawls and otter trawls. For the over 10 m vessel size class, the main gear types are pots/traps and dredge. It should be noted for the over-10 m vessel size class that gears using hooks, otter trawl and beam trawl have minimal values, and for the 10 m and under, otter trawl and beam trawl landings drop off in 2019 to become minimal also.

Table 9.3. Summary of landed value (£) for UK vessels by year, vessel length and gear type for ICES rectangle 35E6

Vessel Length and Gear Type	Value (£)					
	2016	2017	2018	2019	2020	Grand Total
10 m and under						
Pots and traps	25,669	28,339	86,094	109,452	21,108	**270,663**
Drift and fixed nets	52,142	20,405	17,286	14,684	26,776	**131,293**
Gears using hooks	1,045	3,397	19,824	13,594	21,654	**59,513**
Beam trawl	3,055	11,432	2,130	-	-	**16,616**
Otter trawl	1,782	1,800	2,881	193	284	**6,941**
Total	**83,692**	**65,373**	**128,215**	**137,924**	**69,822**	**485,026**
Over 10 m						
Pots and traps	178,955	125,214	306,180	418,256	837,018	**1,865,623**
Dredge	228,321	57,935	412,808	232,996	76,848	**1,008,908**
Gears using hooks	805	260	57	217	3,663	**5,003**
Beam trawl	-	-	-	-	4,403	**4,403**
Otter trawl	-	-	488	-	-	**488**
Total	**408,081**	**183,409**	**719,532**	**651,470**	**921,932**	**2,884,424**
All vessels						
Total	**491,773**	**248,782**	**847,747**	**789,394**	**991,755**	**3,369,450**
- No landings reported in the statistical dataset						

Source: MMO landings data 2016 to 2020

Landings by gear type have been further broken down in Table 9.4 which illustrates the top five species by value for each category, combined across both vessel size classes for 2016-2020. Whelk landings account for 72 % of those for pots and traps, followed by lobsters (20 %) and common prawns (6 %). Scallops account for virtually all dredge landings (99.9 %), and comprise predominantly king scallop (90.4 %, and 9.6 % of queen scallop), with other species presumably landed as incidental by-catch. Bass account for 39 % of drift and fixed net landings, followed by thornback rays (27 %) and flounder (20 %). Bass are also the top landed species for gears using hooks (57 %), with flounder accounting for 27 % and pollack 7 %. In terms of beam and otter trawl gear types, brown shrimp account for 53 % and 25 %

of landings respectively. Other species of note for these gear types are sole (17 % beam trawl and 23 % otter trawl), thornback ray (28 % otter trawl), plaice (19 % otter trawl), and cockles (25 % beam trawl). Within the cockle fishery, most landings are made by hand and so are not represented in the MMO data.

Table 9.4. Summary of landed value (£) for top five species by gear type, combined for both vessel size classes for ICES rectangle 35E6

Gear type / species	Value (£) 2016 - 2020
Pots and traps	**2,136,285 (all species)**
Whelks	1,539,902
Lobsters	429,358
Common Prawns	117,960
Crabs (C.P. Mixed Sexes)	23,162
Thornback Ray	20,585
Dredge	**1,008,908 (all species)**
King Scallops	912,285
Queen Scallops	96,529
Sole	57
Whelks	25
Brill	8
Drift and fixed nets	**131,293 (all species)**
Bass	51,620
Thornback Ray	36,023
Flounder or Flukes	26,823
Mullet - Other	5,559
Plaice	5,230
Gears using hooks	**64,516 (all species)**
Bass	36,957
Flounder or Flukes	17,686
Pollack	4,803
Mullet - Other	2,700
Sole	1,563
Beam trawl	**21,019 (all species)**
Brown Shrimps	11,143
Cockles	5,286
Sole	3,520
Thornback Ray	314
Brill	228
Otter trawl	**7,429 (all species)**
Thornback Ray	2,054
Brown Shrimps	1,848
Sole	1,685
Plaice	1,431
Bass	194

Source: MMO landings data 2016 to 2020

The top twenty species landed in ICES rectangle 35E6 between 2016 and 2020 are presented in Table 9.5, split for gear type and combined for both vessel size classes. Whelks represent the largest proportion of all landings accounting for 46 % of the total, with king scallop at 27 %, lobster at 13 %,

common prawns at 4 %, queen scallops and seabass at 3%, thornback ray at 2 %, and flounder 1 %. All other species accounted for less than 1 % each.

Table 9.5. Summary of landed value (£) for top twenty species by gear type, combined for both vessel size classes for ICES rectangle 35E6

Species	Value (£) 2016-2020						
	Beam trawl	Dredge	Drift or fixed nets	Gears using hooks	Otter trawls	Pots and traps	Grand total
Whelks	170	25	-	-	-	1,539,902	**1,540,097**
King Scallops	-	912,285	-	-	-	-	**912,285**
Lobsters	-	-	113	72	-	429,358	**429,544**
Common Prawns	-	-	-	-	-	117,960	**117,960**
Queen Scallops	-	96,529	-	-	-	-	**96,529**
Bass	32	-	51,620	36,957	194	-	**88,802**
Thornback Ray	314	-	36,023	9	2,054	20,585	**58,985**
Flounder or Flukes	16	-	26,823	17,686	-	-	**44,526**
Crabs	-	-	-	45	-	23,162	**23,208**
Brown Shrimps	11,143	-	-	-	1,848	2,047	**15,038**
Sole	3,520	57	3,214	1,563	1,685	-	**10,038**
Mullet - Other	-	-	5,559	2,700	-	-	**8,259**
Plaice	69	3	5,230	283	1,431	-	**7,016**
Cockles	5,286	-	1,040	-	-	-	**6,326**
Pollack	-	-	8	4,803	-	1,015	**5,826**
Nephrops	-	-	-	-	74	1,472	**1,546**
Turbot	159	-	1,095	7	-	88	**1,349**
Cod	76	-	327	85	5	44	**537**
Velvet Crabs	-	-	-	-	-	466	**466**
Brill	228	8	-	-	8	38	**281**
Total (all species)	**21,019**	**1,008,908**	**131,293**	**64,516**	**7,429**	**2,136,285**	**3,369,450**

