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

European Marine Site: Exe Estuary SPA

Fishing activities assessed: Intertidal Handwork

D&S IFCA Interaction ID	Fishing Activity	Feature(s)	Supporting habitat
HRA_UK9010081_H19	Hand working (access from vessel)	• Non-breeding Avocet • Non-breeding Black-tailed godwit • Non-breeding Dark-bellied Brent goose • Non-breeding Dunlin • Non-breeding Grey plover • Non-breeding Oystercatcher • Non-breeding Slavonian grebe • Waterbird assemblage	Intertidal rock
HRA_UK9010081_Z19			Intertidal stony reef
HRA_UK9010081_H20	Hand working (access from land)		Intertidal rock
HRA_UK9010081_Z20			Intertidal stony reef

Contents

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.

Site level assessments are being carried out in a manner that is consistent with the provisions of Article 6(3) of the Habitats Directive. The aim of this assessment is to determine whether management measures are required in order to ensure that fishing activity or activities will have no adverse effect on the integrity of the site. If measures are required, the revised approach requires these to be implemented by 2016.

The purpose of this site specific assessment document is to assess whether or not in the view of Devon and Severn Inshore Fisheries and Conservation Authority (D&S IFCA) the fishing activities “hand-working” have a likely significant effect on the intertidal rock features of the Exe Estuary SPA, and on the basis of this assessment whether or not it can be concluded that hand-working will not have an adverse effect on the integrity of this EMS.

1.2 Documents reviewed to inform this assessment

- Natural England’s risk assessment Matrix of fishing activities and European habitat features and protected species
- Reference list (Annex 1)
- Natural England’s consultation advice (Annex 2)
- Site map(s) – sub-feature/feature location and extent (Annex 3)
- Fishing activity data (map(s), etc.) (Annex 4)

2. Information about the EMS

The Exe Estuary SPA includes both marine areas (i.e. land covered continuously or intermittently by tidal waters) and land which is not subject to tidal influence. Sub-features have been identified which describe the key habitats within the European marine site necessary to support the birds that qualify within the SPA. Bird usage of the site varies seasonally, with different areas being favoured over others at certain times of the year. The mussel beds in particular are important in supporting the wintering wader and wildfowl assemblage to enable them to acquire sufficient energy reserves to ensure population survival (English Nature, 2001 & Natural England, 2015). Figure 1 (Annex 3) shows the boundary of the Exe Estuary SPA.

2.1 Overview and qualifying features

The Exe Estuary SPA qualifies under Articles 4.1 and 4.2 of the EU Birds Directive by supporting the following interest features (Natural England, 2015):

- Non-breeding Avocet (*Recurvirostra avosetta*)
- Non-breeding Black-tailed godwit (*Limosa limosa islandica*)
- Non-breeding Dark-bellied Brent goose (*Branta bernicia bernicia*)
- Non-breeding Dunlin (*Calidris alpina alpina*)
- Non-breeding Grey plover (*Pluvialis squatarola*)
- Non-breeding Oystercatcher (*Haematopus ostralegus*)
- Non-breeding Slavonian grebe (*Podiceps auritus*)
- Waterbird assemblage

The key supporting habitats are:

- Circalittoral rock
- Freshwater and coastal grazing marsh
- Infralittoral rock
- Intertidal biogenic reef: mussel beds
- Intertidal coarse sediment
- Intertidal mixed sediments
- Intertidal mud
- Intertidal rock
- Intertidal sand & muddy sand
- Intertidal seagrass beds
- Intertidal stony reef
- Subtidal biogenic reefs: mussel beds
- Subtidal coarse sediment
- Subtidal mixed sediment
- Subtidal sand
- Subtidal seagrass beds
- Subtidal stony reef
- Water column
- Saltmarsh
    - Atlantic salt meadows (*Glauco-Puccinellietalla maritimae*)
    - Salicornia and other annuals colonising mud & sand
    - Spartina swards (*Spartinion maritimae*)

2.2 Conservation Objectives

The site's conservation objectives apply to the Special Protection Area and the individual species and/or assemblage of species for which the site has been classified.
The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, 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 populations of the qualifying features
- the distribution of the qualifying features within the site

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

None – this site has no gear-feature interactions categorised as "red" risk.

4. Information about the fishing activities within the site

Handwork accessed from vessels is occurring at a low/very-low level. Although there are good shellfish beds on the estuary, they are mostly easily accessed from the land so there is little need to access from vessels.

Handwork accessed from land is occurring at a medium level across the whole estuary, although this is mostly recreational. The main areas for shellfish collection are Cockwood and Cocklesands, where there is very easy access to mussel beds. Some cockles and winkles are also collected in these areas, however the Exe currently has no classified area for cockle harvesting so this cannot occur commercially (but it does occur recreationally). During May and June 2016 D&S IFCA conducted survey visits to the estuary to identify the level of Intertidal handwork occurring (results can be found in Annex 6). The surveys looked at shellfish collection, crab tiling, and bait digging. Shellfish collection made up approximately 1/3 of these activities, with slightly higher levels on the eastern shore (around Cockle Sands). The majority of the activity took place on spring tides, with slightly higher levels at weekends than on weekdays, so it is naturally temporally limited. The highest number of people seen working on the estuary at one time was 10, but the average for both shores was approx. 4 people. On the occasion when 10 people were seen, one family collecting cockles recreationally accounted for 6 people (4 adults, 2 children). These large groups do not occur frequently. Commercial activity was significantly lower than the recreational, with only one or two commercial hand-gatherers operating at any one time on the estuary. **This assessment only considers the commercial activity.**

Commercial harvesting of mussels (*Mytilus edulis*) can only take place on classified beds (Figure 3, Annex 4), there are currently no areas classified for other species (Cefas, 2015).

