



**Marine Protected Areas
Sub-Committee Meeting**

To be held at:

**Eastern IFCA Offices,
6 North Lynn Business Village, Bergen Way, King's Lynn, PE30 2JG**

15th October 2014

1330 hours

Meeting: Marine Protected Areas Sub-Committee
Date: 15 Oct 2014
Time: 13:30hrs
Venue: Eastern IFCA Office
6 North Lynn Business Village
Bergen Way
King's Lynn
Norfolk PE30 2JG



"Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry."

Agenda

- 1 Welcome by the Clerk
- 2 Apologies for absence
- 3 Declaration of members' interests

Action Items

- 4 Election of Chair - *Clerk*
- 5 Minutes of the Meeting of the Marine Protected Areas Sub-Committee 5 June 2013 - *Chair*
- 6 Matters arising - *CEO*
- 7 To receive a report and make recommendations with regard to Wash Fishery Order shellfish lay allocations -*CEO/SRO/Project Officer*

Information Items

- 8 To receive a report into management of fishery activity in European Marine Sites - *SMEO*
- 9 To receive a report on the potential Greater Wash Special Protection Area - *Nichola Edwards, Natural England*

Any other business

- 10 To consider any other items which the Chair is of the opinion are matters of urgency by reason of special circumstances which must be specified

P J Haslam
Chief Executive Officer
30 September 2014

Marine Protected Areas Sub-Committee

"EIFCA will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economical benefits to ensure healthy seas, sustainable fisheries and a viable industry".



A meeting of the Marine Protected Areas Sub-Committee took place at The Boathouse, Wisbech, Cambs on Wednesday 5th June 2012 at 1400 hours

Members Present:

Cllr Tony Turner	Chair	Lincolnshire County Council
Mr Shane Bagley		MMO Appointee
Mr Roy Brewster		MMO Appointee
Cllr Hilary Cox		Norfolk County Council
Mr Connor Donnelly		Natural England Representative
Mr Paul Garnett		MMO Appointee
Mr Roger Handford		Environment Agency Representative
Mr Neil Lake		MMO Appointee
Mr Tom Pinborough		MMO Appointee

Eastern IFCA Officers Present:

Phil Haslam	Chief Executive Officer
Jason Byrne	Area IFCO
Ian Dye	Area IFCO
Luke Godwin	MEO - Data
Julian Gregory	Head of Marine Protection
Eden Hannam	Head of Marine Environment & Research
Ron Jessop	Senior Research Officer
Judith Stoutt	Senior Marine Environment Officer
Stephen Thompson	Research Officer
Pete Welby	Research Officer

Also Present:

Russel Gadbury	MMO
Barry Smart	MMO
Emma Thorpe	Natural England

Apologies for Absence

Apologies for absence were received from Messrs Morgan & Spray (MMO Appointees) and Mr Stipetic (MMO Representative).

MPA13/01 Declaration of members' interests

Shane Bagley, Roy Brewster, Paul Garnett and Neil Lake declared an interest in item 5 as they were commercial fishermen working in the Wash and also entitlement holders under the Wash Fishery Order 1992. They did not take part in the vote on this item.

MPA13/02 Minutes of the meetings of the Marine Protected Areas Sub-Committee on 6th December 2012

It was Resolved the minutes should be signed as true a record of the proceedings.

**Proposed: Roy Brewster
Seconded: Roger Handford
All Agreed.**

MPA13/03 Matters Arising

There were no matters arising.

MPA13/04 The WFO Cockle Fishery 2013

In order for members to reach an informed decision the CEO had put together the most comprehensive paper possible, with risk analysis included in the appendices. The intent of the comprehensive paper was to provide members with as much information as possible to drive a reasoned debate as to the best means to exploit the cockle fishery. The CEO pointed out that the sense of one of the recommendations was in error and corrected it by stating that the final recommendation in the paper should read: *subject to a Habitats Regulation Assessment, introduce a trial to relay cockles from slow growing to fast growing beds as a measure to help promote sustainability of stocks.*

Some members had forwarded comment on the paper in writing and, owing to the date of publication of the paper and the date of receipt of the comments, the further correspondence was circulated to members to assure impartiality and to deliver transparency.

Members were asked to reach decisions on the opening date, the TAC, method of fishing and the sands to be fished during the 2013 cockle fishery.

The Senior Research Officer provided members with a presentation of the cockle surveys which had been carried out over 21 beds. A total of 1,295 stations were sampled to ascertain cockle size, weight and size frequency data. In addition 129 stations were also sampled for the growth study.

The overall biomass was down only 1% on the previous year due to a reasonable level of growth, and there was a slight predominance of larger cockles this year.

Members were shown cockle distribution charts which depicted the distribution throughout the Wash and the SRO explained the distribution of sizes and year classes on the 21 sand surveyed.

There was a total of 20,932t of which 11,159t were adult. Working on the assumption that one third of the total stock can be applied to a fishery this would give a TAC of 3,720 tonnes.

The debate surrounding the method to be employed was lengthy and the CEO intervened to encourage those members that could vote on the issue to probe the commercial fishing specialists at the table to draw out the relative merits of each type of fishing method to ensure a balanced and informed debate.

It was noted that a dredge fishery is restricted to beds that have at least 70% adult stock, and on mobile sandy sediment. There were potentially 6 sands which could support a dredge fishery.

A handworked fishery could potentially be done on all beds, although attempts could be made to try to protect 2012 year class juveniles and some small 2011 juveniles. It was noted that high densities of juveniles could be killed off by a lot of disturbance.

Following the presentation members discussed the information which had been provided including discussion on whether there was a risk of prop wash damage with a dredge fishery as, unintentionally, dredge fishing can also cause damage. The CEO acknowledged there was an element of potential damage but the 'prop wash' referred to in the risk assessment was damage caused prior to laying on.

There was concern that the Roger Sand had been closed the previous year and it was now being suggested as a site to be dredged – this was explained as being due to the fact that the juvenile stock had grown on and was now considered adult stock.

Having been provided with the stock levels and sizes there was discussion on whether or not densities were sufficient to ensure a dredge fishery would be maintained at 1 tonne / hour, it was felt this could be maintained for on the Holbeach Sand but on other beds there were only small areas with these densities which left members concerned that vessels may get rigged up for dredging and find the fishery shut relatively quickly because the stock was not viable. Mr Lake felt this was for individuals to make the choice.

Mr Lake believed the survey results for 2013 were favourable and would support a dredge fishery and also believed that if dredging was not permitted this year cockles would be allowed to die. Mr Lake stated that he would recommend both a dredge and handworked fishery as the density of cockles on separate beds would support both methods and would not lead to conflict between the two methods. He stated that the density of cockles on some beds meant that they could only reasonably be exploited through suction dredging. Roger Handford questioned whether it was possible to run both a handworked fishery and a dredge fishery in tandem, to which members were advised that it could certainly be done but this would introduce risk to the authority as officers would not be able to enforce both comprehensively, therefore members would need to recognise this risk if they opted to open a fishery for both methods of fishing. The economies of both methods of fishing were also discussed and the length of time the fishing season could potentially last was also given consideration.

Members, who were able to vote, Resolved that for the 2013 cockle fishery the following Management Measures would apply:

Total Allowable Catch would be 3,720 tonnes.

Proposed: Conor Donnelly

Seconded: Roger Handford

The method of fishing would be Handwork only.

Proposed: Tom Pinborough

Seconded: Connor Donnelly

Holbeach Sand would not be opened for dredging therefore it was not necessary to determine opening times to coincide with the range closed periods. The CEO was directed to consider and implement revised management options.

Proposed: Tom Pinborough

Seconded: Roger Handford

The proposal to open the Dills Sand with temporary closed areas to protect 2011 stock until ridging out was detected was rejected as no decision could be reached regarding the protection of areas of predominant 2012/2011 year class cockles. The CEO was directed to make and implement alternative management measures.

The CEO to have delegated powers to immediately (without seven days' notice) close a fishery or parts of a fishery should malpractice and/or unacceptable levels of damage be observed.

Proposed: Conor Donnelly

Seconded: Tom Pinborough

To ensure a regular break in the fishery the fishery would operate on as near as possible a four day week based on appropriate tides. Opening dates would be determined by officers.

Proposed: Conor Donnelly

Seconded: Roger Handford

The fishery would be extended to five days a week in the event that atypical mortality became a significant factor.

Proposed: Conor Donnelly

Seconded: Tom Pinborough

Authority Officers could, subject to a Habitats Regulation Assessment, introduce a trial to relay cockles from slow growing to fast growing beds as a measure to help promote sustainability of stocks.

Proposed: Conor Donnelly

Seconded: Roger Handford

MPA13/05 Any other urgent business

There was no other business.

The meeting closed at 1555 hours

Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Action Item 7

Marine Protected Area Sub Committee meeting

15 October 2014

Allocation of Wash Fishery Order (1992) shellfish lays

Report By: L P Godwin, IFCA/Project Officer

Purpose of report:

To formally present the applications made pursuant of attaining a several fishery as per the Wash Fishery Order 1992 (6) for the consideration of the Authority. To present an updated lease agreement for approval by the Authority.

Recommendations

Members are recommended to:

- **Approve the updated WFO shellfish lay lease agreement;**
- **Agree to approve/defer applications for WFO shellfish lays as set out in the Table 4.**
- **Agree that the new lease shall replace all existing leases in April 2015.**
- **Direct the CEO to develop detailed mitigation measures (including trigger levels) and produce a robust, transparent process to assess when stocking levels may need to be limited.**

Background

Through Article 6 of the Wash Fishery Order 1992, Eastern IFCA is able to grant leases for the purpose of molluscan shellfish cultivation – so called WFO shellfish lays. At the 11th Statutory Authority meeting¹, the Authority directed officers to process those WFO shellfish lay applications which had been at least partially processed and declined due to concerns over food availability in The Wash. There are nine such applications which officers have processed as directed.

Due to the length of time which has passed since the initial applications, the applications were processed in full, including the following steps –

- Biotope surveys of application areas;
- Consultation with neighbouring lay holders and local fishing associations; and
- Habitats Regulations Assessment of potential impacts to the integrity of the European Marine Site (of which The Wash is a part).

In addition, officers were directed to produce an updated Biosecurity Plan and an updated WFO lease agreement.

¹ 11th Statutory meeting – 30th October 2013 confirmed minutes

Update on progress

All of the above steps have now been completed and are presented below for the Authority to consider.

Updated lease agreement

Article 6(1) states that the Authority may lease WFO shellfish lays *upon such terms of such period as may be agreed with that person*. The lease agreement serves as the contract between the Authority and the lay holder whereby the lay holder agrees to the terms the Authority have set out.

The Lease agreement has been changed as recently as 2008 whereby restrictions were made relating to the type of gear and size of vessel which can be used on a lay.

There were two main objectives to updating the lease i) to insert a covenant which deals with the death of a lay holder and ii) to replace references to old legislation. Both of these have been achieved – the draft updated lease can be found in Annex 1. In addition, officers have included four more covenants into the draft lease agreement. All changes to the lease are summarised below.

Change pertaining to...	Covenant	Explanation	Reason
Origin of seed	8(f)	This covenant requires lay holders to seek the written permission from the Authority to deposit shellfish seed which has originated from outside of The Wash.	Eastern IFCA's Aquaculture Production Business certification requires us to report, on an annual basis, the movement of shellfish with regards to the several fishery. This covenant will ensure seed originating from outside of The Wash is recorded and allows for officers to check that seed is not originating from areas designated for diseases.
Removal of shellfish	8(g)	Requires lay holders to inform the Authority of the destination of any shellfish removed from a lay which is destined for relaying somewhere else.	Eastern IFCA's Aquaculture Production Business certification requires us to report, on an annual basis, the movement of shellfish with regards to the several fishery. As part of their audit trail, Cefas require information on the destination of seed when originating from The Wash.
Limiting stocking density	8(h)	Gives the Authority the ability to limit the stocking density of shellfish lays as required.	As a result of the uncertainties regarding food availability in The Wash, the Authority requires a mechanism which will mitigate these impacts. In the case that the lays are having an impact on food

			availability, this covenant will allow the Authority to limit the amount of cultivated mussel on the lays, reducing the impact.
Updated references	9	Includes a reference to the Aquatic Animal Health (England and Wales) regulations 2009/463.	n/a
Direction to mark a lay boundary	10	Directs the Lessee to mark the boundary of their lay in the presence of a fisheries officer.	Article 6(10) of the Wash Fishery Order states that <i>the [Authority] shall mark or cause to be marked...all laying in the several fishery.</i> This covenant pertains to the Authority causing to be marked the lays. In addition, this will serve as the final investigation that the ground is not set with any wild species as prescribed in The Order.
Death of a lay holder (if lay holder if an individual)	End of lease	A break clause which terminates the lease in the case that the lay holder dies. This only applies if the lay holder is an individual (not a corporate entity)	If a lease is in the name of a business (corporate entity) the lease will survive the death of any share holder/partner etc. In the case of individual ownership, the lease is terminated and the Authority will determine how to proceed with any shellfish within the lay.

Table 1. Proposed changes to the WFO lease agreement

Should the MPA sub-committee approve the changes, the Updated lease agreement will be finalised by a legal professional ready for use. It is suggested that as of April 2015, the new lease agreement be implemented – replacing all extant leases.