- No landings reported in the statistical dataset

Source: MMO landings data 2016 to 2020

Seasonality within the ICES rectangle 35E6 commercial fisheries (excluding hand harvested molluscs) is illustrated in Image 9.1 (for pots and traps, and dredge – the main gear types) and Image 9.2 (other gear types). Fishing using pots and traps remains relatively high throughout the year, although a peak in landing value occurs between March and May. Dredge activity sees a peak between November and March, with very low landings taking place between May and October.

Of the minor gear types, drift and fixed net activity increases in April from low levels to a peak in June/July, then decreases again to low levels in November until the following year. Gear using hooks follows a similar pattern to drift and fixed nets, although at an overall lower level. Beam and otter trawl gear types remain relatively low all year, although there are small peaks throughout the year at various times.

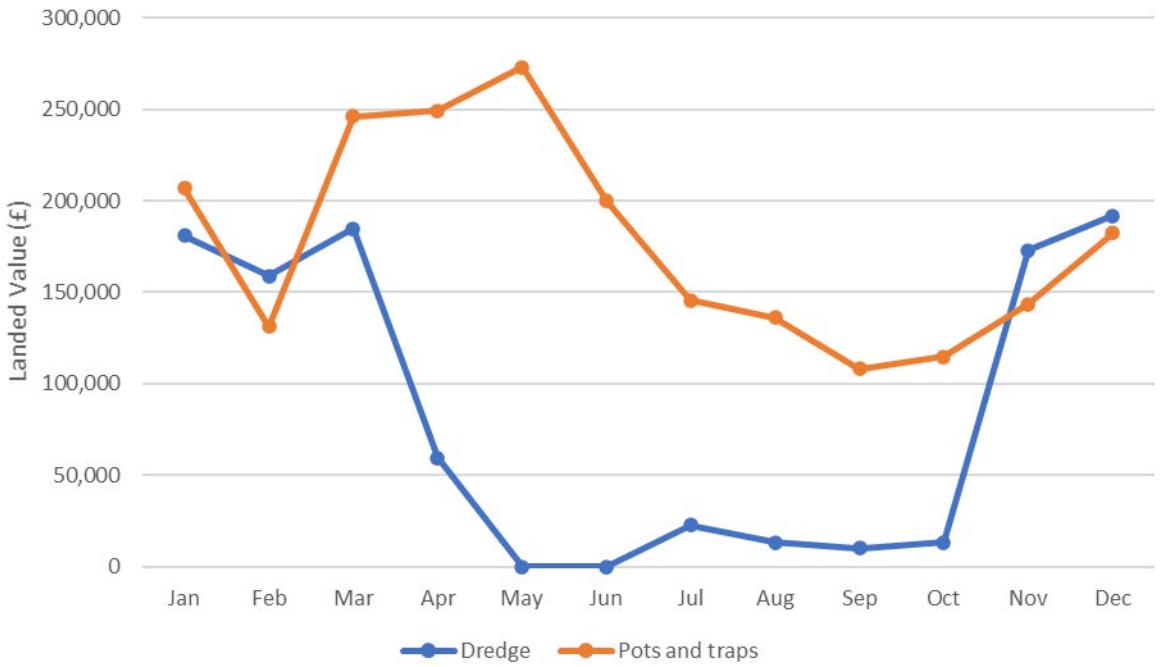

Image 9.1. **Graph depicting seasonal variation in landed value (£) for UK vessels of all species combined for 2016-2020, ICES rectangle 35E6 (higher yield gear types). Source MMO landings data 2016-2020.**