The IFCA has been informed that occasionally (large spring tides) two fishermen collect winkles around Lympstone. Winkles are subject to a minimum size (D&S IFCA Byelaw 10) whereby "No person shall remove from the fishery any winkle which will pass easily through a gauge within a square opening of 16mm measured over each side of the square". However no activity was seen at Lympstone during the IFCA's Handgathering surveys. One commercial winkle collector met twice on the D&S IFCA surveys. On both occasions he was at Cockwood, but said that he works a different area (covering both sides of estuary) each time he comes down, so as not to overfish one

area. He collects approx. 30kg each visit (2-3 times a week), but relays undersize winkles immediately on the water's edge. He is the only regular winkle collector remaining on the Exe, due to lack of buyers and low prices.

Other fishing activities within the EMS are described in the Fishing Activity Report (Gray, 2015).

5. Test for Likely Significant Effect (LSE)
5.1 Table 1: Assessment of LSE

1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?	**No**	
2. What pressures (such as abrasion, disturbance) are potentially exerted by the gear type(s)	• Above water noise (Bird features - Sensitive) • Visual disturbance (Bird features - Sensitive) • Abrasion & disturbance of the substrate on the surface of the seabed (Supporting habitat - Sensitive) See Annex 6 for Pressures Audit Trail	
3. Is the feature potentially exposed to the pressure(s)?	**Yes,** there are currently no management measures prohibiting the use of handwork in the Exe Estuary SPA. However, the only bivalve molluscan species with classified harvesting areas is mussel (Annex 4) and these areas do not coincide with this supporting habitat (Figure 2, Annex 3). Winkle collection is permitted anywhere on the estuary, but is only believed to take place at a low level around Lympstone, so does not interact with this supporting habitat. Therefore, the supporting habitat is not currently exposed to this pressure.	
4. What are the potential effects/impacts of the pressure(s) on the feature, taking into account the exposure level?	The intertidal rock and intertidal stony reef supporting habitats have the following targets (Natural England, 2015): • Maintain the structure, function & supporting processes associated with the feature and its supporting habitat (all bird features) • Maintain the extent & distribution of suitable habitat, which supports the feature for all necessary stages of the non-breeding or wintering period (dunlin, grey plover, oystercatcher, Slavonian grebe, waterbird assemblage) • Maintain the structure, function & availability of the habitat, which supports the assemblage feature for all stages of the non-breeding period (waterbird assemblage) The bird features have the following target: • The frequency, duration &/or intensity of disturbance affecting foraging &/or roosting should not reach levels that substantially affect the feature. As the supporting habitat is not exposed to this activity (see above) there will be no impact.	
5. Is the potential scale or magnitude of any effect likely to be significant?	**Alone**	**No**, there is no likelihood of significant adverse effect on the interest features, as a stand-alone project, as it is unlikely to interact with this supporting habitat.
	In-combination	**No**, there is no likelihood of significant adverse effect on the interest features from in-combination effects with other plans or projects, as it is unlikely this activity will interact with this supporting habitat.

6. Have NE been consulted on this LSE test? If yes, what was NE's advice?	NE were informally consulted on an earlier draft. See Section 9.

6. Appropriate Assessment

An Appropriate Assessment is not required as the TLSE concluded that this activity would not have a significant effect, either alone or in-combination.

6.1 Potential risks to features

Table 2: Summary of Impacts

Feature/Sub feature(s)	**Conservation Objective**	**Potential pressure (such as abrasion, disturbance) exerted by gear type(s)**	**Potential ecological impacts of pressure exerted by the activity/activities on the feature** *(reference to conservation objectives)*	**Level of exposure of feature to pressure**	**Mitigation measures**

7. Conclusion

8. In-combination assessment

9. Summary of consultation with Natural England

Natural England were informally consulted on an earlier draft of this assessment. They asked for more clarity on levels of activity, especially between commercial and recreational. This has been addressed through the D&S IFCA's Intertidal Handwork Survey.

10. Integrity test

Conclusion of adverse effect/non-adverse effect either alone or in-combination. This will be reliant on the consideration of mitigation measure(s) documented in the AA and summarised here in conclusion.

Annex 1: Reference list

Cefas, 2016 https://www.cefas.co.uk/media/1460/exe-mytilus-spp.jpg

Devon & Severn IFCA Byelaws, 2015 https://secure.toolkitfiles.co.uk/clients/15340/sitedata/byep/IFCA%20Byelaw%20book%20changed%20010915.pdf

English Nature (2001) EXE ESTUARY: European marine site. English Nature's advice given under Regulation 33(2) of the Conservation (Natural Habitats &c.) Regulations 1994

Gray (2015) Devon & Severn IFCA Report: Fishing Activities Currently Occurring in the Exe Estuary SPA

Natural England (2015) Marine conservation advice for Special Protection Area: Exe Estuary (UK9010081)

Annex 2: Natural England’s consultation advice

N/A Natural England has not been consulted at this stage.