WFO shellfish lay applications

Nine WFO lay applications have been processed by officers. The applications are as follows:

Lay ID	Sandflat/bed	Area (ha)
TH6 (extension)	Thief	2.7
TH9	Thief	10
TH10	Thief	10
SS9	Scotsman's Sled	8
RG2	Roger sand	2.9
RG3	Roger sand	5.1
RG4	Roger sand	6.8
W1	Wrangle flats	7.63
W2	Wrangle flats	8.66

Table 2. Applications for WFO lays under consideration.

Charts of the proposed lays can be found in Annex 2 – biotope surveys. The MPA sub-committee is asked to consider the information presented below in coming to a decision on the applications.

The Wash Fishery Order 1992

Article 6 (see box 1) of the Wash Fishery Order (1992) enables Eastern IFCA to grant leases for the purpose of shellfish cultivation. The restrictions placed on the Authority's powers to grant leases are summarised below:

- The total size of the lay(s) a 'person' is entitled to is 10 ha (without ministerial consent);
- The maximum period a person may be leased a lay to is 10 years (without ministerial consent);
- That, at the time of marking, a lay must not be set with any of the prescribed species or brood thereof.

Box 1. Article 6 (1) Wash Fishery Order 1992 – *The [Authority] may lease to any person the right of several fishery for any of the prescribed species within such part of the several fishery (hereinafter referred to as the "laying") as it may think fit upon such terms of such period as may be agreed with that person...*

The ethos of Article 6 is to allow for viable aquaculture businesses in The Wash without reducing the availability of wild shellfish – to balance the several and regulated fisheries within the Order – and to prevent a monopoly of lay ownership – ensuring as many people can take advantage of the several fisheries as is reasonable. With regards to impacts on wild shellfish stocks in The Wash, Eastern IFCA conducts Biotope surveys, in part to ascertain if the application lays are set with wild cockles or mussels.

In addition to the provisions of the Wash Fishery Order, Eastern IFCA also has duties to ensure healthy seas, sustainable fisheries and a viable industry. The issues of main concern separate to the WFO are the potential for lays to have a detrimental impact on the integrity of the Wash and North Norfolk Coast European Marine Site and the impacts on a viable fishing industry. As such, Eastern IFCA conducts a consultation with the fishing industry with a view to address any objections made, and has submitted a Habitats Regulations Assessment (HRA) to Natural England for their consideration.

The outcomes of the application process are presented below.

Biotope surveys

The Biotope surveys fulfilled two purposes, to inspect the lays for wild mussel or cockle and to provide evidence to inform the HRA. The outcome of the biotope surveys was that no wild cockle or mussels were found on any of the lays in densities sufficient to constitute a potential wild fishery.

As part of the biotope survey report, the Senior Research Officer investigated historical datasets of wild mussel and cockle stocks in relation to the lays. No natural mussel beds have been recorded within any of the application areas based on Eastern IFCA surveys. Wild cockles were found within the lay SS9 at densities of 100-499 m⁻² in 2010 and on TH9 and TH6(ext) at densities of 100-499 m⁻².

The Wash fishery Order (1992) dictates that wild cockle and mussel only may not be present at the time of marking. However, given that the spirit of the Order is to preserve the regulated, wild fishery it would be reasonable to consider the historical value of the bed to the wild stocks.

Consultation

Five objections were received during the consultation period, three were written responses and two were verbal. The main objections raised are summarised below with officer's comments relating to the objections.

Objection (summarised)	Frequency	Officer comments
General - IFCA mussel and cockle surveys are not of a high enough resolution (too few samples) to detect the full extent of cockle beds – surveys should not be used as evidence.	2	Whilst the Eastern IFCA mussel and cockle surveys are not extensive, the limitations are well understood and their use as evidence is justified when these are taken into account. Further, the historical datasets are used in addition to a physical survey of the site – it is not anticipated that a decision will be made solely dependent on IFCA survey data.
General - Low densities of cockles (below 100 m ⁻²) should be considered as these areas have been known to become valuable cockle beds in the past.	1	Cockles at densities of 10-99 m ⁻² constitutes 1-9 cockles found within a grab sample. It is the opinion of the senior research officer that this does not constitute cockles in significant amounts to be classed as a cockle bed. Further, the historical datasets are used in addition to a physical survey of the site – it is not anticipated that a decision will be made solely dependent on IFCA survey data.
General – There is too much uncertainty regarding the impact the lays may be having on food availability in The Wash (having an impact on wild cockle and mussel stocks) to allow more lays.	1	There is uncertainty surrounding the potential for impacts on wild stocks through reduced food availability (of phytoplankton). Discussions on the potential for this impact has been included in the HRA (submitted to Natural England) and their response has indicated that they are provisionally content with the mitigation measures suggested provided we can elaborate on the process.
General – all lays have the potential to be viable cockle beds in the future.	3	The WFO does not dictate that the Authority consider potential cockle beds however, as responsible fisheries managers we have factored in the potential to contribute to the wild (regulated)

		fishery based on historical datasets.
W1 and W2 (Wrangle lays) – There is significant spatfall on Wrangle (which was not detected during the biotope surveys).	1	Biotope surveys were carried out prior to the period where cockle spat settles out of the water column. Spat will often initially settle in areas which will ultimately not be suitable for a cockle bed to establish. If at the time of marking, cockle (brood or adult) is found within the extent of the lay, the lay will not be marked out.
SS9 – the area is regularly used by shrimp fishermen	1	It is the opinion of Eastern IFCA officers that no shrimping will occur over the lay site. Vessels are thought to turn in the near vicinity of the lay rather than actively fish for shrimps. In addition, the ground is primarily soft mud and not suitable for shrimping.

Table 3. Summary of objections from the consultation with neighbouring lay holders and fishermen’s associations.

Habitats Regulations Assessment

The Habitats Regulation Assessment for the proposed WFO shellfish lays considers the potential for impacts to occur to the detriment of the integrity of the European Marine Site. The impacts focussed on with the assessment were as follows:

- Impacts on the distribution of biotopes within The Wash at a bed and site level;
- Increased silt content of the sediments of The Wash at a site and bed level; and
- Reduced food availability (through increased filtration of phytoplankton) at a site and bed level.

Eastern IFCA concluded that there would be no significant adverse effect on the integrity of the European Marine Site as a result of the proposed WFO shellfish lays. This is as a result of proposing mitigation in the form of monitoring phytoplankton levels and meat yields of wild and cultivated mussel and the ability to limit stocking density (via an amendment to the lease agreement) should phytoplankton or meat yields reach low levels.

Natural England have indicated informally that they are content that this would sufficiently mitigate the risk to the wild cockle and mussel stocks however, will require further detail on the process involved in monitoring, primarily what the trigger levels will be with regards to drops in meat yields and phytoplankton levels.

It is the intention of officers to continue working with Natural England to attain formal advice to the effect that the proposed lays will not have a significant impact on the integrity of the European Marine Site.

Other considerations

Cockle spat: In addition to the formal objections, Eastern IFCA officers have received reports of spat settlement on the Thief bed – including at the sites of the lay applications

TH6(ext), TH9 and TH10. As a result, officers inspected the site (29th September 2014) and can confirm the presence of spat.

The Wash Fishery Order (1992) directs that lays cannot be marked out on ground where wild cockle or mussel (or any of the prescribed species) are present.

Persons granted with in excess of 10ha of WFO lays:

At the 15th Statutory meeting it was brought to the attention of the Authority that there are several circumstances where leases have been granted to a 'person' (as defined in the Order – see box 2) which are in excess of 10ha. Having received legal advice on the matter to confirm our interpretation, it should be noted that four of the applicants are deemed as 'persons' holding in excess of 10ha of lay ground not including their current applications.

Box 2 – 'Person' as defined in the Wash Fishery Order 6(5)(b)

The following shall be treated as one person-

- (i) *Any two or more persons carrying on a business of shellfish cultivation in partnership;*
- (ii) *The person having control of any company and all companies controlled by that person;*
- (iii) *Spouses;*
- (iv) *Parents and children*

It is interpreted that the spirit in which 6(5)(b) of the Wash fishery Order was written was to prevent any monopoly on lay holdings within The Wash – allowing as many persons as there is potential for to have a lay. That said, it is only prohibited to allow for a 'person' to have in excess of 10ha unless ministerial consent is sought – i.e. if a strong enough case is presented.

Applicants for W1 and W2 (Wrangle lays) are related in such a way to existing lay holders (see box 2) that they are deemed as one person – 'person x'. The current lay holding of person x totals 16ha. If granted, the two Wrangle lays would increase this to **32.29ha**. This would require Ministerial consent.

Applicants for TH9 and TH10 (Thief lays) are related in such a way to existing lay holders (see box 2) that they are deemed as one person – 'person y'. The current lay holding of person y total 51.6ha. If granted, the two Thief lays would increase this to **71.6ha**. This would require Ministerial consent.

In addition, the applicant for the TH6(ext) would increase his total lay holdings from 7.5ha to 10.2ha and would thus also require ministerial consent.

Risks

Eastern IFCA was granted a Several Order (as part of the Wash Fishery Order 1992) with the aspiration that the fishing industry could utilise the productive estuary of The Wash – encouraging less dependence on the wild fisheries. Shellfish aquaculture can provide businesses and individuals with a consistency of income. There are however risks inherent in accepting the proposals of any lay.

Impacts on the wild fishery

Most of the intertidal area of The Wash could potentially be a viable cockle bed in the future. The task of the Authority is to ensure that the benefits of granting the right to several fishery are achieved without impacting the wild (regulated) fishery. It is the

opinion of the officers that, in granting any of the lays, the current wild mussel or cockle stock will be impacted. However any of these areas (and indeed any of the areas currently designated as lays) could possibly become viable shellfish beds. This is mitigated in as much as a WFO lay cannot be marked out if there are any cockle (or any of the prescribed species) adults or brood at the site. Thus, if in the time between the biotope survey and marking out the lay any cockle is found (i.e. the area has become part of a viable shellfish bed) the lay cannot be used. For this reason officers recommend that the decision regarding the Thief lays (TH6(ext), TH9 and TH10) be deferred until such a time that it can be ascertained that the proposed sites are either clear of the spat which has settled in the time since the biotope survey or have developed into a cockle bed.

Food availability

There is uncertainty around the issue of food availability within The Wash. The addition of a large amount of filter feeding shellfish will impact the standing stock of food (phytoplankton) available to the wild stocks – the degree of impact cannot, as yet, be quantified. This is mitigated via the introduction of a covenant of the lease agreement that will allow Eastern IFCA to limit stocking densities should an issue arise.

Lay holding by one 'person' in excess of 10ha

Article 6(2) states that Eastern IFCA requires the consent of the Minister to grant total lay holdings to one 'person' in excess of 10ha. This process has been completed in the past and lays of circa 30ha have been granted. The risk inherent in granting lays far in excess of 10ha is that the benefits of aquaculture in The Wash are only appreciated by the few. This is particularly true given that there are already a large number of lays granted in The Wash and we may be nearing the limit that The Wash can sustain.

Summary and recommendation

Based on the outcome of the considerations presented above, officers recommend the following actions;

Application lay	Recommended decision	Explanation
SS9	Provisionally accept	It is of the opinion of Eastern IFCA officers that shrimping is unlikely to occur at this site. It is recommended that a provisional lease be granted pending the site being marked out (that is, depending on the presence of wild shellfish as per the Order).
W1/W2	Defer until April 2015	The 'person' (as defined in the Wash Fishery Order 1992) is already in possession of lays in excess of 10ha. It is suggested that the decision to grant these lays is deferred until the existing issue surrounding lays in excess of 10ha has been discussed with Defra.

TH6(ext)	Defer until after winter	Spat settlement has been observed on the application areas by Eastern IFCA officers. There is the potential for this spat to be removed as a result of weather over winter. As such, it is suggested that the decision to grant these lays is deferred until such a time as it can be ascertained whether the spat has been removed via natural causes.
TH9/TH10	Defer until after winter	The applicants of TH9 and TH10 are a 'person' (as defined in the Wash Fishery Order 1992) already in possession of lays in excess of 10ha. It is suggested that the decision to grant these lays is deferred until the existing issue surrounding lays in excess of 10ha has been discussed with Defra.
RG2; RG3 & RG4	Provisionally accept	Whilst objections made during the consultation were that these lays could potentially become viable cockle beds, Eastern IFCA records indicate that there have been no cockles present at densities above 99m ⁻² and there were no wild cockles present during the biotope survey (2014). It is recommended that a provisional lease be granted pending the site being marked out (that is, depending on the presence of wild shellfish as per the Order).

Table 4. summary of WFO shellfish lay applications

It is recommended that the MPA sub-committee:

- Provisionally accept those lay applications as detailed in Table 4 – pending formal advice from Natural England and a final ground investigation at the time of marking.
- Defer those lay applications (Thief and Wrangle lays) as detailed in Table 4. It is the opinion of officers that the mitigation presented in the summary table will compensate for the above risks.

Officers will propose detailed mitigation measures (including trigger levels) and produce a robust, transparent process which will dictate when stocking levels will be limited.

Once formal advice has been received from Natural England officers will arrange with the successful applicants a time to mark lays (and conduct final lay ground investigation) with those granted a lease in principle. Officers will engage with those applicants whose lay applications have been deferred to ascertain their continued interest in pursuing the lays.

Annex 1

Draft updated lease agreement

Note – Additions are written in red

WASH FISHERY ORDER

LEASE FOR LAYS

WASH FISHERY ORDER 1992

LEASE of a laying for the cultivation
of molluscan shellfish

THIS LEASE made the [**Date.**]

BETWEEN THE CROWN ESTATE COMMISSIONERS (being the managers of the Crown Estates) hereinafter called the Owners of the one part and THE LOCAL SEA FISHERIES COMMITTEE for the Eastern Sea Fisheries District (being the Grantees of the Wash Fishery Order 1992) hereinafter called the Lessors of the second part and [Name and address], hereinafter called the Lessee of the third part.

