Fisheries in EMS Habitats Regulations Assessment for Amber and Green risk categories

NWIFCA-ME-SPA-005
Date completed: 16/09/2016
Completed by: Belinda Vause

Site:	**Mersey Estuary**
European Designated sites:	UK9005131 Mersey Estuary Special Protection Area
	UK11041 Mersey Estuary Ramsar
European Marine Site	**Mersey Estuary**

Qualifying Feature(s):
SPA and Ramsar
A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
A052 *Anas crecca*; Eurasian teal (Non-breeding)
A054 *Anas acuta*; Northern pintail (Non-breeding)
A140 *Pluvialis apricaria*; European golden plover (Non-breeding)
A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
A162 *Tringa totanus*; Common redshank (Non-breeding)
Waterbird assemblage

Site Sub-feature(s):
SPA and Ramsar
Supporting Habitats: Intertidal rock, intertidal biogenic reef – mussel beds, intertidal sand and muddy sand, intertidal mud, intertidal mixed sediment, saltmarsh (Atlantic salt meadows and Salicornia and other annuals)

Generic sub-feature(s): Estuarine birds, Intertidal mud and sand, Intertidal boulder and cobble reef, Saltmarsh spp.

High Level Conservation Objectives:

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified and the Ramsar Site and the wetland habitats and/or species for which the site has been listed (the 'Qualifying Features' listed above), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive and ensure that the site contributes to achieving the wise use of wetlands across the UK, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Fishing activities assessed:

Gear type(s):

- **Drift nets (demersal)**
  N.B. Drift nets (pelagic) are classified as a blue risk interaction on the matrix
- **Static fixed nets**

1. Introduction

1.1 Need for an HRA assessment

In 2012, the Department for Environment, Food and Rural Affairs (Defra) announced a revised approach to the management of commercial fisheries in European Marine Sites (EMS). The objective of this revised approach is to ensure that all existing and potential commercial fishing activities are managed in accordance with Article 6 of the Habitats Directive.

This approach is being implemented using an evidence based, risk-prioritised, and phased basis. Risk prioritisation is informed by using a matrix of the generic sensitivity of the sub-features of EMS to a suite of fishing activities as a decision making tool. These sub-feature-activity combinations have been categorised according to specific definitions, as red, amber, green or blue.

Activity/feature interactions identified within the matrix as red risk have the highest priority for implementation of management measures by the end of 2013 in order to avoid the deterioration of Annex I features in line with obligations under Article 6(2) of the Habitats Directive.

Activity/feature interactions identified within the matrix as amber risk require a site-level assessment to determine whether management of an activity is required to conserve site features. Activity/feature interactions identified within the matrix as green also require a site level assessment if there are “in combination effects” with other plans or projects.

Some European Sites within the NWIFCA District consist of features that are not fully marine (e.g. sand dunes) and therefore fall outside of the EMS Review process. They have not been included in the original risk matrix. Due to the nature of some of the fisheries in the District, particularly intertidal fisheries, the NWIFCA has adopted the approach of carrying out full HRA on all the features (including non-marine) within European Sites to ensure that any potential risk from fishing activity has been identified and assessed.

Site level assessments are being carried out in a manner that is consistent with the provisions of Article 6(3) of the Habitats Directive, that is to determine that fishing activities are not having an adverse effect on the integrity of the site, to inform a judgement on whether or not appropriate steps are required to avoid the deterioration of natural habitats and the habitats of species as well as disturbances of the species for which the areas have been designated, in so far as such disturbance could be significant in relation to the objectives of this directive.

If measures are required, the revised approach requires these to be implemented by the end of 2016.

The purpose of this site specific assessment document is to assess whether or not in the view of NWIFCA the fishing activity of demersal drift nets and static fixed nets has a likely significant effect on the qualifying features of the Mersey Estuary SPA and on the basis of this assessment whether or not it can be concluded that demersal drift nets and static fixed nets will not have an adverse effect on the integrity of this European Site.