Annex 3: Site Maps

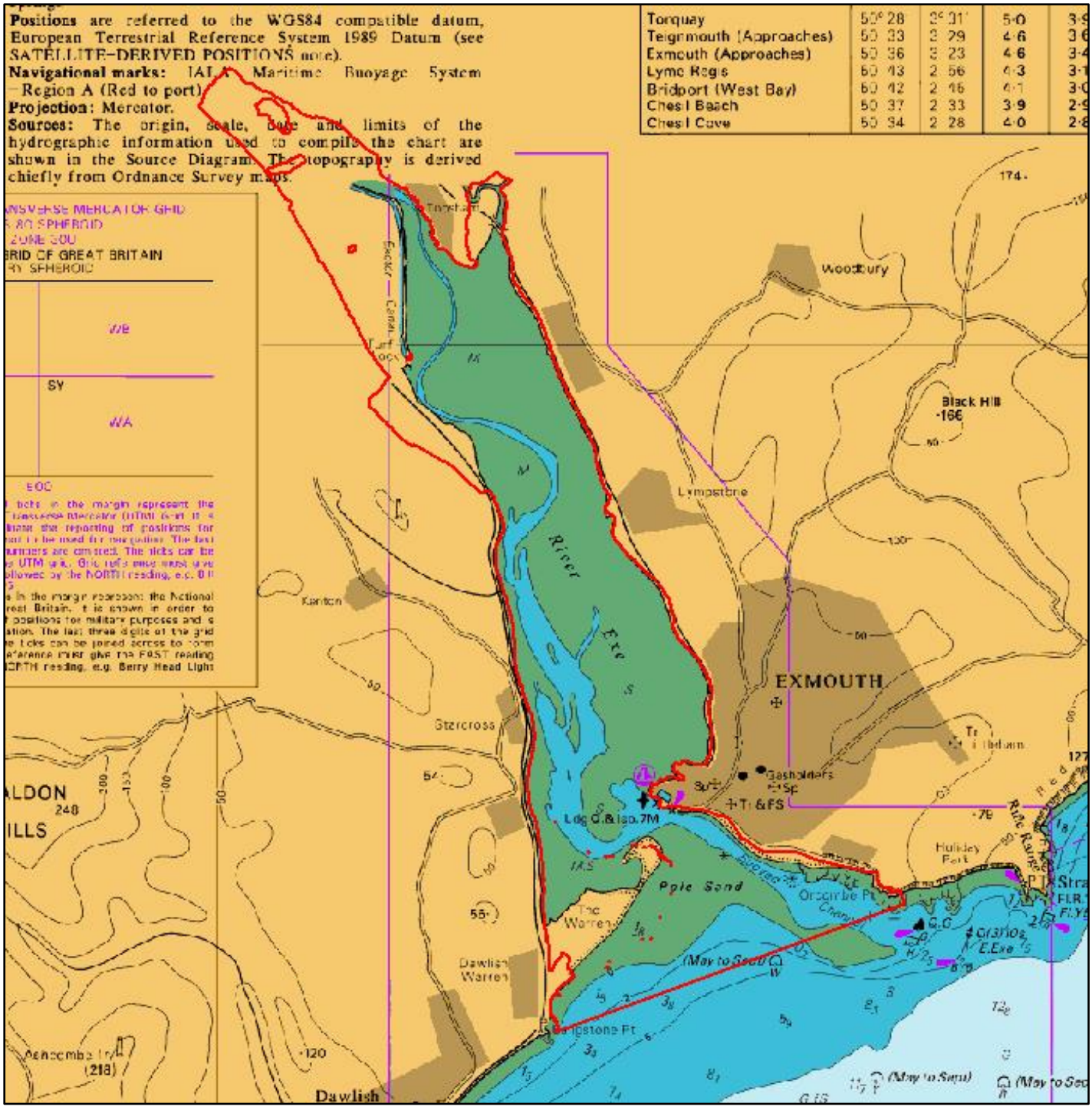


Figure 1 Exe Estuary SPA boundary (shown in red)