Whereas under and by virtue of Article 3 of the Wash Fishery Order 1992, the Lessors are the Grantees of an Order for the establishment and maintenance of a Several Molluscan Fishery in the Estuary of the Wash in the Counties of Norfolk and Lincolnshire

AND WHEREAS the Lessors are empowered from time to time to set and mark out such portions of the area within the limits of the Order aforesaid as they may think fit for the purpose of being leased as lays or layings or breeding or fattening grounds for the cultivation of molluscan shellfish and the lay or layings hereinafter described has been duly set and marked out pursuant to the provisions of the said Order.

AND WHEREAS in pursuance of the powers conferred upon them by the said Order and of all other powers if any vested in them the Owners and the Lessors have agreed with the Lessee to lease to him the laying No. [xxx] consisting of [xxx] hectares hereinafter described for the period and upon the term and conditions hereinafter contained.

NOW THIS DEED WITNESSETH that in consideration of the rent covenants provisions and Agreements herein reserved and contained and on the part of the Lessee to be paid observed and performed the Owners and the Lessors hereby demise unto the Lessee ALL that laying situate in the Wash in the Counties of Norfolk and Lincolnshire being numbered [xxx] on the official plan of the layings of which a copy of the relevant part appears in the first Schedule hereto TO HOLD the same unto the Lessee from the [date] day of [date] for the term of [time (years)] and thence forth from year to year determinable by either party giving to the other three calendar months previous notice in writing expiring on the 31st day of March in any year **or until the lease has been in effect for ten years**. YIELDING AND PAYING therefore :- the yearly rent is determined by the quota available from the public beds as set out in Minutes WM04/13, such sum payable by yearly payments on each 1st day of April in every year of the said term in advance and and in the following terms and conditions viz:-

The Lessee hereby covenants with the Lessors -

(1) That he will pay and discharge all taxes and assessments and other outgoings (if any) including Licence fees to the Owners imposed upon the said laying during the said term:

(2) That he will use the said laying only for the propagation cultivation breeding fattening or gathering of molluscan shellfish and in accordance with the Wash Fishery Order 1992 and that he will efficiently and properly manage use and keep such laying and will not allow the same nor any part thereof to be dormant or unused or to become choked or fouled or contain any starfish or any other matter substance or thing which is or might be detrimental to molluscan shellfish and that he will not underlet, assign, or part with the possession of the said laying without the previous consent in writing of the Lessors. Such consent not to be unreasonably withheld.

(3) That he will at all times allow the Lessors full right and liberty by their Fishery Officers or any of their servants agents or workmen to inspect the laying or for any other purpose and that he will render to the Lessors accounts of all molluscan shellfish layed, relayed and sold by him to enable them to comply with the requirements of the Ministry of Agriculture and Fisheries under the provisions of Article 5 of the Wash Fishery Order 1992

(4) That no building erections embankments or other works shall at any time be commenced or executed by the said Lessee within the limits of the said Wash Fishery Order 1992 and that he the said Lessee shall not interfere in any way with the works boundaries or marks of the Lessors which show the extents of each lay.

(5) That he the said Lessee will indemnify the Owners and the Lessors against all claims actions and demands of any kind whatsoever which may arise out of or in any way in consequence of the used or otherwise of his laying.

(6) That the laying shall not be used for any purpose other than that prescribed by the Wash Fishery Order 1992.

(7) That he the said Lessee shall and will in every way during the period of his tenancy comply with the provisions of the Wash Fishery Order 1992 so far as he is affected thereby.

(8) a) That the execution of this lease by the Owners and the Lessee shall constitute his consent, for the purpose of Section 158(5) of the Marine and Coastal Access Act 2009 and Section 3(1) of the Sea Fisheries (Shellfish) Act 1967 (or any statutory re-enactment or modifications thereof) to the application to the laying hereby demised, , of the byelaws made from time to time by the Lessors under the Powers contained in Sections 155 to 162 of the Marine and Coastal Access Act 2009 and all Regulations and Restrictions made by the Lessors under the powers contained in Section 3 of the said Sea Fisheries (Shellfish) Act 1967 or any prior legislation to the like effect.

b) Vessel Length Restriction

No Layholder shall use a vessel exceeding 14 metres in overall length (LOA) unless;

1) the vessel was legally owned by the Layholder on 24th October 2007

Or

2) the vessel was used by the Layholder in the Several Fishery on or before 24th October 2007

Vessels exceeding 14 metres LOA will only be able to operate within the Several Fishery:

- until there is a change of legal ownership;
 - or there is any modification that increases the carrying capacity of the vessel;
 - or the vessel ceases operation;
- whichever occurs earlier.

(Legal ownership shall be determined by the Transcript of Registry held by the Registry of Seaman and Shipping)

c) Maximum Carrying Capacity

No Layholder shall use a vessel that has a carrying capacity exceeding 40 tonnes

(if evidence of the carrying capacity is required by the Joint Committee, the carrying capacity of the vessel shall be determined by a Naval architect approved by the Joint Committee, the cost of which will be borne by the vessel's owner)

d) Number of Dredges

No vessel shall use more than two dredges

e) Dredge Design

No vessel shall use a dredge that has an inside opening greater than one metre. The design of dredges must be approved by the Joint Committee. The use of suction dredges is not permitted.

f) Origin of seed

No vessel or persons shall deposit shellfish of any kind onto their lay holding which has originated from anywhere other than within the limits of The Wash Fishery Order 1992 unless written consent is obtained from Eastern IFCA and such consent shall not be unreasonably withheld within.

g) Removal of shellfish from lays

No vessel or persons shall remove shellfish deposited onto their lay holding without informing the Authority of its destination unless the shellfish are to be sold to a market as a fully grown adult.

h) The Authority ("the lessors") reserves the right to cap or otherwise limit stocking density of shellfish deposited on lays as is necessary. The Authority will notify lay holders of stocking density restrictions three months prior to the date of the limits being imposed.

The Authority ("the lessors") reserve the right to make future changes to the lease conditions'.

(9) That the said Lessee shall and will in every way during the period of his tenancy comply with the provisions of the Aquatic Animal Health (England and Wales) regulations 2009/463. and the Molluscan Shellfish (Control of Deposit) Order 1974/1555 (or any statutory re-enactment or modification thereof), and any statutory enactment laying down the health conditions for the production and the placing on the market of live bivalve molluscs.

10) That the said Lessee shall mark the boundary of his laying in the presence of a Fisheries Officer, pursuant of Article 6(10) of the Wash Fishery Order 1992 and that, the objects used to mark said laying shall be approved by said officer.

PROVIDED ALWAYS and it is hereby further agreed and declared that if the Lessee shall allow the said laying to become choked or fouled or to contain any starfish or any other matter substance or thing which is or might be detrimental to molluscan shellfish or if he shall fail to use the said laying for the purpose of propagation cultivation breeding fattening gathering or cleansing of molluscan shellfish or if he shall allow the same to lie dormant or unused shall use the same for any purpose other than that intended by these present then in each or any of such cases it shall be lawful for the Lessors without any notice whatsoever to the Lessee immediately to re-enter into possession of the said laying and to eject the Lessee there from without making any compensation whatever to the Lessee for any molluscan shellfish if any which may at the time of such re-entry be in or upon such laying.

Provided further that if the rent hereby reserved or any part thereof shall be in arrears for twenty-one days after the same shall become due (whether legally demanded or not) or in the event of any breach of any other covenant or agreement on the part of the Lessee herein contained or implied by virtue of the herein before recited order upon the execution hereof or of his becoming subject to the Bankruptcy Laws or making any composition or arrangement with his creditors the Lessors may determine the tenancy hereby created by giving to the Lessee seven clear day's notice in writing to that effect and may after the expiration of such notice resume possession of the said laying and remove there from all property belonging to the Lessee and re-let the said laying without any process of law or further authority in that behalf. And the Lessors hereby covenant with the Lessee that on payment by him of the proper seasons and under the direction in all respects and supervision of the Fishery Officers of the Lessors for the time being to gather brood molluscan shellfish from such of the existing molluscan shellfish scalps under the jurisdiction of the Lessors as may be opened for fishing for the purpose only of depositing such molluscan shellfish in the laying aforesaid.

Provided always and it is hereby expressly agreed and declared that in the event of the lease granted to the Lessors by the Owners under the Wash Fishery Order 1992 being determined then this lease shall determine with that lease, and the said Lessee shall have no right to compensation or to any return of rent against the Lessors in respect of such determination.

Provided always and it is hereby expressly further agreed and declared that in the event of the death of the Lessee then this Lease shall be determined and the said Lessee (or its estate) shall have no right to compensation or to any return of rent against the Lessors in respect of such determination.

Provided always and it is hereby further declared that in case of any dispute or difference which may arise between the Lessors and the Lessee during the said tenancy touching or concerning the user or occupation of the said laying such dispute or difference shall be referred to the sole arbitrament of the Ministry of Agriculture and Fisheries whose decision hereon shall be final and binding and conclusive on the parties hereto.

IN WITNESS whereof the said parties have executed these present as a Deed the day and year first above written.

Signed as a Deed and delivered by)
the Lessors and for and on behalf)
of the Owners in the presence of)

Signed as a Deed and delivered by)
the Lessee in the presence of)

FIRST SCHEDULE

This page should consist of a map of the lay in question.

Annex 2

Biotope survey reports and associated charts

Note – Figure 1 of the biotope survey report for the Wrangle lays shows the incorrect boundaries of both W1 and W2. The correct boundaries are presented in figures 2-4.

SURVEY REPORT FOR THE PROPOSED MUSSEL LAYS RG2, RG3 and RG4

Introduction

Applications for three lays on the Roger Sand, RG2, RG3 and RG4, were submitted to Eastern Sea Fisheries Joint Committee in 2008, prior to the moratorium on granting new lays came into effect. Before new lay leases can be issued, the Authority must conduct a Habitats Regulation Assessment (HRA) to ensure granting the lay will not have a deleterious impact on the site features. Following a survey, conducted on May 6th 2008, a HRA was submitted to Natural England. The Committee received advice from Natural England that due to the intensification of lays on the Roger/Toft sand, there were concerns that food availability could become problematic if any further lays were leased in that particular area.

Subsequent to receiving that advice, officers in conjunction with Cefas have conducted research studying food availability in the Wash with particular reference to the impacts the lays might have. Although this study detected a depletion of Chlorophyll-a 10cm above the mussels within a lay, it did not find any evidence to suggest food limitations were currently occurring within the Wash. Given this new evidence, the applications for these three lays have been re-opened. Due to the long interim period during the moratorium since the previous habitat survey, another survey was conducted on June 16th 2014. In order to provide as much evidence as possible to inform a new HRA, additional evidence has also been gathered from recent and historic cockle and mussel surveys to show the extent of nearby shellfish beds and the distribution of the sand mason worm, *Lanice conchilega*. 2013 data from the Sea Mammal Research Unit has been used to determine where seal haul-out sites occur in the vicinity of the proposed lays.

Survey Results

The proposed lays, RG2-RG4, are located on the north-western foreshore of the Roger Sand, 400m north-east of the existing lay, TOB. Table 1 lists the coordinates marking the border of these lays, while figure 1 shows their position on the sand. The proposed lays cover the following areas:

RG2 – 2.9 hectares

RG3 – 5.1 hectares

RG4 – 6.8 hectares

Table 1 – Coordinates marking borders of proposed lays, RG2, RG3 and RG4

Lay	Latitude	Longitude
RG2	52 57'.919N	00 11'.103E
	52 57'.960N	00 11'.213E
	52 57'.877N	00 11'.310E
	52 57'.827N	00 11'.200E
RG3	52 57'.790N	00 10'.689E
	52 57'.884N	00 10'.873E
	52 57'.741N	00 10'.971E
	52 57'.710N	00 10'.862E
RG4	52 57'.884N	00 10'.873E
	52 57'.919N	00 11'.103E
	52 57'.827N	00 11'.200E
	52 57'.741N	00 10'.971E

The eastern side of the Roger/Toft sand faces seaward and is exposed to prevailing storms. As such the ground on this side tends to be mobile and supports no significant shellfish beds. By contrast, the northern and southern sides are sheltered and support

higher biodiversity, including high densities of cockles and important wild mussel beds. These areas are also attractive for mussel cultivation and currently support 21 lays, mainly on the north-western edge of the sand.

Habitat types

The survey conducted on June 15th 2014 found the area in the vicinity of the proposed lays supports a variety of features that are shown in figure 2. These appear to be influenced by several run-offs that flow through the area, causing erosion and accretion of sediment.

Run-offs

There are four run-offs that flow through the proposed lays, draining water from higher on the sands to the sea. Three of these are relatively small and shallow (<10cm deep), almost drying out at low water. The larger run-off is 5-8m wide and 30-50cm deep at low water. In places the water flow has eroded the sand from the edges and bottom of this run-off, revealing the underlying clay layer.

Sand Bank

These areas are situated between and along the edges of the run-offs. They are up to 1m higher than the surrounding ground and appear to be caused by an accretion of sand. Their sediment is mainly a mixture of medium and coarse grain sand with ripples <10cm high. The ground is firm and has no visible anoxic layer within 20cm of the surface. *Arenicola marina* are present in these areas in densities of 1-9 worms/10m².