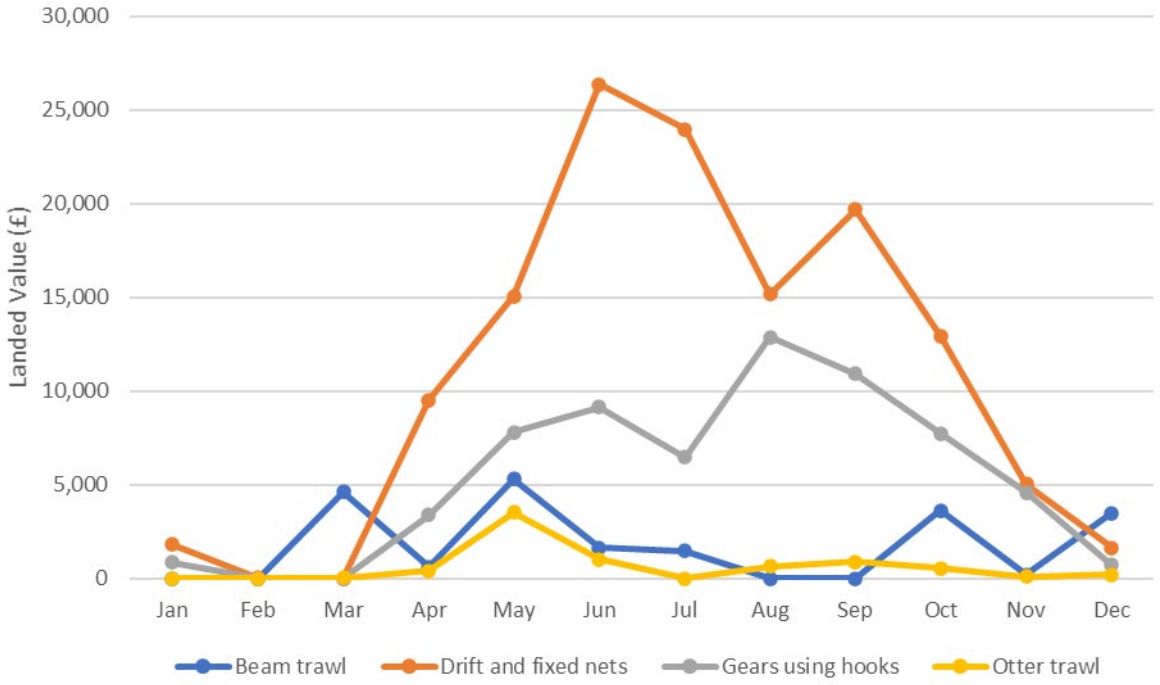

Image 9.2. **Graph depicting seasonal variation in landed value (£) for UK vessels of all species combined for 2016-2020, ICES rectangle 35E6 (lower yield gear types).**

Source MMO landings data 2016-2020.

9.6.3 Specific fisheries in the Dee Estuary

Cockle Fishery

The cockle fishery is located in the Dee Estuary between North Wales and Wirral. It is defined to the north by a line drawn between Red Rocks, northern most point of Hilbre Island and the old lighthouse, point of Ayr, and to the south by a line drawn at right angles to the training wall intersecting the Flint channel light. Within the estuary there are currently nine cockle beds in the fishery (Image 9.3), namely West Kirby, Thurstaston, Mostyn, Mostyn Deep, Talacre, Caldy, No.3 Buoy, Salisbury Middle and Salisbury. These beds vary spatially according to spatfall, exploitation, sediment changes and other external factors and it is possible that beds may change in the future. The total area of the fishery, below mean high water springs (MHWS) is 10,656 hectares (NRW, 2021).

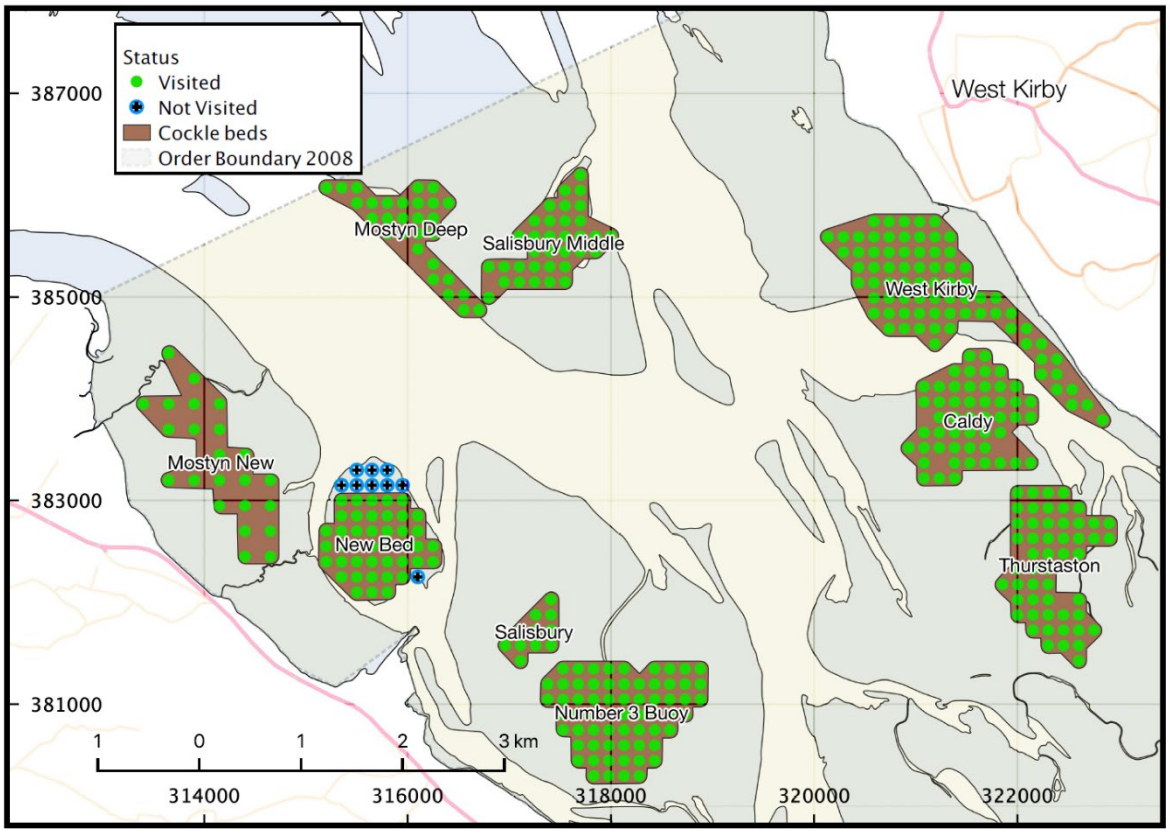

Image 9.3. Location of the cockle beds in the Dee Estuary (NRW, 2022)