1.2 Documents reviewed to inform this assessment

- Natural England's risk assessment Matrix of fishing activities and European habitat features and protected species[1]
- Reference list2 (Annex 1)
- Natural England's consultation advice (Annex 2)
- Site map (Annex 3)
- Broad scale habitat map (sub-feature/feature location and extent) and fishing activity (Annex 4)

2. Information about the EMS

(See cover pages)

3. Interest feature(s) of the EMS categorised as 'Red' risk and overview of management measure(s) (if applicable)

No interest features of the EMS categorised as 'Red' risk.

4. Information about the fishing activities within the site

At any one time there can be up to 3 commercial netting boats operating within the Mersey Estuary SPA. These vessels are 5 to 6m in length and are operated by 1 or 2 people. These vessels are operated by full time fishermen who are variable and opportunistic in their fishing practices i.e. targeting different species utilising different methods in different localities according to resource availability and market demand. It is estimated that on average each of these commercial vessels will engage in netting within the Mersey Estuary SPA 35 times a year. The vessels are moored at New Brighton or removed from the water and launched from a trailer. The activities of demersal drift netting and static fixed netting are undertaken by the same fishers and the fishers only engage in one activity, or the other, at any one time. All local fishing activity information has been collated from two local Inshore Fisheries and Conservation Officers whom have 6 years' and 29 years' experience as a local Fisheries Officer in this area.

Drift Nets (demersal)

Drift nets are mobile nets that are not fixed or set in any way; instead they drift with prevailing currents and tide, catching fish by entangling. The demersal drift nets used in the Mersey SPA are monofilament diamond mesh (mesh size >100mm), 2-5m in height and 100-300m in length. The footrope of the net is made from lead line so it sinks and the head line has small floats attached making it neutrally buoyant, thus during fishing the net occupies the water column from the seabed to 2-5m above the seabed. A fisherman on-board the vessel holds the headline of the net to 'feel' for the catch, thus, the net is effectively attached to the vessel. Upon feeling a fish swim into the net, the net is hauled in, the fish is removed and the net is deployed again. Only one net can be fished at any one time and usually only one fish is caught per haul.

[1] See Fisheries in EMS matrix: http://www.marinemanagement.org.uk/protecting/conservation/documents/ems_fisheries/populated_matrix3.xls

[2] Reference list will include literature cited in the assessment (peer, grey and site specific evidence e.g. research, data on natural disturbance/energy levels etc)

This fishing activity is conducted during the day and night for approximately 3 hours over slack water, predominantly on low water neap tides. It is weather dependent and wind less than a force 4 Beaufort scale are required. This practice is further restricted due to the Mersey SPA being an area of very busy shipping activity. On average each commercial fisher engages in this activity 1.5 days per month.

Demersal drift netting is used to target demersal round fish species, predominantly bass from April to October and cod from November to March. Bycatch includes Dover sole, flounder, plaice, dab and whiting. On average a fisher will catch 10kg of fish, including 2 or 3 individuals of their target species per trip. IFCOs have never seen, nor received any reports of lost or abandoned drift nets in the area.

Static fixed nets

The static fixed nets used in the Mersey SPA are monofilament, singled walled gill nets with a diamond mesh (mesh size >100mm), 2-5m in height and up to 100m in length. The footrope of the net is made from lead line so it sinks and the head line has small floats attached making it neutrally buoyant, thus during fishing the net occupies the water column from the seabed to 2-5m above the seabed. Some fishers use the same net for demersal drift netting and static netting simply by applying additional anchorage weight to the footrope to weight it down. Others have separate nets for this practice with a heavier lead line and/or additional anchorage weights attached. Up to two static fixed nets may be used per boat at any one time. No static fixed netting occurs from the shore within the Mersey SPA, this practice is only conducted from boats.

This fishing activity is conducted during the day and night for approximately 3 hours over slack water, predominantly on low water neap tides. Due to the busy shipping activity in the area the fishing boat stays within close proximity to the net(s). It is weather dependent and wind less than a force 3 Beaufort scale are required. On average each commercial fisher engages in this activity 1.5 days per month.

Static fixed netting is used to target demersal flatfish species, predominantly Dover sole, flounder, plaice and dab. Bycatch includes bass from April to October, cod from November to March and whiting. On average a fisher will catch 25kg of fish per trip. IFCOs have never seen, nor received any reports of lost or abandoned static fixed nets in the area.