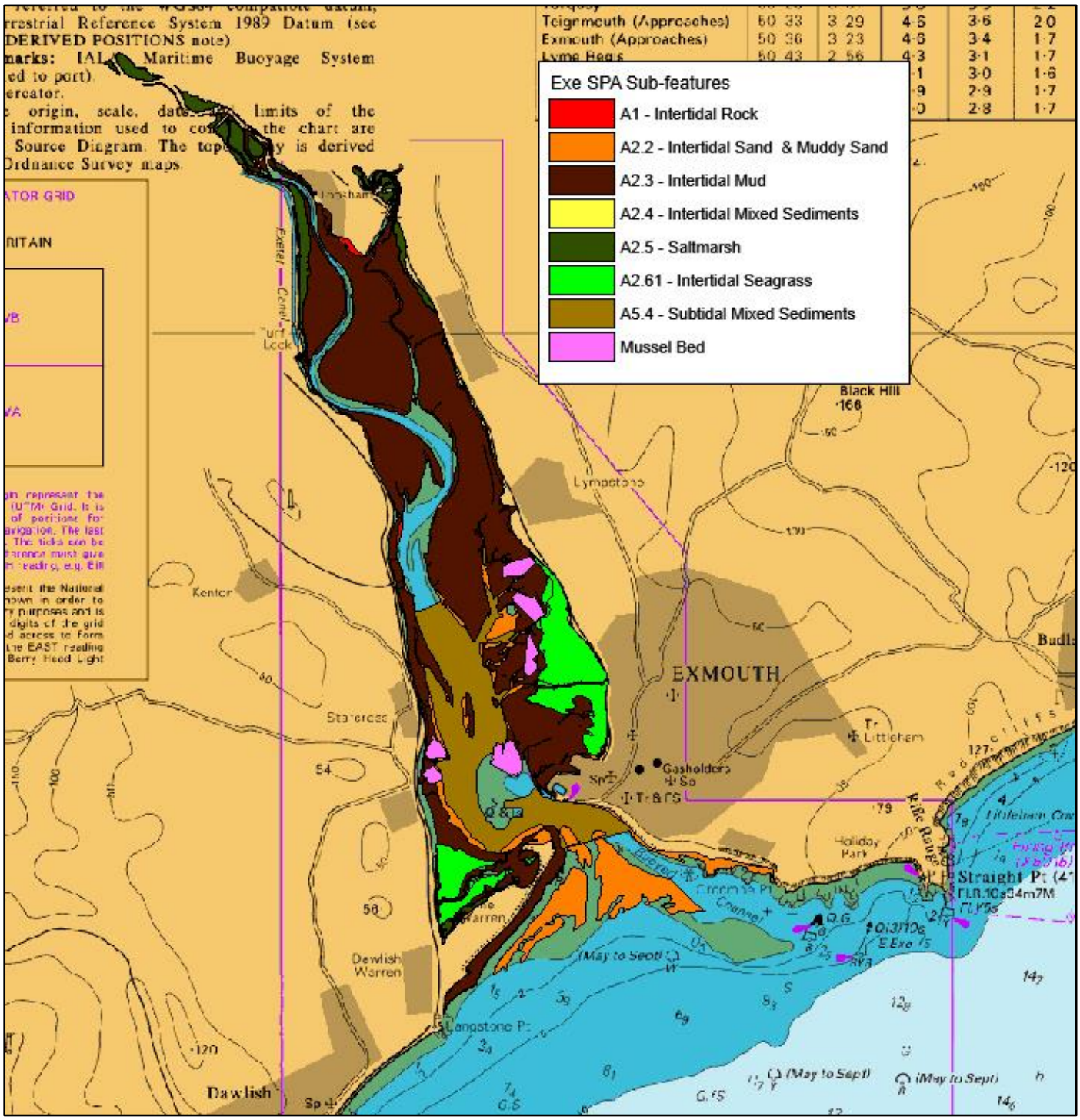
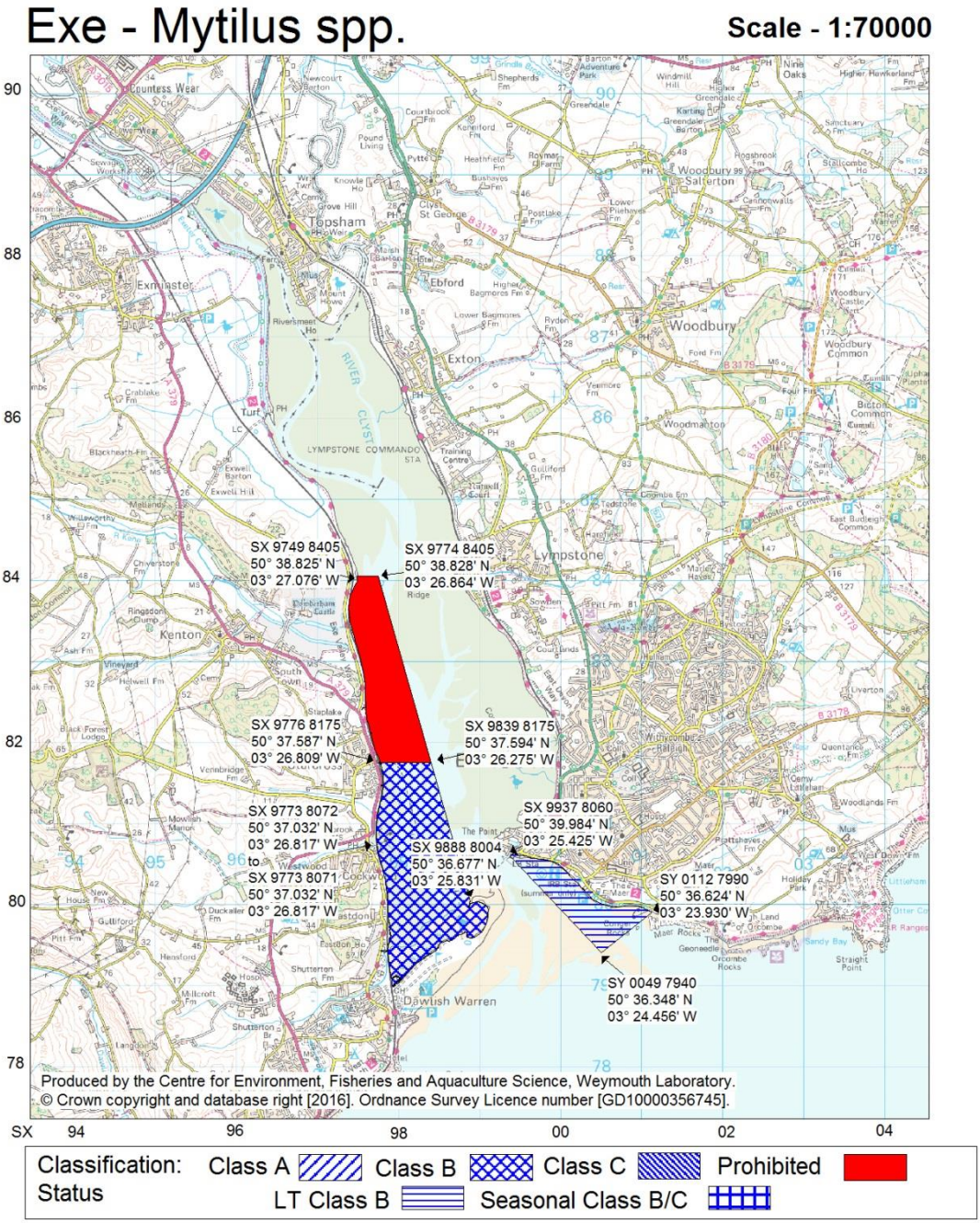


Figure 2 Exe Estuary SPA sub-features (Natural England, 2015)

Annex 4: Fishing activity maps



Classification of Bivalve Mollusc Production Areas: Effective from 1 April 2016

The areas delineated above are those classified as bivalve mollusc production areas under EU Regulation 854/2004.