Sandy Ripples

These areas are lower and flatter than the elevated sand banks. They are composed mainly of medium grained sand and covered with ripples <10cm high. They are firm with an anoxic layer 1-5cm below the surface. *Arenicola* are present in these areas in densities between 1-9 worms/m², and occasional *Lanice conchilega* in densities between 1-9 worms/100m². Strands of *Entromorpha spp* are present throughout these areas but the coverage is low (<1% to 5% coverage).

Sandy low way

These areas are similar in appearance to the areas of Sandy Ripples, but the ground is a little wetter, with shallow pools of standing water (1-2cm deep). The sediment is mainly composed of medium grained sand, covered with ripples <10cm high. The ground is firm, with an anoxic layer 5-20cm deep. *Arenicola* are present in these areas, but in densities that are lower than in the Sandy Ripple areas (1-9 worms/10m²). Individual *Lanice* were found to be present in densities similar to that of the Sandy Ripple areas (between 1-9 worms/100m²). Strands of *Entromorpha spp* were found to be present, but with a coverage of <1%.

Scoured sand + Silty hillocks

This area appeared more eroded than the other features in the vicinity. The sediment was mainly fine grained sand, mixed with medium grained sand, mud and empty shells. The surface relief was slightly uneven with low silty hillocks rising above scoured ground and shallow pools of standing water (see figure 4 for photograph of feature). The

scouring appears to be caused by water draining off the sand towards the large run-off. The ground in this area was found to be a little softer than elsewhere in the vicinity, with an anoxic layer 1-5cm beneath the surface. *Arenicola* and *Lanice* were present in densities of 1-9 worms/100m², while *Entromorpha spp* were present with a coverage between 1% and 9%.

Silt

The survey conducted on June 16th did not extend as far as this feature, but sediment data collected during the 2014 spring cockle surveys identified an area of fine silt between RG3 and the Lay TOB.

Shellfish beds

Cockles

The Roger/Toft sand has historically provided important fisheries for both and cockles and mussels. In the 1960s dense cockle stocks covered much of this sand, extending into the Trap area of the Roger. Since then the extent of the cockle beds on this sand has declined, with settlements usually only occurring in the Hook Hill and Toft parts of the sand. EIFCA survey records show there are still regular cockle settlements at Hook Hill and in a band to the south of the Toft mussel bed and the lays. The survey on June 16th did not find any cockles within the boundaries of the proposed lays, but there were low densities (<10 cockles/m²) of large adult cockles found in the sandy low way to the south-east of RG2. These are the remnants of a settlement that occurred in 2010 and were fished in 2012. The distribution of these stocks in 2012, prior to the fishery, can be seen in figure 3. Also shown in this figure is the distribution of a patch of 2006 year-class cockles that were identified during the 2007 spring cockle surveys.

Mussels

There are currently two wild mussel beds on the Roger/Toft sand. The larger of these is situated 1.8km south-west of the proposed lays, while the smaller bed is 230m south-west of RG3 (see figures 2-4). These beds have been surveyed annually for over a decade and show no signs of extending towards the proposed lays.

Sand mason worm, *Lanice conchilega*

In addition to those identified and described above from the survey conducted on June 16th, the distribution of *Lanice* is also mapped from data gathered during the spring cockle surveys. Figure 4 shows the distribution of this species in the vicinity of the proposed lays at the time of the 2014 spring cockle surveys. This survey found *Lanice* covered approximately 384 hectares of the Roger/Toft sand, of which 6.5 hectares (1.9%) were within the boundaries of the proposed lays.

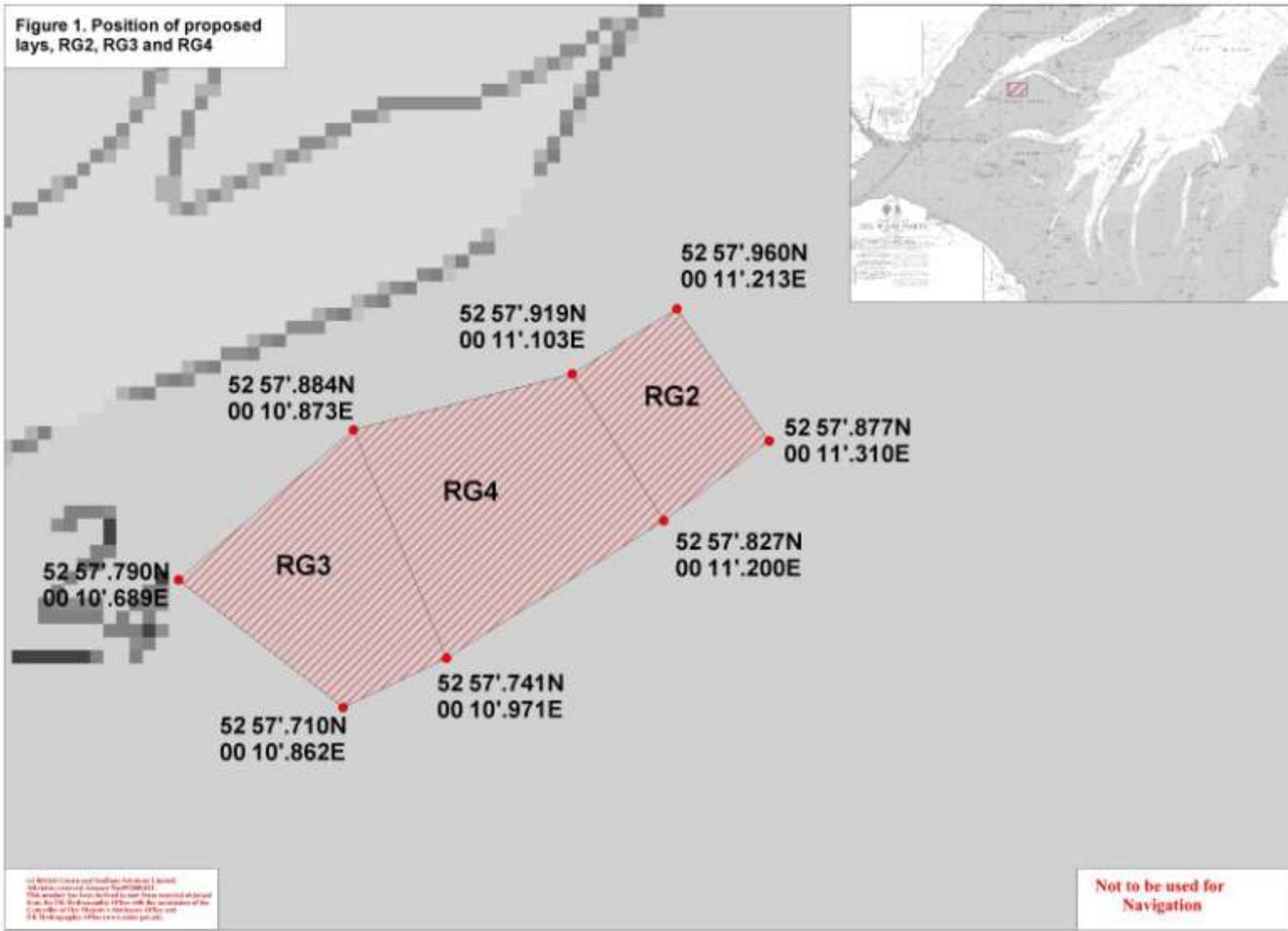
Seal haul-out sites

The closest seal-haul-out site to the proposed lays is 1.9km away on the edge of the Roger Sand and Freeman Channel. There are two other haul-out sites on the South Tofts (3.8km) and the northern Gat (3.3km), but these are not visible at low water due to the height of the sand.

Conclusion

Historically the Roger/Toft beds have supported valuable cockle and mussel fisheries, and for the past 30 or more years have been an important site for the aquaculture of mussels. Survey records, however, show that the proposed lays are beyond the extent of wild cockle or mussel beds. *Arenicola marina* and *Lanice conchilega* are both present within the lays, but both of these species have widespread distributions over the intertidal beds in the Wash.

The nearest seal haul-out site is 1.9km away. This is more than triple the 600m radius of disturbance accepted for human disturbance on seals. Further, as most activity on the proposed lays is likely to be over high water periods, when the seals are not hauled out, disturbance will be minimal.