Interactions

IFCOs have never seen, nor received any reports of birds being caught in demersal drift nets of static fixed nets in the Mersey SPA. These netting practices are carried out over hard sand substrate. The net design, weight of the footrope and buoyancy of the headline, makes the footrope skim across the surface of the seabed. Thus this fishing practice interacts with the seabed and potential pressures of this are included in this assessment, however, any abrasion is likely to be insignificant when compared to that which occurs due to natural processes. The volume and speed of water movement within the Mersey estuary creates a very dynamic environment of submerged sand banks which are constantly moving.

The bird species for which this site is designated are dabbling ducks and intertidal waders which by their nature inhabit the shallows and intertidal areas, not the open water where these fishing practices occur. If there were some overlap in the shallower water the birds are unlikely to interact with the fishing net as the fishing vessels stay within close proximity to their nets in the water and these birds are unlikely to come into close proximity of vessels. In addition these bird species feed on smaller fish than those caught by these fishing activities, thus there is no competition for the fishery resource.

Netting Regulations
Netting within the European Site is regulated by:
Council Regulations (EC) No. 850/98 – Technical Measures
Council Regulations (EU) 2016/72 – Bass Fishing Restrictions

5. Test for Likely Significant Effect (LSE)

The Habitats Regulations Assessment (HRA) is a step-wise process and is first subject to a coarse test of whether a plan or project will cause a likely significant effect on an EMS[3].

Is the activity/activities directly connected with or necessary to the management of the site for nature conservation? No

5.1 Table 1: Assessment of LSE

What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s) to features? - taken from *NE Advice on Operations-Pelagic fishing (or fishing activities that do not interact with seabed).* Additional pressures relating to seabed impacts of lines (*AoO- anchored nets and lines*) have also been included in the event that a drift net footrope catches on the seabed in an area of shallow water.

Features: All of the qualifying features (bird species and assemblages) will be assessed in this document. Of the supporting habitats, these fisheries only occur within 2 of the habitats: 'intertidal sand and muddy sand' and 'intertidal mud' (Annex 4) at high tide when these supporting habitat features are submerged. There is no interaction with the remaining supporting habitats; intertidal rock, intertidal biogenic reef – mussel beds, intertidal mixed sediment and saltmarsh (Atlantic salt meadows and Salicornia and other annuals) or with the generic sub-features: intertidal boulder and cobble reef and saltmarsh spp., thus these have been screened out (Annex 4). There is no interaction with the saltmarsh habitat because access is via boats and established access routes, therefore impacts on this habitat feature is considered to be insignificant.

Pressures: Many of the pressures from the Advice on Operations table provided in the Mersey Estuary SPA Conservation Advice package have been screened out due to the low level of fishing activity in these fisheries; a total of 3 commercial fishing vessels, 5-6m in length with 1 or 2 persons on board operating approximately 3 days per month. The following pressures will be assessed:

- Collision above water with static or moving objects not naturally found in the marine environment
- Collision below water with static or moving objects not naturally found in the marine environment
- Visual disturbance
- Removal of non-target species
- Abrasion/disturbance of the substrate on the surface of the seabed *(supporting habitat)*
- Penetration and/or disturbance on the substrate below the surface of the seabed including abrasion *(supporting habitat)*

Qualifying Feature	Sub-	Gear type and potential	Sensitivity	Potential	Justification

[3] Managing Natura 2000 sites: http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

	feature	pressures		for Likely Significant Effect?	and evidence
A048 *Tadorna tadorna*; Common shelduck (Non-breeding)	*Supporting habitats assessed separately*	Collision above water with static or moving objects not naturally found in the marine environment	Sensitive	No	Nets are fished below the water surface. Birds forage on shore, wade in shallow water and dabble in the upper few centimetres of the water- they do not go more than a few centimetres below the water surface and would avoid the fishing boats that stay with the nets. This, and the limited scale and intensity of netting activity means collision with vessels or gear above/out of or below water is highly unlikely. This is therefore unlikely to have a significant effect on the population or distribution of the qualifying features.
A052 *Anas crecca*; Eurasian teal (Non-breeding)		Collision below water with static or moving objects not naturally found in the marine environment	Sensitive	No	
A054 *Anas acuta*; Northern pintail (Non-breeding)					
A140 *Pluvialis apricaria*; European golden plover (Non-breeding)					
A149 *Calidris alpina alpina*; Dunlin (Non-breeding)					
A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)					
A162 *Tringa totanus*; Common redshank (Non-breeding)					
Waterbird assemblage *Including:* *Wigeon, Ringed Plover, Grey Plover, Lapwing, Curlew- not assessed in their own right*		Visual disturbance	Sensitive	No	The scale and intensity of the netting activity and access is low resulting in limited visual disturbance with little increase on background levels (in an area busy with shipping activity) thus unlikely to have an effect on the population or distribution of the qualifying features.
		Removal of non-target species such as; -Accidental bycatch of fish (bird prey)	Sensitive	No	Shelduck, redshank and ringed plover may occasionally feed on fish (Holden &