Further details on the classified species and the areas may be obtained from the responsible Food Authority. Enquiries regarding the maps should be directed to: Shellfish Microbiology, CEFAS Weymouth Laboratory, Barrack Road, The Nothe, Weymouth, Dorset DT4 8UB.
(Tel: 01305 206600 Fax: 01305 206601)

N.B. Lat/Longs quoted are WGS84

Food Authority: Teignbridge District Council
East Devon District Council

Figure 3 Classified shellfish harvesting areas for the *Mytilus edulis* (Cefas, 2016)

Annex 5: Summary of Results of the D&S IFCA Intertidal Handwork Survey

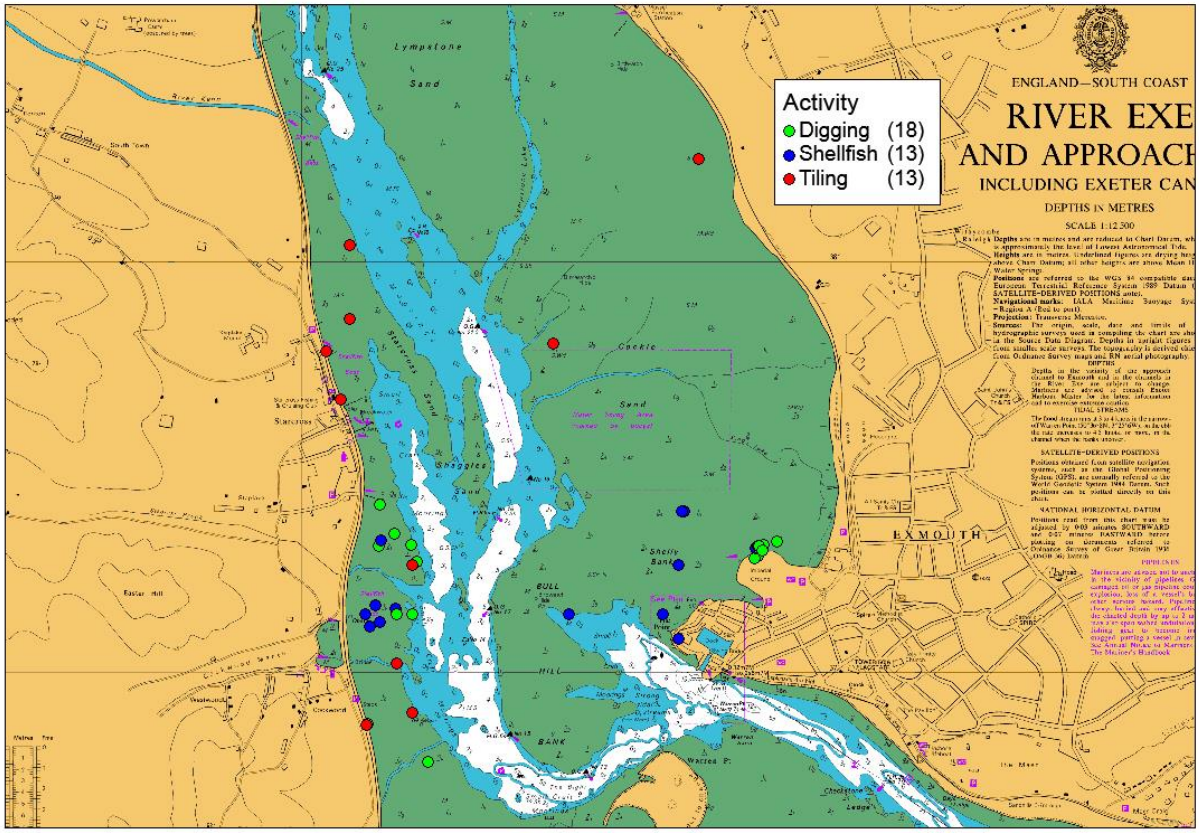


Figure 4 Total people observed (recreational & commercial) working in the intertidal area, shown by activity; bait digging, shellfish collection, and crab tiling.