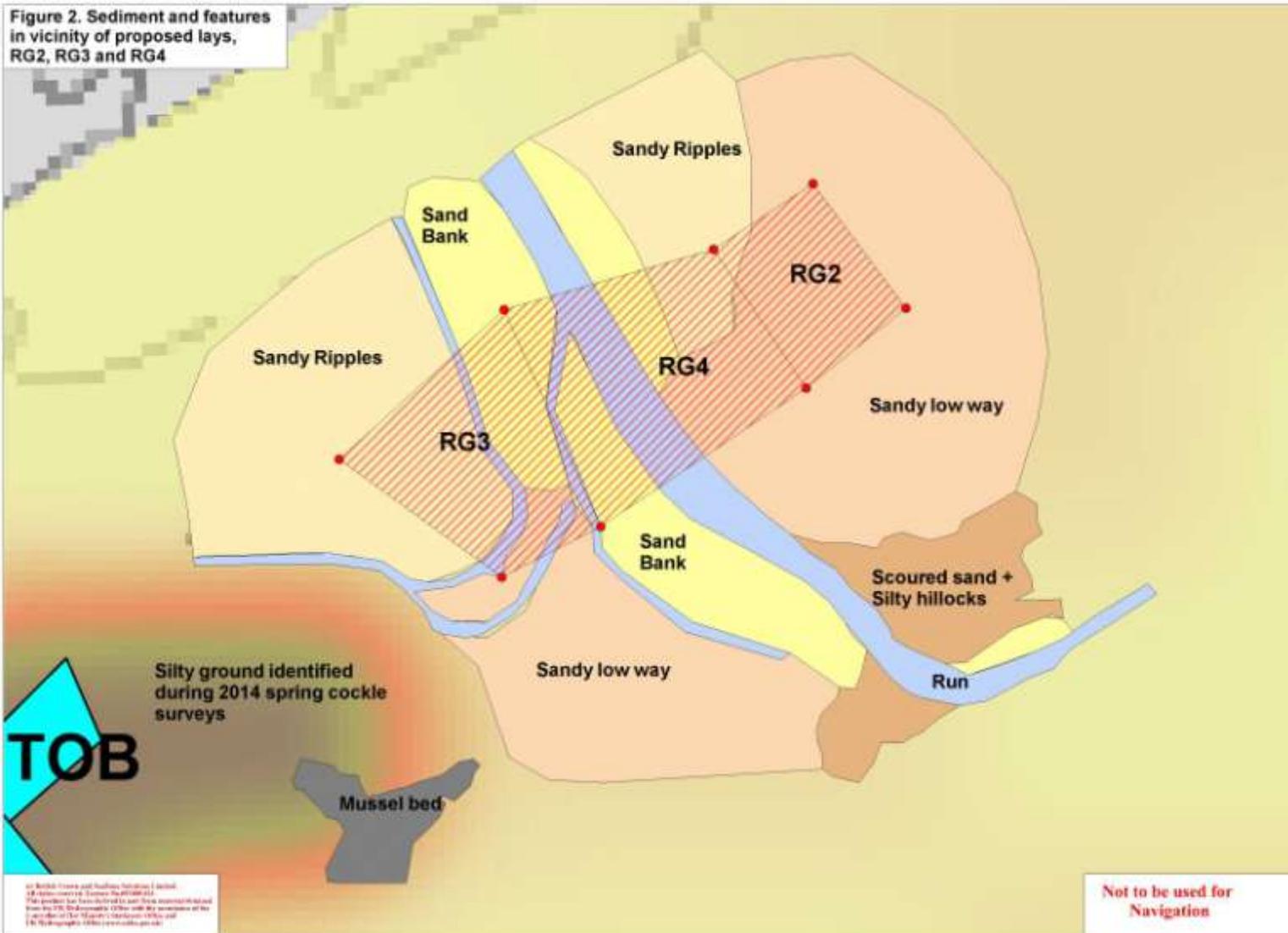


Figure 3. Extent of cockle beds in vicinity of proposed lays, RG2, RG3 and RG4

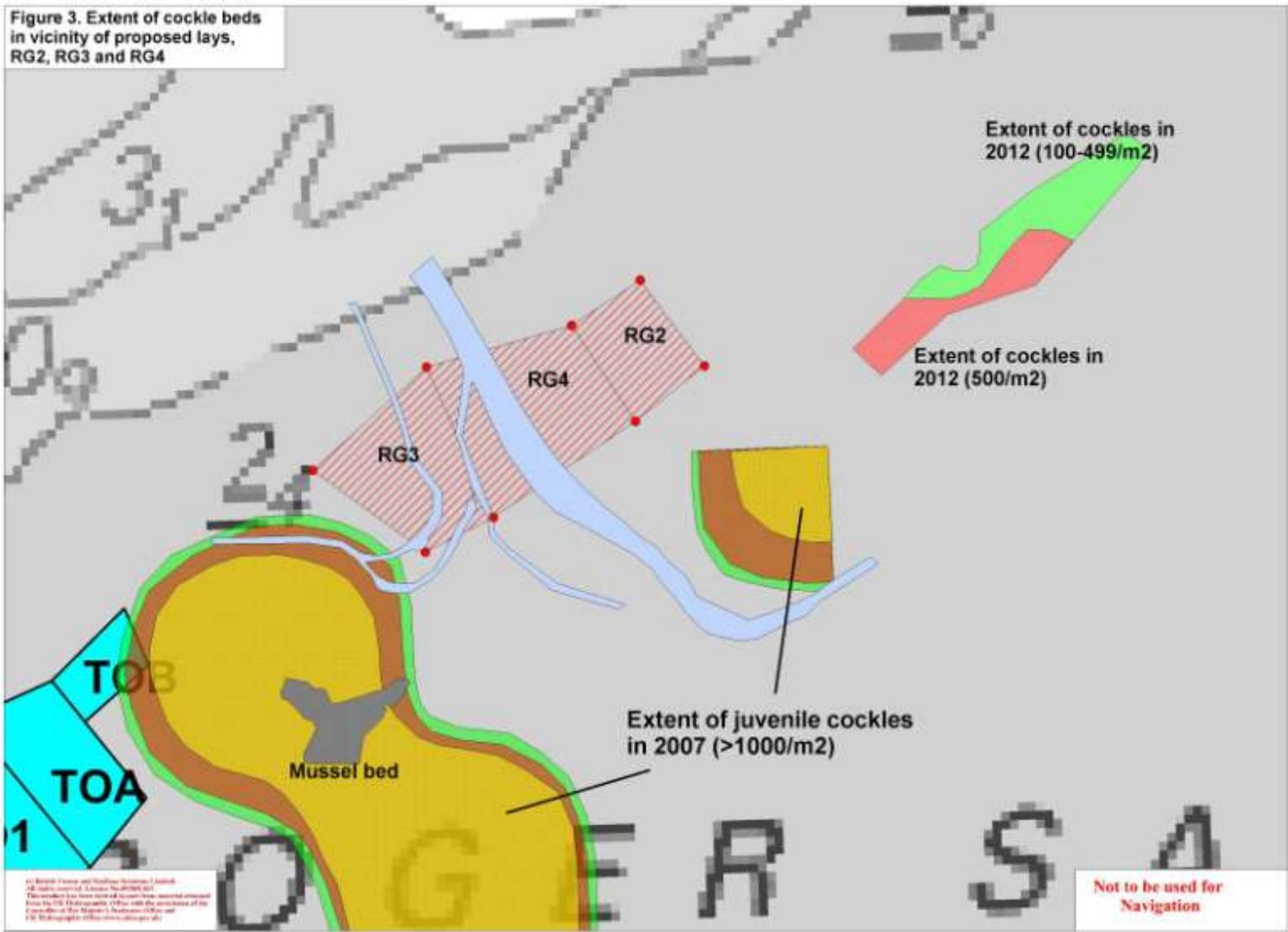


Figure 4. Patches of *Lanice conchilega* in vicinity of proposed lays, RG2, RG3 and RG4

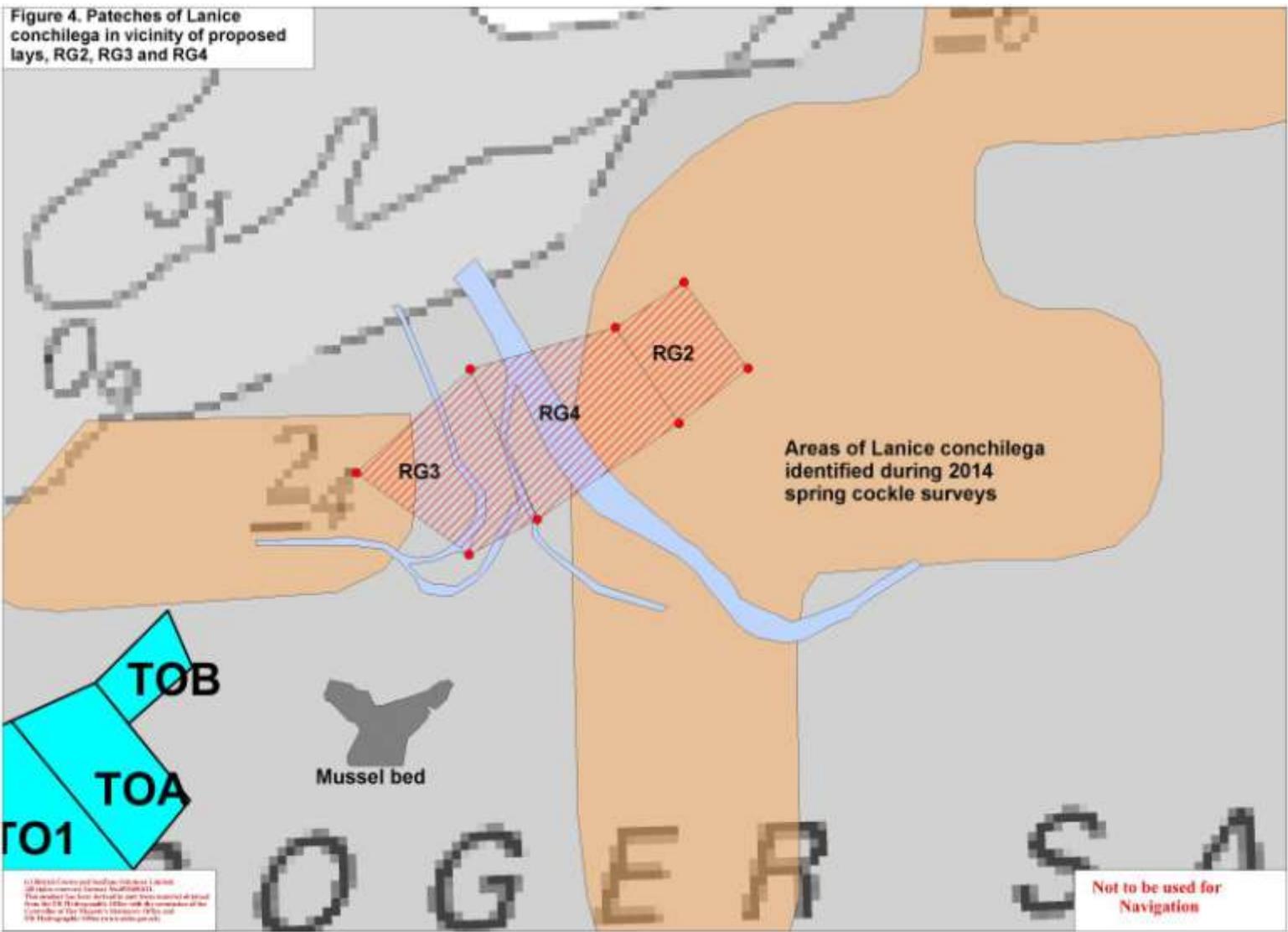




Figure 4 – Photograph of area of Scoured sand and silty hillocks

SURVEY REPORT FOR THE PROPOSED MUSSEL LAY, SS9

Introduction

An application for a mussel lay on the Scotsman's Sled edge of the Hull Sand was submitted to Eastern Sea Fisheries Joint Committee in 2008, prior to the moratorium on granting new lays came into effect. Before new lay leases can be issued, the Authority must conduct a Habitats Regulation Assessment (HRA) to ensure granting the lay will not have a deleterious impact on the site features. In order to provide evidence for its original HRA, a survey was conducted in the vicinity of the proposed lay on January 14th 2009, shortly after the submission of the application. Due to the long interim period during the moratorium since the original survey, another survey was conducted on July 14th 2014. In order to provide as much evidence as possible to inform the HRA, additional evidence has also been gathered from recent and historic cockle and mussel surveys to show the extent of nearby shellfish beds and the distribution of the sand mason worm, *Lanice conchilega*. 2013 data from the Sea Mammal Research Unit has been used to determine where seal haul-out sites occur in the vicinity of the proposed lays.

Survey Results

The proposed lay, SS9, is located in the lower eulittoral zone on the western side of Hull Sand on the edge of the Scotsman's Sled channel. This is 370m north-west of the existing lay, SS8, and 460m north-east of the existing lay, SS2.

Table 1 lists the coordinates marking the border of SS9, while figure 1 shows its position on the sand. The proposed lay covers an area of 8.0 hectares.

Table 1 – Coordinates marking border of proposed lay, SS9

Lay	Latitude	Longitude
SS9	52 50'.945N	00 16'.575E
	52 50'.985N	00 16'.900E
	52 50'.875N	00 17'.000E
	52 50'.816N	00 16'.824E

The northern part of the Hull Sand (Whiting Shoal) faces seaward and is exposed to prevailing storms. As such the ground on that side of the sand tends to be mobile and supports no significant shellfish beds. By contrast, the area around the Scotsman's Sled channel is more sheltered and supports more stable or silty habitats. In addition to the proposed lay, six existing lays are situated along the edge of the channel or in the silty basin at its terminus.

Habitat types

The survey conducted on July 14th 2014 found the predominant habitats in the vicinity of the proposed lay are rippled fine sand on the higher ground, gradually becoming siltier as the ground slopes towards the channel edge. Non-native American razorclams, *Ensis directus*, were found to be present in these lower regions. In an area north-west of the proposed lay, patches of sand mason worm, *Lanice conchilega*, appeared to have trapped sediment and formed low hillocks. A

shallow run-off was also found that flowed northwards, roughly parallel to the Scotsman's Sled channel. These features are shown in figure 2.

Sandy Ripples

The higher parts of the sand, including the higher part of the proposed lay, predominantly support this habitat. Here the sediment is composed mainly of medium and fine grained sand and covered with ripples <10cm high (see figure 5). In these areas the ground is relatively firm with an anoxic layer 5-20cm below the surface. This ground supported *Arenicola marina* in densities between 1-9 worms/m², and *Lanice conchilega* in densities that varied between 1-9 worms/m² to 10-99 worms/m². Low numbers of cockles and starfish were also found in this region, but these were present in densities <1/1000m².

Sandy-Silt + Ensis

The survey found that as the sand slopes towards the channel the sediment gradually becomes siltier. Previous visits to this area had found that these regions do not dry apart from during the larger spring tides. In these regions the sediment was found to be a mixture of fine grained sand and mud. The ground is less firm than higher up the sand and becomes softer closer to the channel edge. The anoxic layer is 1-5cm below the surface. Razorclams, *Ensis directus*, were found to be present in this region in densities of 10-99/m². *Lanice* were also present in densities of 1-9 worms/10m². Mussels, starfish and brittlestars were also found in this region but in densities <1/1000m².

Hillocks + *Lanice*

In an area north-east of the lay, patches of *Lanice conchilega* appeared to have trapped sediment and consolidated the ground to low hillocks (see figure 6). The sediment within these hillocks was composed predominantly of fine sand and mud, with an anoxic layer 1-5cm beneath the surface. Within these hillocks *Lanice* were present in densities that ranged between 10-99 worms/m² and 100-999 worms/m². *Arenicola* were also found to be present in densities of 1-9 worms/10m².

Gravel/Sand + *Lanice*

Between the hillocks of *Lanice* and the run-off a small area of ground was found that had a coarser sediment. Here the sediment was composed of a mixture of gravel, coarse, medium and fine grained sand, mud and empty shells. Within this region *Lanice* were present in densities of 100-999 worms/m².

Run-off

There is a shallow run-off that drains water from the surrounding sand. This flows slowly northwards and almost dries out at low water on a large tide.

Shellfish beds

Cockles

This area was not historically included within the spring cockle surveys and was only included in 2010 after fishing activity was observed on this sand in 2009. As a consequence, the cockle database for this sand is limited to five surveys. The earliest of these found a small patch of cockles to be present in densities that ranged between 100-499 cockles/m² and 500-999 cockles/m² (see figure 3). This patch was situated close to the eastern edge of the proposed lay. Subsequent surveys have found this population of cockles has declined, having received no further settlements. The absence of any recent settlements coupled with the original population being a single year-class would indicate that cockle settlements on this bed are not a common occurrence.

Mussels

Although there are a number of wild inter-tidal mussel beds on the Breast Sand, none of these are close to the proposed lay. The nearest of these beds are the East Breast bed (1.6 km away), and the Trial Bank and Scotsman's Sled beds (both 2.1 km away).

Sand mason worm, *Lanice conchilega*

In addition to those identified and described above from the survey conducted on July 14th, the distribution of *Lanice* is also mapped from data gathered during the spring cockle surveys. Figure 4 shows the distribution of this species in the vicinity of the proposed lays, including those patches identified during the 2014 spring cockle surveys. This survey found *Lanice* covered approximately 66.7 hectares of ground in the vicinity of the proposed lay. Of this, approximately 0.64 hectares (<1%) were within the boundaries of the proposed lay.

Seal haul-out sites

The closest seal-haul-out site to the proposed lay is 1.5 km away on the opposite side of the Scotsman's Sled channel. There is also a site 1.8 km away on the eastern edge of the Hull Sand but this is not visible from the lay at low water due to the height of the sand.

Conclusion

Apart from a single settlement of cockles that were fished in 2009-2010, our records do not show any wild cockle or mussel beds to be present in the vicinity of this proposed lay. Anecdotal reports from some fishermen indicate they may fish for brown shrimps (*Crangon crangon*) at high water with beam trawls in this area. EIFCA fishery observation data is limited and with only a small fraction of the local fishing fleet being obliged until recently to use Vessel Monitoring

Systems (VMS), this claim is currently difficult to confirm or refute. However, in 2011 the Authority conducted cockle mortality studies on this sand, during which wooden stakes were pushed into the ground to identify survey stations. One of these stations was close to the edge of the proposed lay and at the time of the recent survey the stake was still present. Having surveyed three years, its continued presence would suggest that if shrimping does occur in this area, it is not extensive.

Arenicola marina and *Lanice conchilega* are both present within the lays, but both of these species have widespread distributions over the inter-tidal beds in the Wash.