					Cleeves, 2006), however, they feed on a wide range of prey and the fish they do feed on are smaller than those caught in the mesh size of these nets. The impact on the bird feature food resource is therefore minimal. This is unlikely to have an effect on the population or distribution of the qualifying features.
		-Accidental bycatch of birds	Sensitive	No	These bird species forage on shore, wade in shallow water and dabble in the upper few centimetres of the water. They do not go more than a few centimetres below the water surface and would avoid the fishing boats that stay with the nets. This behaviour and the low intensity of netting activity means entanglement in gear is highly unlikely and is therefore unlikely to have a significant effect on the population or distribution of the qualifying features.
	Generic sub-feature				Estuarine bird feature interaction categorised as “Blue” in generic matrix.

Waterbird assemblage *Including:* *Great Crested Grebe - not assessed in their own right*	*Supporting habitats assessed separately*	Collision above water with static or moving objects not naturally found in the marine environment	Sensitive	No	Nets are fished below the water surface. Bird feature is a diving species, however it would avoid the fishing boats that stay with the drift nets. This behaviour and the limited scale and low intensity of netting activity means collision with vessels or gear above/out of or below water is highly unlikely. This is therefore unlikely to have a significant effect on the population or distribution of the qualifying features.
		Collision below water with static or moving objects not naturally found in the marine environment	Sensitive	No	
		Visual disturbance	Sensitive	No	The scale and intensity of the netting activity and access is low resulting in limited visual disturbance with little increase on background levels (in an area busy with shipping activity) which is unlikely to have an effect on the population or distribution of the qualifying features.
		Removal of non-target species such as; -Accidental bycatch of fish (bird prey)	Sensitive	No	Great crested grebe feed on fish (Holden & Cleeves, 2006), however, they feed on a wide range of prey and the fish they do feed on are smaller than those caught in the nets mesh. The impact on the bird feature food resource is therefore minimal. This is unlikely to have

					an effect on the population or distribution of the qualifying features.
		-Accidental bycatch of birds	Sensitive	No	Nets are fished below the water surface. Bird feature is a diving species, however, it would avoid the fishing boats that stay with the nets. This behaviour, the limited scale and low intensity of netting activity means collision with vessels or gear above/out of or below water is highly unlikely. This is therefore unlikely to have a significant effect on the population or distribution of the qualifying features.
SPA Supporting Habitats	Intertidal sand and muddy sand Intertidal mud	Abrasion/disturbance of the substrate on the surface of the seabed Penetration and/or disturbance on the substrate below the surface of the seabed including abrasion *(e.g. through abrasion and movement of substrate via contact of nets)*	Sensitive Sensitive	No No	Abrasion, penetration and disturbance could be caused by nets footropes, lines and anchorage weights (anchorage weights on static fixed nets only) during fishing activity. However, nets are set on sandy/muddy substrate and the area is naturally highly dynamic with strong currents, and a large tidal range, therefore any impacts caused by abrasion, penetration or disturbance would be quickly dissipated. Access to the fishery is via boats and

					established access routes. No increase in disturbance on existing background levels. The scale and intensity of the netting activity is very low and unlikely to have a significant effect on the extent, distribution, structure or function of the habitats of the qualifying features.