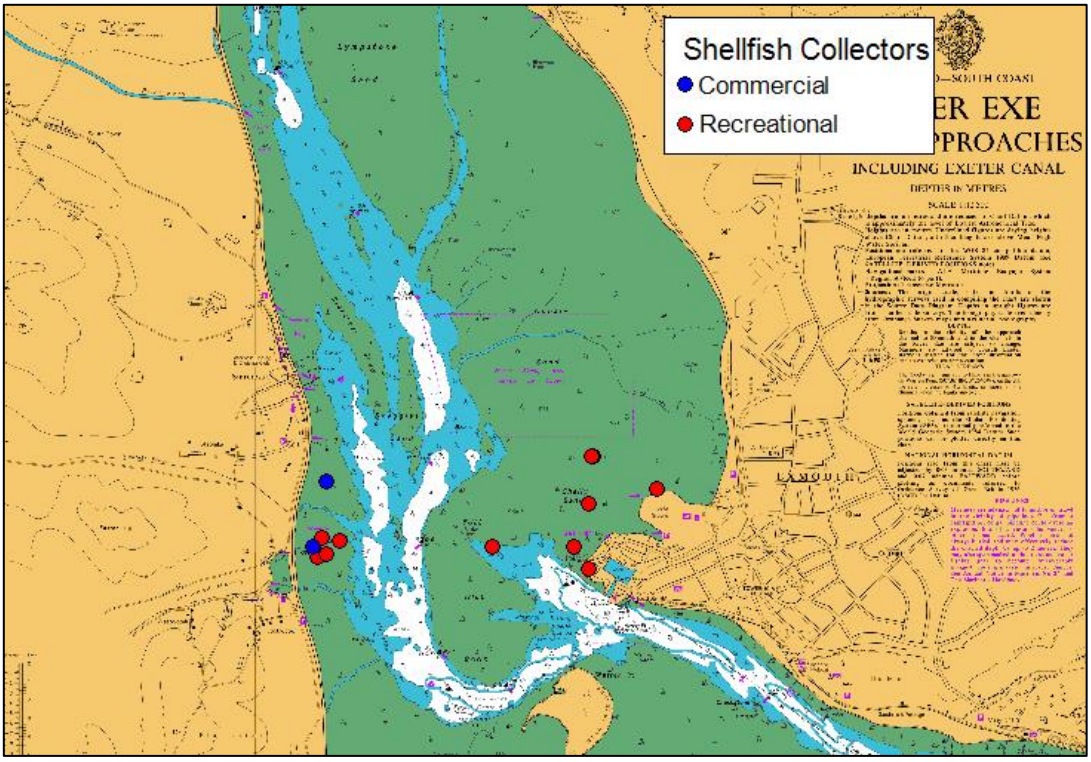


Figure 5 Total shellfish collectors observed, shown by commercial/recreational.

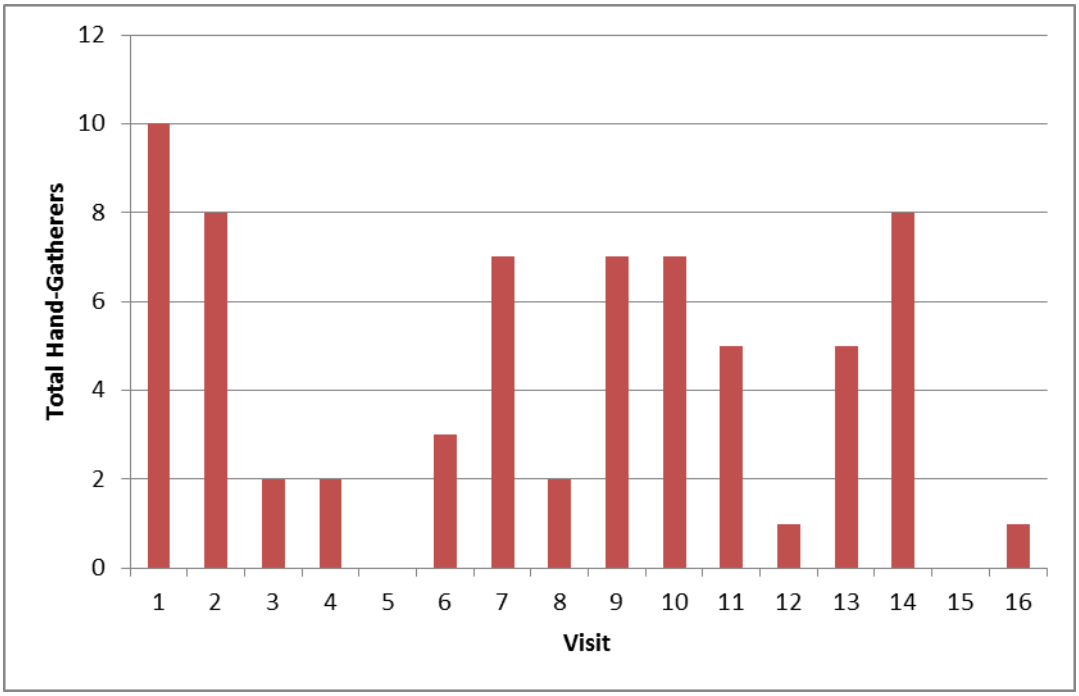
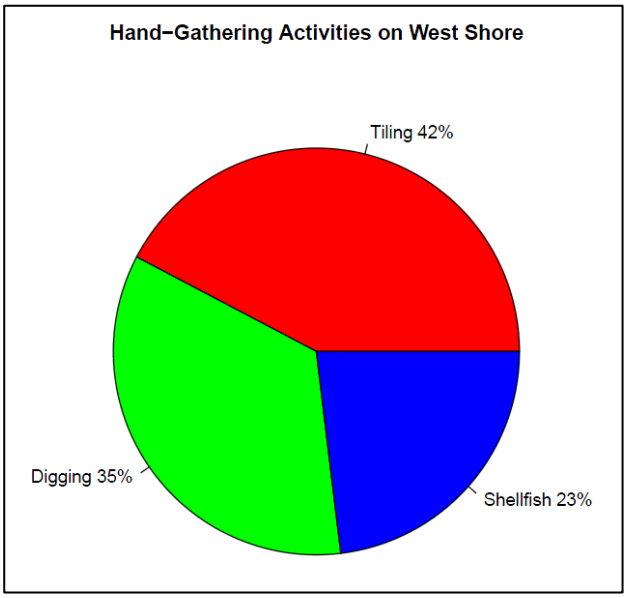
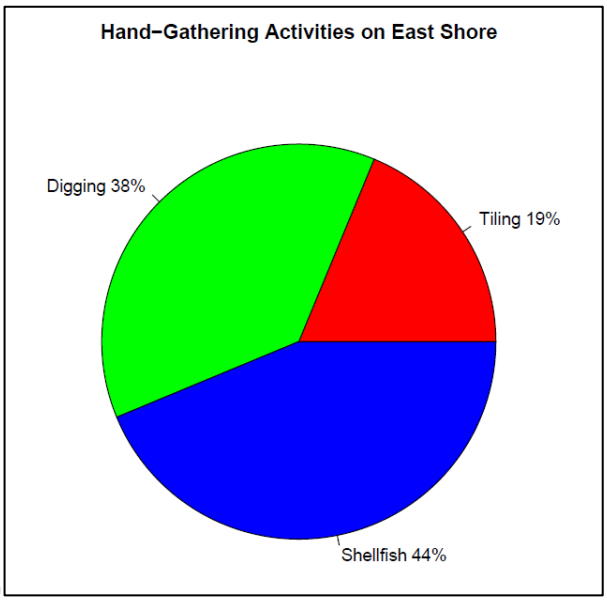