The sustainability of the fishery is managed by quotas set by NRW which are generally based on up to 30 % of the available stock being allocated for harvesting (NRW, 2021). Around fifty individual cockle licences are issued annually which entitle the holders to take up to 300 kg of cockles per day each during the open season from 1 July until 31 December. Cockle beds can be accessed by foot, by motorised vehicle, or by boat (during the cockling season an average of 25 small boats, usually under 10 m in length), the latter in particular for beds in the middle of the estuary. However, harvesting of cockles takes place by hand. In terms of licence holders, 54 active licences have been issued between 2020 and 2022, with 53 in the years prior (NRW *pers. comm.*). Table 9.6 shows landings from the cockle fishery between 2008 and 2021.

Table 9.6. Annual landings from the cockle fishery in the Dee Estuary 2008 to 2021 (NRW pers. comm.)

Year	Landings (tonnes)
2021	2,403
2020	2,483
2019	2,224
2018	240
2017	1,303
2016	1,694
2015	245
2014	1,557
2013	545
2012	820
2011	1,250
2010	657
2009	1,279
2008	1,073

The latest cockle survey report (NRW, 2022) shows the highest biomasses of cockles on West Kirby and Caldy beds, and additionally in 'New Bed' which is located between the Mostyn and Salisbury channels. Correspondingly, the beds on the east and middle of the estuary are designated as Shellfish Production Areas, and the Mostyn and Talacre beds (now combined into 'Mostyn New' bed) have been declassified[2], indicating that harvest for consumption cannot take place from these beds (Table 9.7). Permit holders are permitted to harvest from New Bed (which is within the Salisbury classified Shellfish Production Area, and this is the main bed that they have been harvesting from in 2022 (NRW, *pers. comm.*).

Table 9.7. Shellfish Classifications in the Dee Estuary for C. edule

Designated Use	Classification Zone	Classification	Local Authority	RMP ID	RMP Name
Production	Salisbury	A	Flintshire CC & Wirral BC	B45AB	Salisbury Cockles
Production	Salisbury Middle	A	Flintshire CC & Wirral BC	B45AB	Salisbury Cockles
Production	Caldy Blacks	B-LT	Flintshire CC & Wirral BC	B45AD	Thurstaston
Production	Thurstaston	B-LT	Flintshire CC & Wirral BC	B45AD	Thurstaston
Production	West Kirby	B-LT	Flintshire CC & Wirral BC	B45AE	West Kirkby Cockles
Declassified*	Mostyn & Talacre	N/A	Flintshire CC	B45AC	Mostyn/Talacre (*C. ed*)

* Bed declassified because an insufficient number of samples were received covering the review year, or for those beds that were declassified due to lack of commercial interest that are not being monitored at all (this is allowed for up to 2 years).

[2] A bed is declassified either because an insufficient number of samples were received covering the review year, or because of a lack of commercial interest resulting in the bed not being monitored at all (this is allowed for up to 2 years).

Article 4 of the Dee Estuary Cockle Fishery Order 2008 states that: No person may dredge, fish for or take cockles within the fishery unless they do so under the terms of (i) a licence issued by the grantee; or (ii) an authorisation under article 6. This does not apply to any person who (iii) takes by hand not more than five kilograms in live weight of cockles from the fishery in any one day for personal consumption; or dredges, fishes for or takes cockles in pursuance of the provision made under section 3(1)(c) of the Act [the propagation of shellfish].

Key restrictions and regulations on harvesting cockles that are set out in the Order are:

- The method shall be restricted to hand-gathering only with a rake head not exceeding 30 centimetres in width;
- Only cockles which are retained by a gauge having a square opening of 20 mm along each side of the square can be taken;
- No mechanically driven vehicles are permitted on the Fishery without the prior written consent of the Landowner and grantees;
- No vessels greater than 10 metres may be used for the purpose of removing or receiving cockles and must be operated solely by a licence holder, except with the written approval of the grantees for the purpose of ensuring the safe navigation of the vessel;
- Annual close season shall be from the 1st day of January to the 30th of June following;
- No fishing for cockles between one hour after sunset and one hour before sunrise;
- There shall be a weekly closed period on Sundays unless so directed by the grantees;
- Except in emergencies or unless otherwise agreed by the grantees, no person may access the fishery for the purpose of dredging, fishing for or taking cockles, or leave the fishery after cockling, except (i) at points above mean high water, and at times, which may be designated by the grantees from time to time; and (ii) in compliance with the terms and conditions of any such agreement given by the grantees; and
- The grantees may, in writing, exempt any person from any regulation or restriction if it is necessary for the purpose of preserving, improving, or developing the fishery or for scientific, stocking or breeding purposes.

Other fisheries in the estuary (mussels, trawl, net, prawn beam trawl)

There are NWIFCA licensed mussel beds on the English side of the Dee Estuary. Although there is no recognised mussel fishery on the Welsh side, some fishermen report the presence of a mussel bed that they would like to collect from. However, no shellfish classification currently exists, and it is not clear whether the bed will be able to form a viable mussel fishery.