The nearest seal haul-out site is 1.5 km away. This is more than double the 600m radius of disturbance accepted for human disturbance on seals. Further, as most activity on the proposed lays is likely to be over high water periods, when the seals are not hauled out, disturbance will be minimal.

Figure 1. Position of proposed lay, SS9

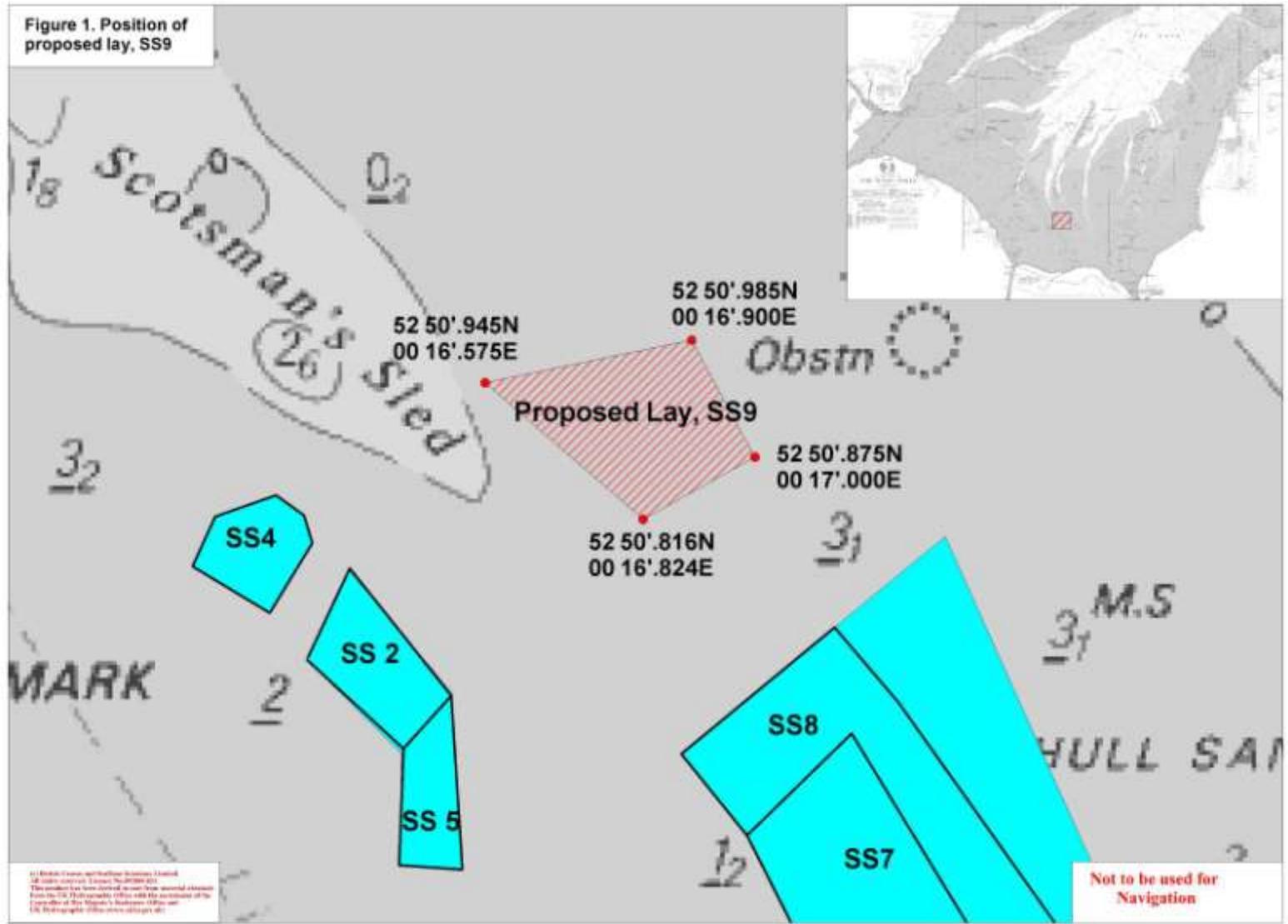
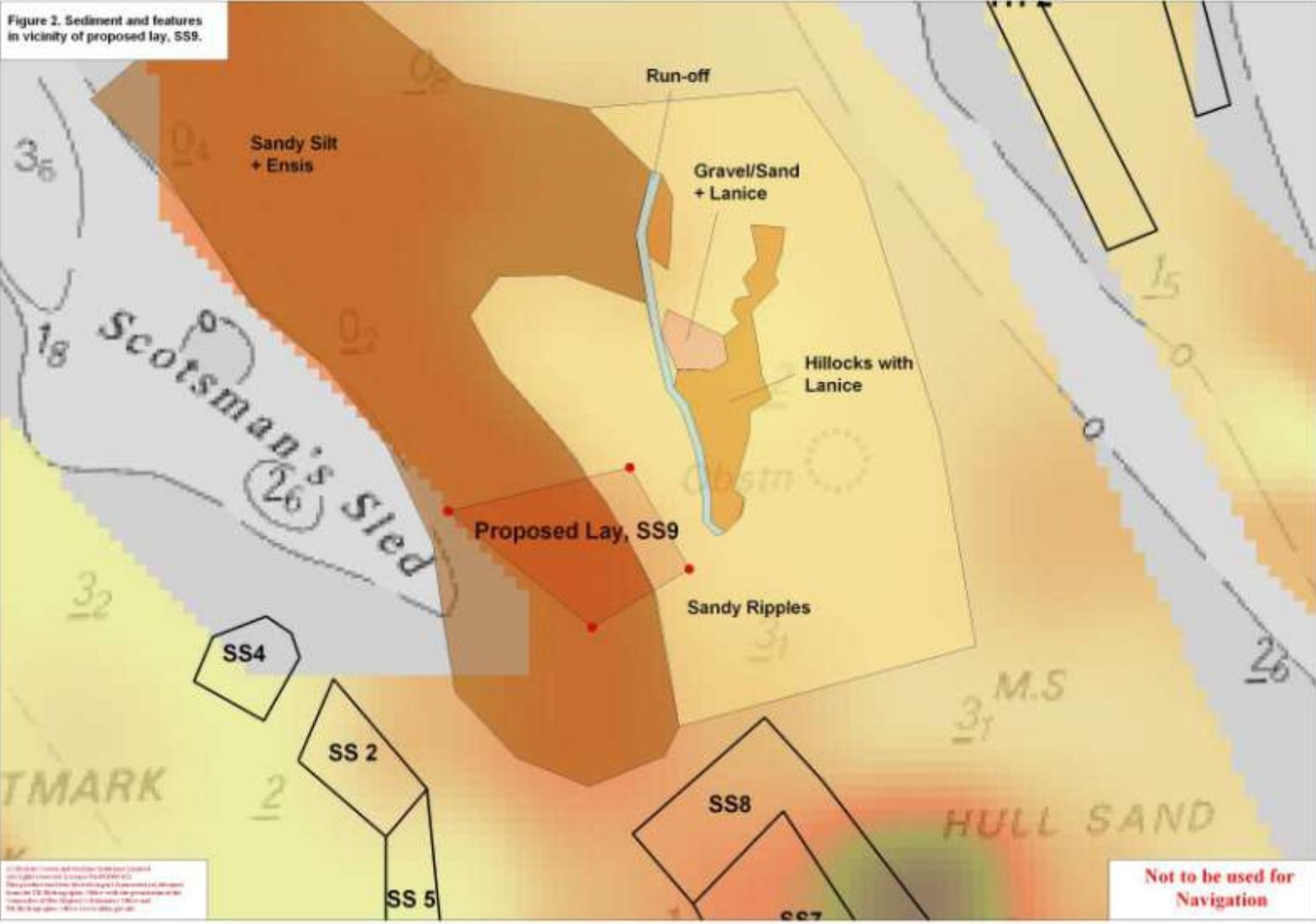


Figure 2. Sediment and features in vicinity of proposed lay, SS9.



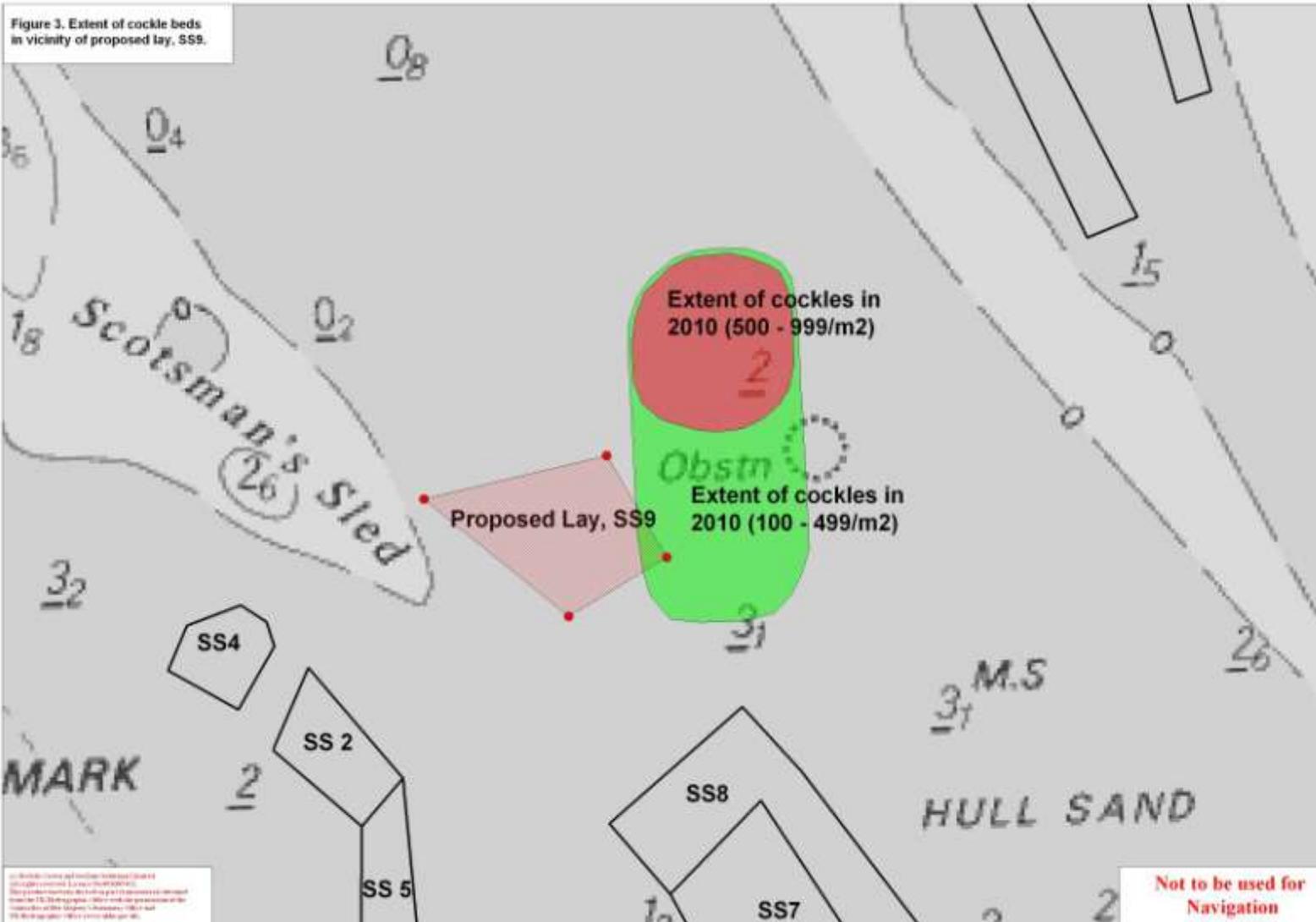




Figure 5 – Photograph of area of sandy ripples in vicinity of proposed lay, SS9



Figure 6 – Photograph showing the area of *Lanice conchilega* hillocks, NE of the proposed lay, SS9. The run-off can be seen beyond the hillocks.

SURVEY REPORT FOR THE PROPOSED MUSSEL LAYS TH9, TH10 AND EXTENSION TO EXISTING LAY, TH6

Introduction

Applications for two new lays on the Thief Sand, TH9 and TH10, and an extension along the seaward edge of an existing lay, TH6, were submitted to Eastern Sea Fisheries Joint Committee in 2009, prior to the moratorium on granting new lays came into effect. Before new lay leases can be issued, the Authority must conduct a Habitats Regulation Assessment (HRA) to ensure granting the lay will not have a deleterious impact on the site features. Following a survey, conducted on March 12th 2009, a HRA was submitted to Natural England. The Committee received advice from Natural England raising concerns about food availability in the Wash. They advised no further lays should be leased until a food availability study had been conducted.

Subsequent to receiving that advice, officers in conjunction with Cefas have conducted research studying food availability in the Wash with particular reference to the impacts the lays might have. Although this study detected a depletion of Chlorophyll-a 10cm above the mussels within a lay, it did not find any evidence to suggest food limitations were currently occurring within the Wash. Given this new evidence, the applications for these three lays have been re-opened. Due to the long interim period during the moratorium since the previous habitat survey, another survey was conducted on June 14th 2014. In order to provide as much evidence as possible to inform a new HRA, additional evidence has also been gathered from recent and historic cockle and mussel surveys to show the extent of nearby shellfish beds and the distribution of the sand mason worm, *Lanice conchilega*. 2013 data from the Sea Mammal Research Unit has been used to determine where seal haul-out sites occur in the vicinity of the proposed lays.