Is the potential scale or magnitude of any effect likely to be significant?[4]	**Alone** No **Comments :** Small scale activity with very limited impacts on a small number of features.	**OR In-combination[5]** Uncertain **Comments :** These activities also may occur at the site: • Light otter trawls In combination effects will be assessed when all initial TLSEs for a site are completed.
Have NE been consulted on this LSE test? If yes, what was NE's advice?	Yes	

6. Conclusion[6]

Taking into account the information detailed in the Test of Likely Significant Effect, it can be concluded that fishing using demersal drift nets and static fixed nets, has no likely significant effect on the Mersey Estuary SPA interest features.

7. In-combination assessment[14]

[4] Yes or uncertain: completion of AA required. If no: LSE required only.
[5] If conclusion of LSE alone an in-combination assessment is not required.
[6] If conclusion of adverse affect alone an in-combination assessment is not required.

In combination effects will be assessed in a separate document when all initial TLSEs for a site are completed.

8. Summary of consultation with Natural England

See attached advice from Natural England (Annex 2).

9. Integrity test

As this assessment has concluded no likely significant effect on the interest features of the Mersey Estuary SPA in the NWIFCA district, there is no need to conduct an integrity test for this activity.

Annex 1: Reference list

Brownrigg, A and Capper, P. *local Inshore Fisheries and Conservation Officers. Pers. comms.*

Holden, P. & Cleeves, T. 2006. RSPB Handbook of British Birds. Second edition book.

Natural England Marine Conservation Advice for Special Protection Area: Mersey Estuary, published March 2015. Available at: https://www.gov.uk/government/publications/marine-conservation-advice-for-special-protection-area-mersey-estuary-uk9005131

Annex 2: Natural England's consultation advice

Date: 05 October 2016
Our ref: 196343
Your ref: NWIFCA-ME-SPA-005

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BY EMAIL ONLY

Dear Belinda

Formal Advice to NWIFCA. Fisheries in EMS Habitats Regulations Assessment for Amber and Green risk Categories in Mersey Estuary SPA, including gear types: Drift nets (demersal) and Static fixed nets

Thank you for your consultation on the above which was received by Natural England on 16 September 2016.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

In 2012, the Department for Environment, Food and Rural Affairs (Defra) announced a revised approach to the management of commercial fisheries in EMSs[1]. The objective of this revised approach is to ensure that all existing and potential commercial fishing activities are managed in accordance with Article 6 of the Habitats Directive. This document states that for 'green' risk activities a site level assessment will be required if there are 'in combination effects' with other plans or projects. The Department's strong preference is that site level assessments be carried out in a manner that is consistent with the provisions of Article 6(3) of the Habitats Directive. Appropriate management measures should be put in place to ensure that the fishing activity or activities either 1) have no likely significant effect on a site in view of its conservation objectives or 2) following assessment, can be concluded to have no adverse effect on the integrity of the site.

Natural England has considered the Habitat Regulations Assessment (HRA) prepared by North Western Inshore Fisheries and Conservation Authority (IFCA) for the purposes of making an assessment consistent with the provisions of Article 6(3). Please accept this letter as Natural England's formal advice on the assessment and the conclusion it makes. The assessment considers the effects of the following fishing activities on the Mersey Estuary Special Protection Area (SPA):

- Drift nets (demersal);
- Static fixed nets

[1] Defra revised approach: https://www.gov.uk/government/publications/revised-approach-to-the-management-of-commercial-fisheries-in-european-marine-sites-overarching-policy-and-delivery

We are content that the best available and most up to date evidence has been used to carry out the HRA by North Western IFCA officers to determine whether management of an activity is required to conserve site features, and thus to ensure the protection of the features, from direct and indirect impacts, from the collection of marine fisheries resources.

We note that in-combination effects will be assessed in a separate document when all initial Tests of Likely Significant Effects (tLSEs) for a site are completed.

Subject to the outcome of the in-combination assessment, it is Natural England's view that through their HRA, North Western IFCA officers appear to have appropriately identified those activities that are likely to have a significant effect in view of the site's conservation objectives, and whether management measures are required in order to ensure that the assessed fishing activity or activities will have no adverse effect on the integrity of the European Marine Site.

It is Natural England's view that any foreseeable risk, or harm to the site has been appropriately assessed; and a robust mechanism for re-assessing that risk is in place. This view is based on our current knowledge of the impacts of these fishing activities on the designated features.