Other small and sometimes seasonal fisheries operate in the Dee Estuary including: a prawn beam trawl fishery (*Palaemon serratus*) in the gutters on both English and Welsh sides of the estuary between March to May and August to November; a small stern trawl flounder fishery (that also lands catches of some plaice) in the main channel of the estuary (Welsh waters, prosecuted by Welsh vessels); drift netting for plaice and sole; and bass fishing. Bass fishing from a vessel is not permitted in any tidal waters between Hilbre Point and Mostyn from June to September. Local legislation states that trammel nets may be used between Saltney and Ferry Footbridge between 31 August and 1 February, and further downriver all year round from Flint Channel to the Funship (three hours before and three hours after high water (HW) provided the net remains fastened to the boat throughout) (NRA Byelaw 5). There is no salmon netting in the estuary (R. Sharp & C. Charman, NRW, *pers. comm*.).

Activity within ICES rectangle 35E6 (Image 9.2) for drift and fixed nets exhibit a seasonal peak between April and October, with gears using hooks following a similar pattern albeit less pronounced. This activity may not, however, reflect specific patterns within the estuary itself.

There are a small number of trawlers from Connahs Quay that may trawl in the estuary from March to July when the cockle fishery is not open and they are not fishing for other species outside the estuary (R. Sharp, NRW, *pers. comm.*).

Recreational angling

Recreational angling takes place mostly from the shore (only rarely from angling vessels) for a variety of species such as whiting, bass, flounder and plaice. The main area is east of the Port of Mostyn, between the bay upstream from the Port of Mostyn and the TSS Duke of Lancaster Funship. There is also some angling towards the mouth of the Dee Estuary at Talacre, and on the English side around West Kirby. Angling also takes place further upstream between Greenfield and Connahs Quay (R. Sharp, NRW, *pers. comm.*). The mud and sand flats of the estuary also provide areas for bait collection by recreational anglers who take species such as lugworm and ragworm. For reasons of safety and port security, fishing activities are not allowed from the entire Statutory Harbour Area (SHA).

9.6.4 Future baseline

In the absence of the MEPE project, fisheries receptors will continue to be influenced by natural and human-induced variability, ongoing cyclic patterns and trends (e.g. vessel movements). The future baseline will also be influenced by climate change, ocean acidification and increases in non-native species. These could lead to changes in distribution, abundance, health and reproduction in target finfish and shellfish species, potentially affecting stocks.

In terms of the EU-UK Trade and Cooperation Agreement (TCA) that has been negotiated as part of Brexit, the pattern of fishing by EU and UK vessels is not anticipated to change significantly. Access to the 6 to 12 NM zone off northern Wales for Irish and French vessels ceased on 1 January 2021. Under the TCA, the UK will receive higher quota shares for some stocks, phased in over a five-year period (ABPmer, 2021). There are no tariffs on fish and fisheries products, although additional trade (non-tariff) barriers, such as catch certificates and other paperwork will have to be completed. There is also a ban on exports to the EU of bivalve molluscs from Class B or C waters.

9.7 Impact assessment

This section identifies the potential likely effects on fisheries receptors as a result of the construction and subsequent operation of the MEPE Project.

Recreational angling is all shore-based and will not be susceptible to vessel movements obstructing navigation routes to fishing grounds or disrupting or obstructing fishing activities. Furthermore, the recreational angling areas do not overlap with any of the elements of the MEPE Project. There is, therefore, considered to be no potential interference and no loss of or restricted access to recreational angling areas. In other words, there will be **no impact** on recreational angling and this receptor has been scoped out of further assessment.

The following impact pathways have been assessed:

Construction phase:

- Interference with fishing activities due to vessel movements obstructing navigation routes to fishing grounds;
- Interference with fishing activities due to vessel movements disrupting or obstructing fishing activities;
- Loss of or restricted access to fishing grounds; and
- Potential indirect impacts on stocks of target finfish and shellfish species.

Operational phase:

- Potential indirect impacts on stocks of target finfish and shellfish species.

In addition, the potential risks to human health, the potential impacts on climate and the vulnerability of the proposed development to climate change, as well as to risks of major accidents and/or disasters have been considered in the context of the potential likely effects on fisheries.

Cumulative impacts on fisheries could arise as a result of other coastal and marine developments and activities. These have been considered as necessary as part of the cumulative impacts and in-combination effects assessment included in Chapter 13 of this ES.

9.7.1 Interference with fishing activities due to vessel movements obstructing navigation routes to fishing grounds during construction

Cockle fishery

The cockle fishery in the Dee Estuary is undertaken by hand, but vessels may be used to reach the cockle beds. There is the possibility of interference during construction due to vessel movements obstructing navigation routes, although this will be temporary and will be managed by ongoing operational controls, including providing Local Notices to Mariners, in accordance with the Port of Mostyn's and Dee Conservancy's Marine Safety Management System (SMS).

The probability of occurrence is considered medium, and magnitude of change small, leading to a low/negligible exposure to change. Based on the fishery's defined fishing grounds, the sensitivity of the feature is considered to be moderate, leading to low vulnerability. The cockle fishery is a key fishery in the region and, therefore, its importance is considered to be moderate. Overall, the potential interference within cockle fishing activities is assessed as **insignificant to minor adverse**.