Survey Results

The proposed new lays TH9 and TH10, and the extension to the existing lay, TH6, are located in the eulittoral zone on the western side of the Thief sand, bordering the Old Lynn Channel. All three proposed areas border the existing lay, TH6. Table 1 lists the coordinates marking the borders of these lays, while figure 1 shows their position on the sand. The proposed lays cover the following areas:

TH9 – 10.0 hectares

TH10 – 10.0 hectares

TH6 extension – 2.7 hectares (total area of TH6 would become 10.0 hectares)

Table 1 – Coordinates marking borders of proposed lays, TH9, TH10 and extension to TH6

Lay	Latitude	Longitude
TH9	52 52'.150N	00 16'.972E
	52 52'.171N	00 17'.388E
	52 52'.060N	00 17'.457E
	52 52'.036N	00 17'.043E
TH10	52 51'.899N	00 17'.134E
	52 51'.922N	00 17'.536E
	52 51'.811N	00 17'.600E
	52 51'.777N	00 17'.212E
TH6 ext	52 52'.040N	00 17'.116E
	52 52'.045N	00 17'.210E
	52 51'.908N	00 17'.294E
	52 51'.902N	00 17'.203E

Although the northern edge of the Thief sand faces seaward and is exposed to prevailing storms, the western and eastern sides are sheltered. Both of these sheltered sides have proved good growing areas for mussel cultivation and currently support 6 lays. The ground in the middle of the sand has historically supported cockle beds that have been targeted by both the hand-work and dredge fisheries. In recent years cockle settlement in this area has been sporadic, but there have also been good settlements at the southern end of the bed.

Habitat types

The survey conducted on June 14th 2014 found the area in the vicinity of the proposed lays supports a variety of features that are shown in figure 2. These tend to be sandy areas in the middle and north of the sand, where the ground is higher, with a gradual transition towards more silty sediments along the lower edges of the sand.

Sand Bank

This region in the centre of the sand slopes gently to a crest that is elevated approximately 1m higher than the surrounding areas. The sediment is composed of a mixture of medium and fined grained sands with ripples <10cm high. The ground is firm, with an anoxic layer between 5-20cm beneath the surface. Lugworm, *Arenicola marina*, were found to be present in densities of 1-9 worms/100m² and individual sand mason worm, *Lanice conchilega*, tubes in densities of 1-9 tubes/10m². The occasional large cockle was also found, but their densities were <1/m².

Silty sand plain

As the ground sloped down from the elevated sandy area, it became wetter and slightly siltier, with occasional silty mounds rising slightly above the surrounding ground. The sediment in this region was composed mainly of medium and fine grained sand, but also contained a small proportion of mud and broken shell. Within the silty mounds, the sediment was finer, containing a higher mud content. The ground was relatively firm to walk on and had an anoxic layer 1-5cm

beneath the surface. *Arenicola* and *Lanice* were both found to be present in similar densities to that of the sand bank, above.

Sandy silt

Towards the edge of the channel the ground became siltier. There was no definite border between this area and the silty sand plain, but a gradual transition. Here the sediment was composed mainly of fine grained sand with some mud, and was softer to walk on. The anoxic layer was between 1-5cm below the surface. In this region *Arenicola* and *Lanice* were less common, being present in densities of 1-9 worms/1000m² and 1-9 worms/100m² respectively.

Sandy Silt + Ensis

At the low water edge of TH9 and northwards, the sandy silt area supports high densities of American razerclams, *Ensis directus*. These are present in densities between 100-999/m². These were present when surveyed in 2009, at which time their densities were between 250-400/m². Other than the presence of *Ensis*, this area is similar to that of the sandy silt, above.

TH6 Mussel bed

Within TH6 is a bed of mussels that appear to have been relayed several years ago. These are present in patches that have accreted hillocks of mud and pseudo-faeces beneath them (see figure 5 for photograph).

Silty Sand + Lanice

North of the mussels in TH6 is an area of the silty sand plain that appears to have an increased biodiversity. This includes scattered clumps of mussels and empty mussel shells, which have most likely washed out of the lay. These have provided structures for strands of *Entromorpha* spp to anchor to. Within this area *Lanice* were more prevalent than elsewhere in the vicinity too, being present in densities of 1-9 tubes/m².

Silty mud

The survey conducted on June 14th did not extend as far as these features, but sediment data collected during the 2014 spring cockle surveys identified an area of muddy silt on the eastern side of the Thief sand close to the lays TH4, TH5 and TH8.

Shellfish beds

Cockles

Historically the Thief sand has supported valuable cockle fisheries, both for dredging and hand-working. Traditionally the cockles have tended to settle in the middle of the bed, to the east and north of the proposed lays, although as figure 3 shows, in 2008 cockles were present in part of the area proposed for TH9. The EIFCA survey data shows that in the past decade, however, settlements have

been sporadic in this area, the last good settlement being in 2006. That particular cohort also settled on the southern part of the Thief, south of TH2. These provided a good fishery in 2008 and 2009, but there have not been any substantial settlements since then. The 2014 spring cockle survey only found low densities of cockles on the southern part of this bed, and nothing in the vicinity of the proposed lays.

Mussels

The only wild mussels on this sand are a small patch growing on some rocks 90m to the south of the proposed lay, TH10 (marked as an obstruction on charts).

Sand mason worm, *Lanice conchilega*

In addition to those identified and described above from the survey conducted on June 14th, the distribution of *Lanice* is also mapped from data gathered during the spring cockle surveys. Figure 4 shows the distribution of this species in the vicinity of the proposed lays at the time of the 2014 spring cockle surveys. That particular survey did not find any *Lanice* in the immediate vicinity of the lays, just three patches over 1km away on the northern end of the sand.

Seal haul-out sites

The closest seal-haul-out site to the proposed lays is 1.1km to the north, on the north-western edge of the Thief Sand. There is a further site 1.6km to the north-east, on the western edge of the Daseley's Sand, but this would not be visible at low water due to the elevation of the sand bank.

Conclusion

Historically the Thief Sand has supported sporadic but valuable cockle fisheries and has become an important site for the cultivation of mussels. Past survey results show that the proposed lay, TH9, is situated close to where cockles have settled in the past. *Arenicola marina* and *Lanice conchilega* are both present within the lays, but both of these species have widespread distributions over the inter-tidal beds in the Wash.

The nearest seal haul-out site is 1.1km away. This is almost double the 600m radius of disturbance accepted for human disturbance on seals. Further, as most activity on the proposed lays is likely to be over high water periods, when the seals are not hauled out, disturbance will be minimal.

Figure 1. Position of proposed lays, TH9, TH10 and extension to TH6

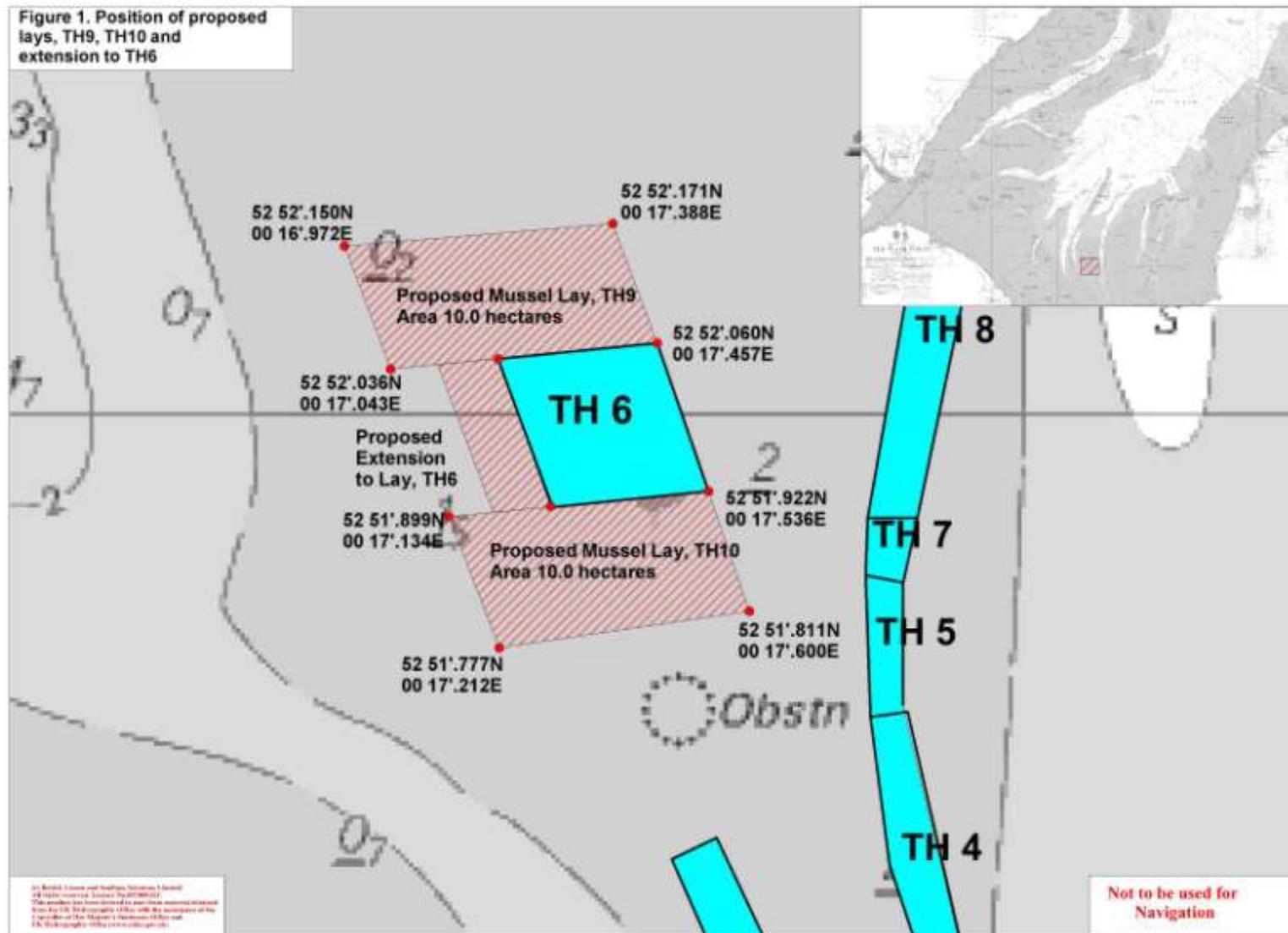


Figure 2. Sediment and features in vicinity of proposed lays, TH9, TH10 and TH6 extension