If you require any further comments or have any queries regarding the above please contact me to discuss them further.

Yours sincerely

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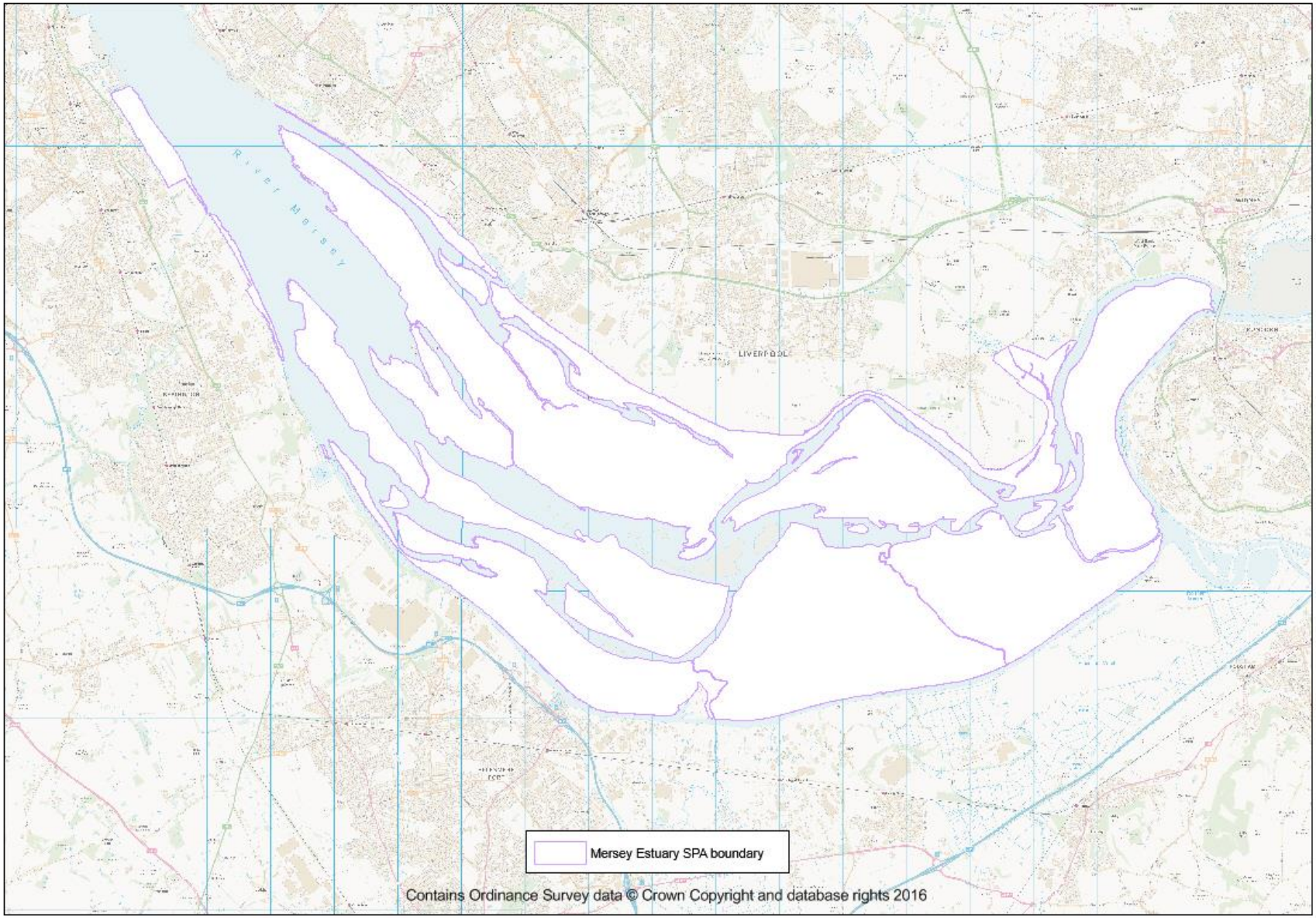
Annex 3: Mersey Estuary SPA Site Map



Annex 4: Broad Scale Habitat and Fishing Activity Map