Other fisheries in the Dee Estuary

Small and sometimes seasonal fisheries exist within the Dee Estuary, including a prawn beam trawl fishery on both English and Welsh sides of the estuary, a small stern trawl flounder fishery (that also lands catches of some plaice) in the main channel of the estuary (Welsh waters), drift netting for plaice and sole, and bass fishing. There is the possibility of interference to these fisheries during construction due to vessel movements obstructing navigation routes, although this will be temporary and will be managed by ongoing operational controls, including providing Local Notices to Mariners, in accordance with the Port of Mostyn's and Dee Conservancy's Marine SMS.

The probability of occurrence is considered low, and magnitude of change is small, leading to a negligible exposure to change. Given that the fisheries have some flexibility in where they fish in the estuary, the sensitivity of the feature is considered to be low and the importance of these fisheries is considered to be low, as they are generally seasonal and small scale. The low sensitivity and negligible exposure to change results in no vulnerability and, therefore, the potential interference with other fisheries in the Dee Estuary is assessed as **insignificant**.

9.7.2 Interference with fishing activities due to vessel movements disrupting or obstructing fishing activities during construction

Cockle fishery

The cockle fishery is harvested by hand (i.e. when the beds are exposed at lower states of the tide) and so will not be susceptible to vessel movements disrupting or obstructing fishing activities. There is,

therefore, considered to be no potential interference and **no impact** on cockle harvesting activities during construction.

Other fisheries in the Dee Estuary

The dredging of the main navigation channel during the construction phase of the MEPE Project has the potential to interfere with other fisheries in the Dee Estuary due to the dredger movements disrupting or obstructing fishing activities. The impact will be temporary and will be managed by ongoing operational controls, including providing Local Notices to Mariners, in accordance with the Port of Mostyn's and Dee Conservancy's SMS. Furthermore, vessels will follow existing regulations, such as Collision Regulations (COLREG) which requires smaller vessels to give way to larger vessels.

The probability of occurrence is considered medium, and magnitude of change small, leading to a low/negligible exposure to change. Given that the fisheries have some flexibility in where they fish in the estuary, the sensitivity of the feature is considered to be low and the importance of these fisheries are considered to be low, as they are generally seasonal and small scale. The low sensitivity combined with low/negligible exposure to change will result in low/no vulnerability. The potential interference with other fisheries in the Dee Estuary is, therefore, assessed as **insignificant**.

9.7.3 Loss of or restricted access to fishing grounds during construction

Cockle fishery

The main cockle fishery areas are unlikely to overlap with the construction elements of the MEPE Project, including the dredging of the main navigation channel, and so there will be no loss of or restricted access to fishing grounds during the construction phase.

The probability of occurrence and magnitude of change are both considered negligible, leading to a negligible exposure to change. Based on the cockle fishery's defined fishing grounds, the sensitivity of the feature is considered to be moderate, and the importance of the cockle fishery is considered to be moderate, as it is an important fishery in the region. Despite the moderate sensitivity and importance of the cockle fishery, the negligible exposure to change will result in no vulnerability of the feature to impact and, therefore, the loss of or restricted access to other cockle fishing grounds is assessed as **insignificant**.

Other fisheries in the Dee Estuary

The dredging of the main navigation channel during the construction phase of the MEPE Project is unlikely to overlap with fishing grounds aside from a small possibility of interference with the prawn beam trawl fishery on the Welsh side of the estuary. However, this will be temporary and will be managed by ongoing operational controls, including providing Local Notices to Mariners, in accordance with the Port of Mostyn's and Dee Conservancy's SMS.

The probability of occurrence is considered to be medium, and magnitude of change will be small, leading to a low/negligible exposure to change. Given that the fisheries have some flexibility in their fishing grounds, the sensitivity of the feature is considered to be low, and the importance of these fisheries are considered to be low, as they are generally seasonal and small scale. The low sensitivity and low importance of these fisheries, combined with the low/negligible exposure to change will result in low/no vulnerability. The loss of or restricted access to other fishing grounds is, therefore, assessed as **insignificant**.

9.7.4 Potential indirect impacts on stocks of target finfish and shellfish species during construction

Cockle fishery

The outputs from the fish and shellfish assessment (Nature Conservation and Marine Ecology, Chapter 8) indicate that there are unlikely be significant indirect impacts on the cockle fishery during the construction phase, with predicted sediment deposition levels within the range of natural variability and potential effects due to habitat loss or change on commercially exploited shellfish beds anticipated to be negligible. Changes in water and sediment quality during capital dredging and dredge disposal were also assessed as insignificant. The overall potential residual impacts on fish and shellfish populations were considered to be insignificant to minor adverse.

Any sediment-bound pathogens that are released into the water column during construction could potentially affect the classification of the shellfish beds and result in additional treatment being required. However, it should be noted that the majority of material disturbed during capital dredging works involving the cutter suction dredger will be sucked and discharged directly to the reclamation area to be reused as fill via a floating pipeline. The trailing suction hopper dredger (TSHD) uses suction to raise loosened material from the bed through a pipe connected to a centrifugal pump. Suction alone may not be sufficient to remove the sand and, therefore, the dredger draghead is often used to help loosen these sediments. Only a small proportion of the disturbed material during either method of dredging is raised into suspension and remains in the water column (i.e. through abrasion pressure from the cutter or draghead).