Figure 6 Total people observed (recreational & commercial) during each visit.



a)



b)

Figure 7 Proportions of each activity on the West Shore (a) and East Shore (b)

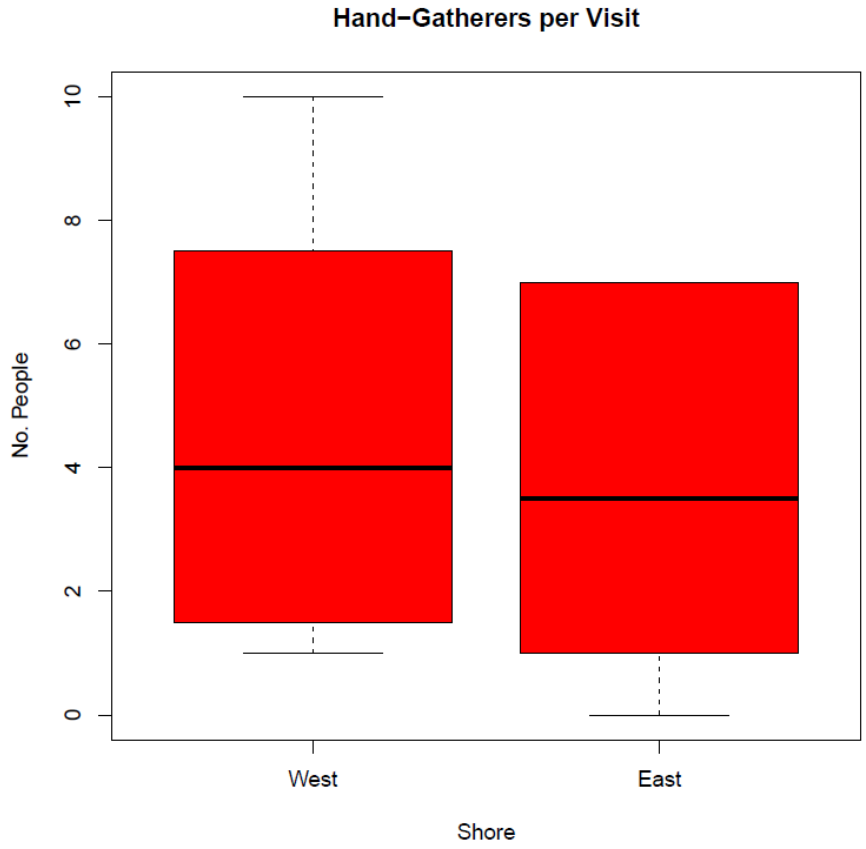


Figure 8 Numbers of people working on each shore per visit

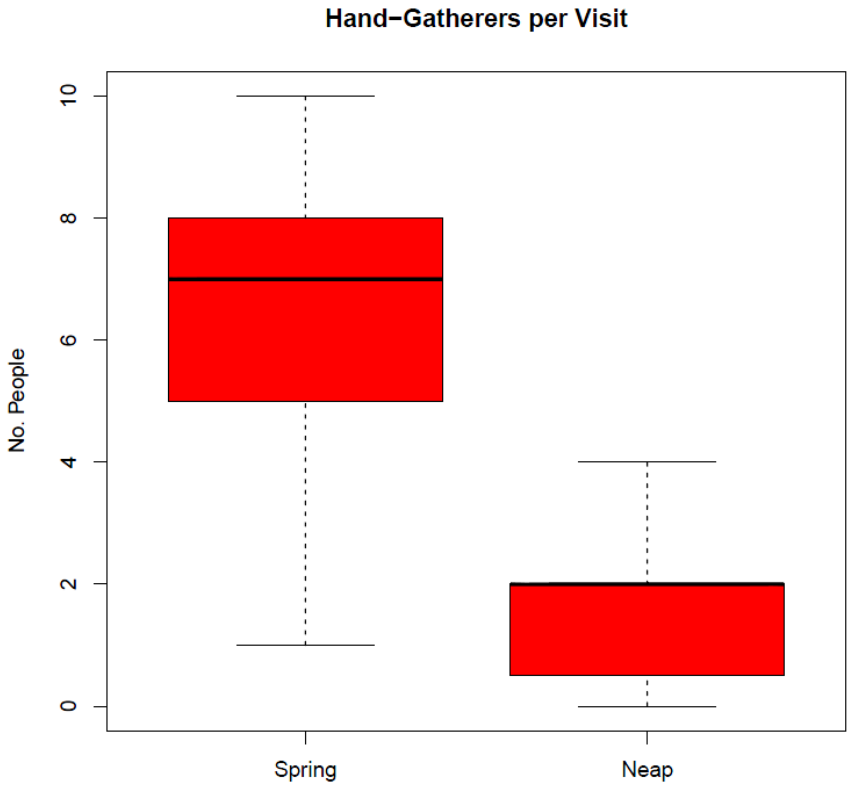


Figure 9 Numbers of people working during spring and neap tide visits

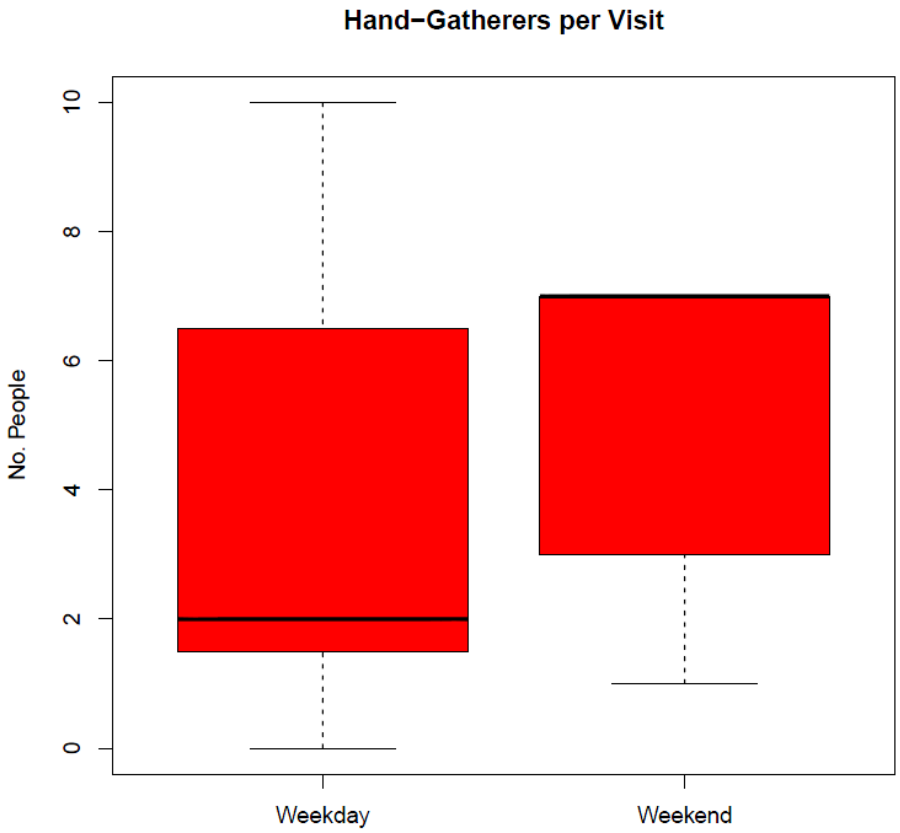


Figure 10 Numbers of people working during weekday and weekend visits

Annex 6: Pressures Audit Trail

Sensitivities based on Conservation Advice (Natural England, 2015)

Shore-based activities	Feature/Sub-feature & Screen Justification		
	Bird Feature	Intertidal Rock	Intertidal Stony Reef
Above water noise	**Sensitivity: S** **IN** - Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure		
Abrasion/disturbance of the substrate on the surface of the seabed		**Sensitivity: S** **IN** - Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure.	**Sensitivity: S** **IN** - Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure.
Collision BELOW water with static or moving objects not naturally found in the marine environment	**Sensitivity: S** **OUT** - This interaction was only sensitive for Slavonian grebe with hand-working (access from vessel), so is considered extremely low risk.		
Deoxygenation		**Sensitivity: IE** **OUT** - Insufficient activity levels to pose risk of large scale pollution event.	**Sensitivity: IE** **OUT** - Insufficient activity levels to pose risk of large scale pollution event.
Genetic modification & translocation of indigenous species		**Sensitivity: IE** **OUT** - Insufficient activity levels within proximity to this habitat to pose risk.	**Sensitivity: IE** **OUT** - Insufficient activity levels within proximity to this habitat to pose risk.