The level of pathogens in the material that will be disturbed during construction is anticipated to be negligible to low given that there are no nearby sources of contamination. Only a small proportion of disturbed material during construction is expected to be raised into suspension and this material will be rapidly dispersed by strong tidal currents in the area. Significant elevations of contamination in the water column are, therefore, not anticipated. Furthermore, ongoing existing dredging and disposal activity has never raised an issue in terms of the classification of nearby shellfish beds.
Based on all these consideration, the overall exposure to change is considered to be negligible to low. The moderate sensitivity of the cockle fishery due to its defined fishing grounds, leads to a low vulnerability. As it is an important fishery in the region, it is considered to be of moderate importance, and therefore the potential indirect impacts on cockle stocks are assessed as **insignificant to minor adverse**.

Other fisheries in the Dee Estuary

The outputs from the fish and shellfish assessment (Nature Conservation and Marine Ecology, Chapter 8) indicate that there is minimal risk of indirect impacts on stocks of target finfish and shellfish during the construction phase. The overall potential residual impacts on fish and shellfish populations following the application of mitigation measures were considered to be insignificant to minor adverse.

A low exposure to change, based on the outcome of the assessment of fish and shellfish populations, and low sensitivity of the feature due to some flexibility in fishing grounds, leads to a low vulnerability. The importance of these fisheries is considered to be low, as they are generally seasonal and small scale, and therefore potential indirect impacts stocks of other fisheries is assessed as **insignificant**.

9.7.5 Potential indirect impacts on stocks of target finfish and shellfish species during operation

Cockle fishery

The outputs from the fish and shellfish assessment (Nature Conservation and Marine Ecology, Chapter 8) indicate that there are unlikely to be significant indirect impacts on the cockle beds during the operational phase of the MEPE Project.

The probability of occurrence and magnitude of change are both considered negligible, leading to a negligible exposure to change. Based on the fishery's defined fishing grounds, the sensitivity of the feature is considered to be moderate, and the importance of the cockle fishery is considered to be moderate, as it is an important fishery in the region. Despite the moderate sensitivity and importance of the cockle fishery, the negligible exposure to change will result in no vulnerability of the feature to impact and, therefore, the potential indirect impacts on cockle stocks are assessed as **insignificant**.

Other fisheries in the Dee Estuary

The outputs from the fish and shellfish assessment (Nature Conservation and Marine Ecology, Chapter 8) indicate that there is minimal risk of indirect impacts on stocks of target finfish and shellfish during the operational phase.

The probability of occurrence and magnitude of change are both considered negligible leading to a negligible exposure to change. The low sensitivity and low importance of the feature, combined with the negligible exposure to change, result in the potential indirect impacts on stocks of other fisheries being assessed as **insignificant**.

9.7.6 Potential risks to human health

The impacts on fisheries receptors that will result from the construction and operation of the MEPE Project are such that they are not anticipated to cause a potential risk to human health.

9.7.7 Potential impacts on climate and vulnerability of proposed development to climate change

The impacts on fisheries receptors that will result from the construction and operation of the MEPE Project are such that they are not anticipated to cause a consequent effect on climate or change the vulnerability of the proposed development to climate change.

9.7.8 Risks of major accidents and/or disasters

The impacts on fisheries receptors that will result from the construction and operation of the MEPE Project are such that they are not anticipated to cause any increased risk of a major accident and/or disaster occurring.

9.8 Mitigation and residual impacts

9.8.1 Secondary mitigation

None of the impact pathways identified for fisheries receptors are expected to give rise to significant adverse effects and, therefore, no secondary mitigation measures are required (i.e. actions that will

require further activity in order to achieve the anticipated outcome and identified as necessary through the assessment process).

9.8.2 Tertiary mitigation

Tertiary mitigation measures (i.e. actions that would occur with or without input from an environmental impact assessment process) will be undertaken to manage commonly occurring environmental effects. Although these are not likely to alter the assessment conclusions, they are considered to be standard good practice. In terms of fisheries, these are as follows:

- **Marine Safety Management System (SMS)**: the potential interference with fishing activities and loss of or restricted access to fishing grounds during construction will be managed by following the existing Port of Mostyn's and Dee Conservancy's Marine SMS, including issuing Local Notices to Mariners. Further details on the SMS are included in the commercial and recreational navigation assessment (Chapter 10).

9.9 Summary of impacts

A summary of the impact pathways that have been assessed, the identified residual impacts and level of confidence is presented in Table 9.8.

The significance of the pathways has been assessed as either insignificant or insignificant to minor adverse. Those assessed as insignificant to minor adverse are expected to be temporary at worst and will be managed through existing standard operating controls, such as the issuing of Local Notices to Mariners, which will minimise disruption and facilitate planning. The residual impacts to fisheries receptors will, therefore, be insignificant to minor adverse.

The data which this assessment is based on include a range of information, including MMO and NRW data, and regional studies. However, the uncertainties are recognised, including with regards to cockle landings which, due to the hand capture nature of this fishery, may not be fully represented in the ICES rectangle data. Additionally, data on recreational fisheries is relatively sparse. For commercial fisheries and shellfisheries, different sources have been used to collate information, but there are limitations in correlating such data particularly considering the dynamic and variable nature of the industry, and the spatial resolution of the data compared to the study area for the project.