Hydrocarbon & PAH contamination. Includes those priority substances listed in Annex II of Directive 2008/105/EC.	**Sensitivity: IE** **OUT** - Insufficient activity levels to pose risk of large scale pollution event	**Sensitivity: IE** **OUT** - Insufficient activity levels to pose risk of large scale pollution event	**Sensitivity: IE** **OUT** - Insufficient activity levels to pose risk of large scale pollution event
Introduction of light	**Sensitivity: S** **OUT** - Insufficient activity levels within proximity to this habitat to pose risk.		
Litter	**Sensitivity: IE (S for Slavonian grebe)** **OUT** – Low risk of litter from hand-gathering activities.	**Sensitivity: IE** **OUT** – Low risk of litter from hand-gathering activities.	**Sensitivity: IE** **OUT** – Low risk of litter from hand-gathering activities.
Penetration/disturbance of the substrate below the surface of the seabed, including abrasion		**Sensitivity: S** **OUT** - Insufficient activity levels within proximity to this habitat to pose risk.	**Sensitivity: S** **OUT** - Insufficient activity levels within proximity to this habitat to pose risk.
Physical changes (to another seabed type)		**Sensitivity: S** **OUT** - Insufficient activity levels within proximity to this habitat to pose risk.	**Sensitivity: S** **OUT** - Insufficient activity levels within proximity to this habitat to pose risk.
Removal of non-target species	**Sensitivity: S** **OUT** – hand-gathering shellfish poses little risk of incidental by-catch.	**Sensitivity: S** **OUT** – hand-gathering shellfish poses little risk of incidental by-catch.	**Sensitivity: S** **OUT** – hand-gathering shellfish poses little risk of incidental by-catch.
Removal of target species		**Sensitivity: S** **OUT** – Insufficient activity levels within proximity to this habitat to pose risk.	**Sensitivity: S** **OUT** - Insufficient activity levels within proximity to this habitat to pose risk.
Visual disturbance	**Sensitivity: S** **IN** - Need to consider spatial scale/intensity of activity to determine likely magnitude of pressure		