Table 9.8. Summary of potential impact, mitigation measures and residual impacts for fisheries

Receptor	Impact Pathway	Impact Significance	Mitigation Measures	Residual Impact	Confidence
Construction phase					
Cockle fishery	Interference with fishing activities due to vessel movements obstructing navigation routes to fishing grounds during construction	Insignificant to minor adverse	N/A	Insignificant to minor adverse	Medium
	Interference with fishing activities due to vessel movements disrupting or obstructing fishing activities during construction	No impact	N/A	No impact	Medium
	Loss of or restricted access to fishing grounds during construction	Insignificant	N/A	Insignificant	Medium
	Potential indirect impacts on stocks of target finfish and shellfish species during construction	Insignificant to minor adverse	N/A	Insignificant to minor adverse	Medium
Other fisheries	Interference with fishing activities due to vessel movements obstructing navigation routes to fishing grounds during construction	Insignificant	N/A	Insignificant	Medium
	Interference with fishing activities due to vessel movements disrupting or obstructing fishing activities during construction	Insignificant	N/A	Insignificant	Medium
	Loss of or restricted access to fishing grounds during construction	Insignificant	N/A	Insignificant	Medium
	Potential indirect impacts on stocks of target finfish and shellfish species during construction	Insignificant	N/A	Insignificant	Medium
Operational phase					
Cockle fishery	Potential indirect impacts on stocks of target finfish and shellfish species during operation	Insignificant	N/A	Insignificant	Medium
Other fisheries	Potential indirect impacts on stocks of target finfish and shellfish species during operation	Insignificant	N/A	Insignificant	Medium

9.10 References

ABPmer (2021). White Paper: EU-UK Trade and Cooperation Agreement. Thoughts on Fisheries from a UK Perspective. January 2021. Available at https://www.abpmer.co.uk/media/3467/white-paper-eu-uk-trade-and-cooperation-agreement.pdf. (accessed November 2022)

Defra (2022). Consultation on the draft Joint Fisheries Statement, January 2022. Available at: https://consult.defra.gov.uk/sustainability-devolution-and-legislation-team/jfs/ (accessed November 2022)

Kingfisher (2021). Seafish Kingfisher Information Service. UK Fishing Restrictions. Online resource. Available at: https://kingfisherrestrictions.org/. (accessed November 2022)

MMO (2020). UK sea fisheries annual statistics report 2019. Available at: https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2019 (accessed November 2022)

- MMO (2022) UK fishing vessel registry. Available at: https://www.gov.uk/government/collections/uk-vessel-lists (accessed November 2022)
-

NRW (2016). Dee Estuary Cockle fishery overview. Summary report produced by Natural Resources Wales (unpublished).

NRW (2021). Dee Estuary Cockle Fishery Order (2008) management plan. Available at: https://naturalresources.wales/about-us/strategies-and-plans/dee-estuary-cockle-fishery-order-2008-management-plan/?lang=en (accessed November 2022)

NRW (2022). Dee Estuary Cockle Stock Assessment Spring 2022. Report produced by Natural Resources Wales (unpublished draft).

Port of Mostyn (2013). Mostyn Energy Park Development at the Port of Mostyn. Environmental Statement Volume 1 - EIA Text July 2013.

UK Government (2020). Fisheries Act 2020. Available at: https://www.legislation.gov.uk/ukpga/2020/22/contents/enacted (accessed November 2022)

Welsh Government (2011). Inshore Fishery Legislation (North Wales , 0-6 nautical miles). Available at: https://gov.wales/sites/default/files/publications/2018-05/inshore-fishery-legislation-definitions-of-north-and-north-west-inshore-district-byelaws.pdf (accessed November 2022)

Welsh Government (2013). Wales Marine and Fisheries Strategic Action Plan. Available at: https://gov.wales/sites/default/files/publications/2018-05/strategic-action-plan-for-marine-and-fisheries.pdf. (accessed November 2022)

Welsh Government (2019). Welsh National Marine Plan. Available at: https://gov.wales/welsh-national-marine-plan-document. (accessed November 2022)

Welsh Government (2021). Law Wales: Fisheries. Webpage: law.gov.wales/environment/fisheries. Published 16 March 2021, last updated 21 October 2021. (accessed November 2022)

9.11 Abbreviations/Acronyms

BC	Borough Council
CC	County Council
COLREG	Collision Regulations
EIA	Environmental Impact Assessment
EMS	European Marine Site
ES	Environmental Statement
EU	European Union
FMP	Fisheries Management Plan
HW	High Water
ICES	International Council for the Exploration of the Sea
ID	Identification
IFCA	Inshore Fisheries and Conservation Authority
JFS	Joint Fisheries Statement
LT	Long Term
MEPE	Mostyn Energy Park Extension
MHWS	Mean High Water Springs
MMO	Marine Management Organisation
NM	Nautical mile
NRA	National Rivers Authority
NRW	Natural Resources Wales
NWIFCA	North Western Inshore Fisheries and Conservation Authority
NWNWSFC	North Western and North Wales Sea Fisheries Committee
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
RMP	Representative Monitoring Point
SAF	Safeguarding
SHA	Statutory Harbour Area
SI	Statutory Instrument
SMS	Safety Management System
TCA	Trade and Cooperation Agreement
TSHD	Trailing Suction Hopper Dredger
TSS	Twin-screw steamship
UK	United Kingdom
WFA	Welsh Fishermen's Association
WGMFD	Welsh Government Marine and Fisheries Division
WNMP	Welsh National Marine Plan

Cardinal points/directions are used unless otherwise stated.

SI units are used unless otherwise stated.

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