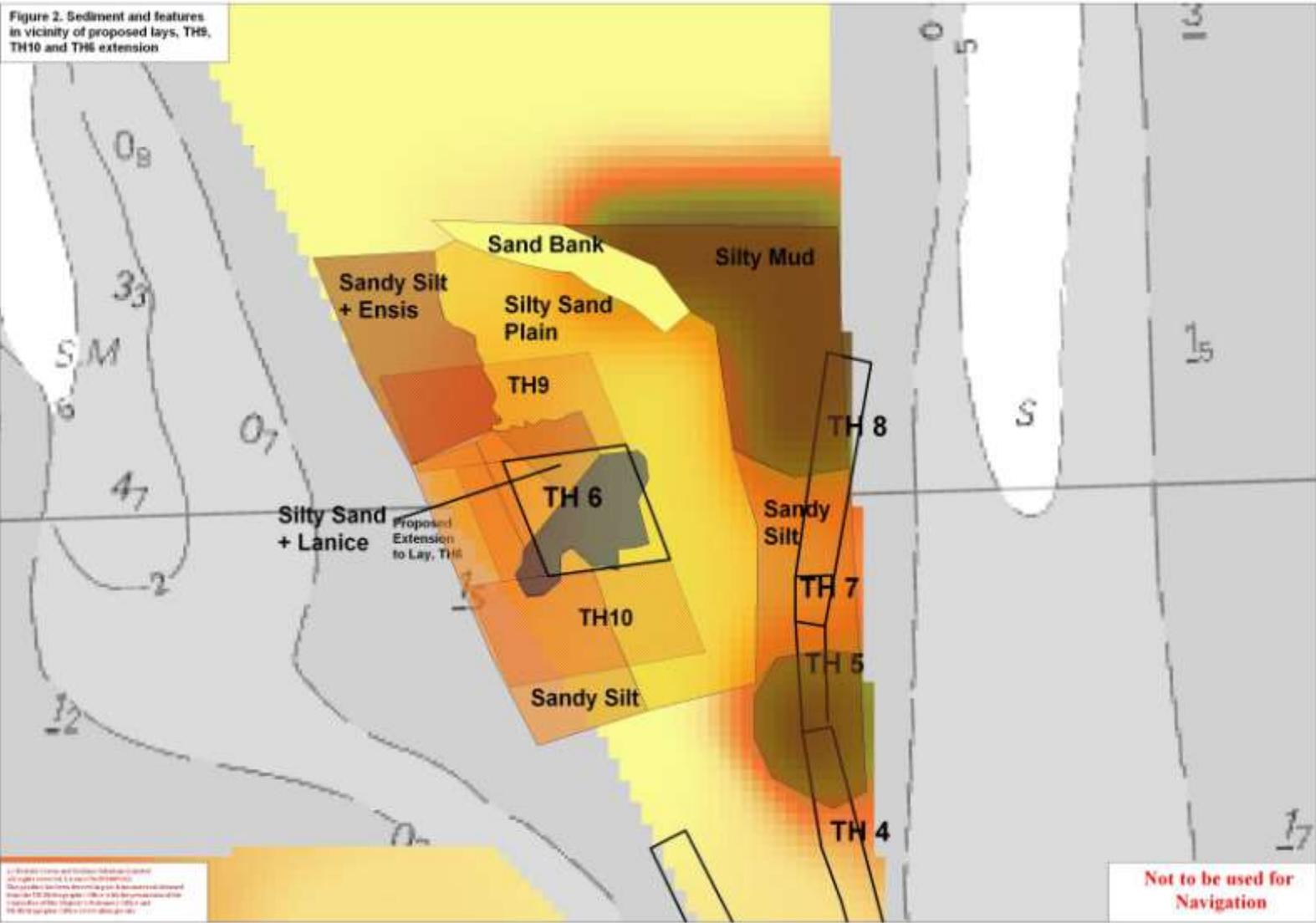
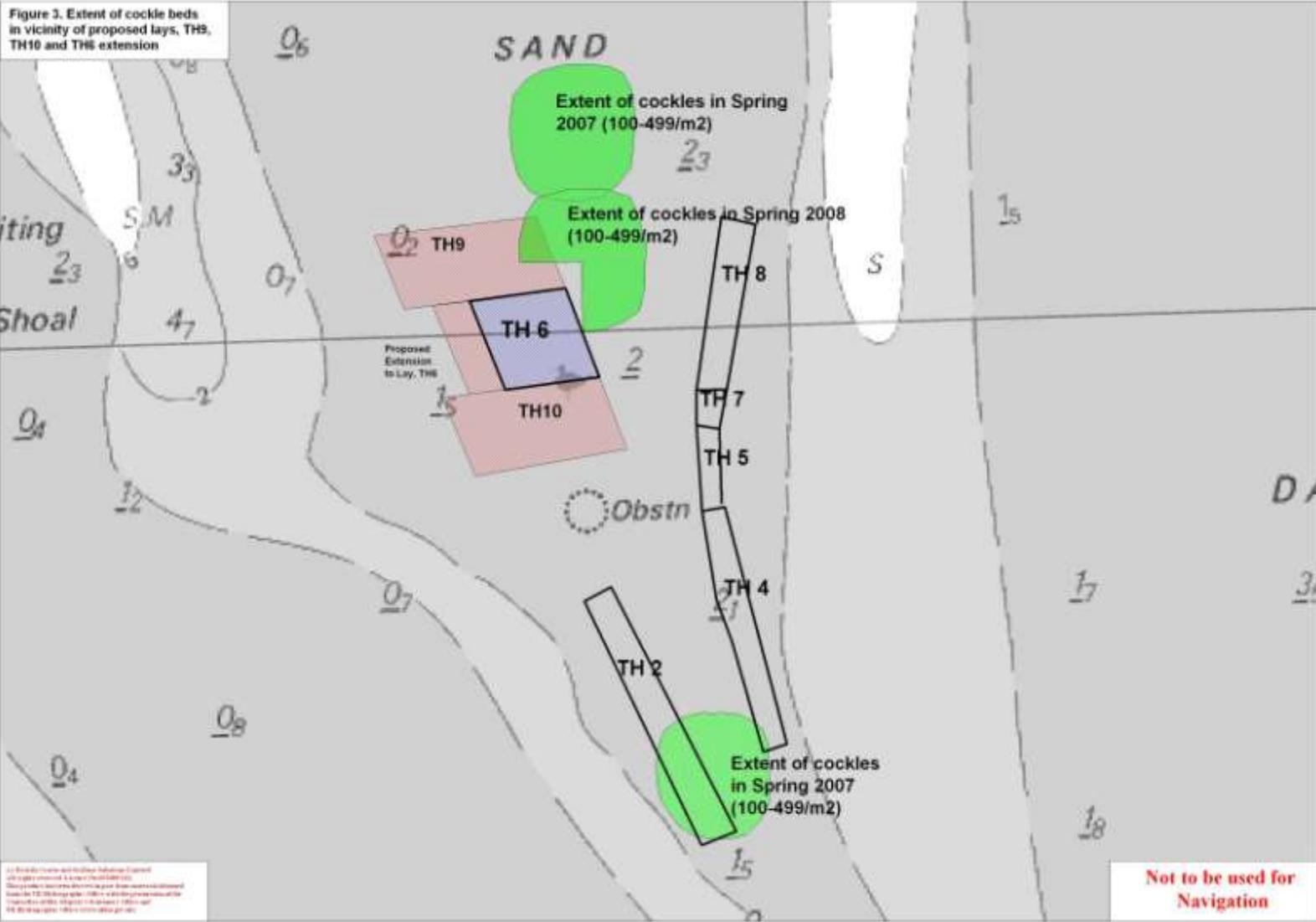


Figure 3. Extent of cockle beds in vicinity of proposed lays, TH9, TH10 and TH6 extension



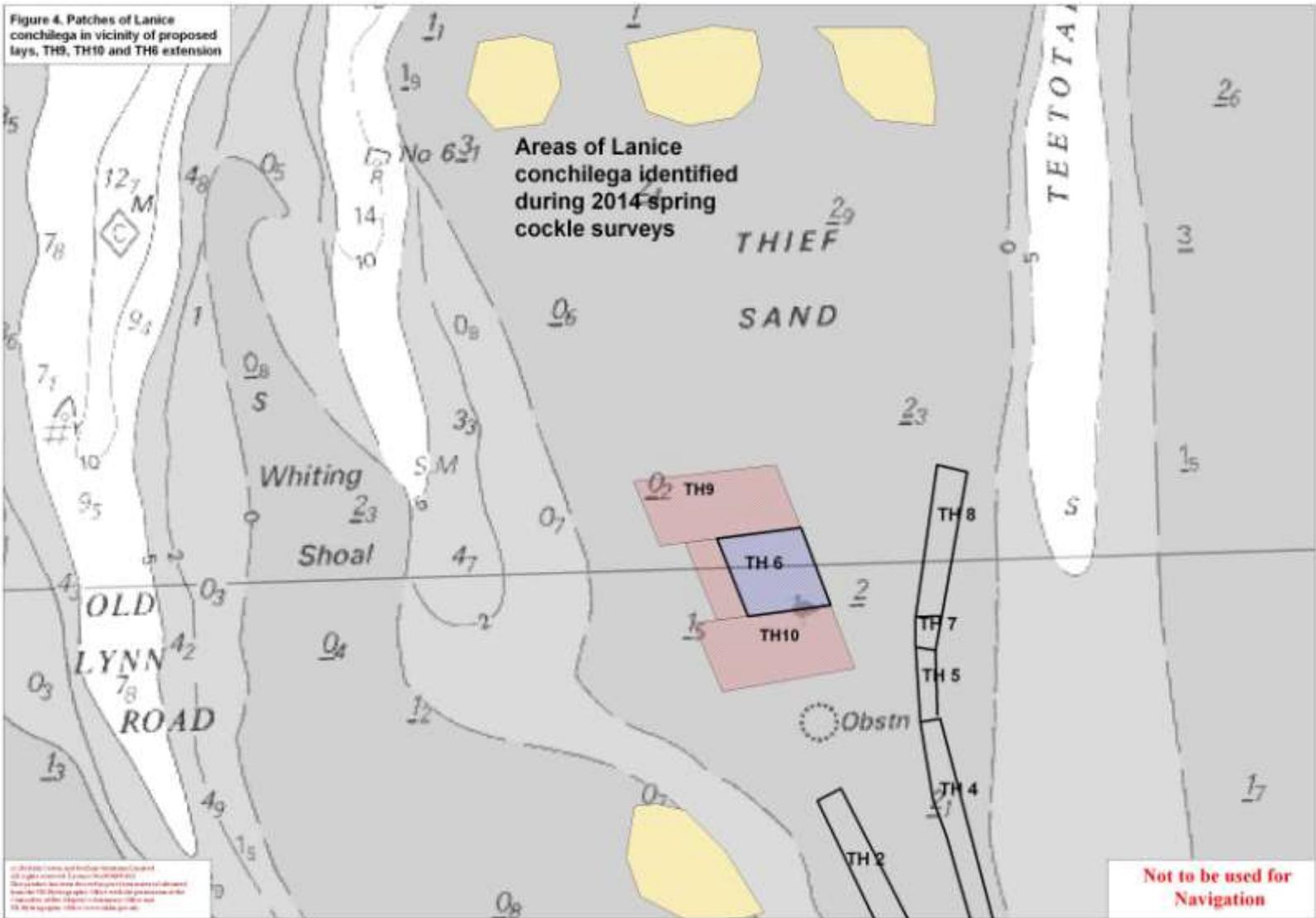




Figure 5 – Photograph of patches of mussels in lay, TH6

SURVEY REPORT FOR THE PROPOSED MUSSEL LAYS W1 AND W2

Introduction

Applications for two lays on the Wrangle Sand, W1 and W2, were submitted to Eastern Sea Fisheries Joint Committee in 2008, prior to the moratorium on granting new lays came into effect. Before new lay leases can be issued, the Authority must conduct a Habitats Regulation Assessment (HRA) to ensure granting the lay will not have a deleterious impact on the site features. In order to provide evidence for their original HRA these two lays had been surveyed on January 15th 2009, shortly after the submission of their applications, but due to the long interim period during the moratorium another survey was conducted on June 15th 2014. In order to provide as much evidence as possible to inform the HRA, additional evidence has also been gathered from recent and historic cockle and mussel surveys to show the extent of nearby shellfish beds and the distribution of the sand mason worm, *Lanice conchilega*. 2013 data from the Sea Mammal Research Unit has been used to determine where seal haul-out sites occur in the vicinity of the proposed lays.

Survey Results

The proposed lays, W1 and W2, are located on the foreshore of the Wrangle Flats on the Boston Main, approximately 400m from the edge of the Boston Deep channel. Table 1 lists the coordinates marking the border of these lays, while figure 1 shows their position on the sand. W1 has an area of 7.63 hectares and W2 an area of 8.66 hectares.

Table 1 – Coordinates marking borders of proposed lay, W1 and W2

Lay	Latitude	Longitude
W1	53 00'.346N	00 12'.100E
	53 00'.314N	00 12'.279E
	52 59'.979N	00 12'.194E
	52 59'.989N	00 12'.097E
W2	53 00'.314N	00 12'.279E
	53 00'.288N	00 12'.433E
	53 00'.067N	00 12'.373E
	52 59'.971N	00 12'.268E
	52 59'.979N	00 12'.194E

Wrangle Flats is a broad expanse of mostly sandy ground, crossed by the occasional shallow run-off. Where these run-offs occur, the sand tends to erode creating broad low ways between areas of higher ground. The proposed lays, W1 and W2, are situated in one of these low ways that has been created by two fast flowing run-offs. When originally surveyed in 2009 the two run-offs flowed along the western and eastern edges of the proposed lays, but during the interim period between surveys, the eastern run-off has altered its course and now flows through the lays. The western run-off, which is the smaller of the two, dries out at low water, while the larger run-off on the eastern side remains flowing.

Sediment types

The survey conducted on June 15th 2014 found that the sediment in the immediate vicinity of the proposed lays was predominantly composed of firm medium-grain sand textured with uniform ripples (<10cm high). Although the ground between the two run-offs had eroded approximately 1m lower than the surrounding sand, the sediment was similar between the run-offs to outside of them. This differed slightly to 2009, when the ground between the run-offs appeared more scoured and was not rippled. No anoxic layer was found within the top 20cm of sediment, suggesting the sediment in this area is relatively mobile. The presence of ripples on the surface also suggests the sediment is mobile.

Sediment data collected during the 2014 spring cockle surveys has been used to supplement the data gathered during the site visit on June 15th. These data show that the Wrangle Flats are mostly covered by medium-grained sand, as seen within the vicinity of the lays, but in places does also support finer, silty sediments. These are generally situated along the lower foreshore and along the edges of some of the run-offs. One of these silty patches is situated approximately 200m east of the proposed lays (see figure 2).

Shellfish beds

The Wrangle Flats have historically supported extensive beds of cockles (*Cerastoderma edule*) that have provided a valuable resource to commercial fishers from Boston and King's Lynn. In recent years there have been dense settlements of cockle spat in 1998, 2004, 2006 and 2010 on this sand. Very few cockles were found within the vicinity of the proposed lays during either the 2009 or 2014 site visits, however. Because cockle stocks on the whole of Boston Main were low on both of these occasions, following heavy fisheries and high atypical mortality events in 2008 and 2012, data from the spring cockle surveys have been used to show the extent of the cockle beds in this area. Figure 3 shows the extent of juvenile cockles present on this sand in densities exceeding 100 cockles/m² in 2007. This particular data-set was selected because the cockle coverage that year was closest to the proposed lays. None of the other records show either adult or juvenile cockle stocks within the proposed lays in densities exceeding 100 cockles/m², while lower densities of 10 cockles/m² have only been found when stocks have been high on the rest of the sand.

Other species/taxon

The site surveys conducted in 2009 and 2014 were limited to collecting visual data. Because no microscopic analysis of core samples was conducted, the data is limited to recording macro-faunal/floral species. These included:

- Lugworm (*Arenicola marina*) – Past surveys have found this species to have a widespread distribution over most of the intertidal beds in the

Wash including on the Wrangle Flats. Casts were found within the area of the proposed lays on both site visits in 2009 and 2014, although they were more numerous at the time of the 2014 survey (1-9 casts/m² in 2014 compared to <1 cast m² in 2009).

- Sand mason worm (*Lanice conchilega*) – Patches of these worm tubes were found within the area of the proposed lays during both surveys. Within patches, these were present in densities of between 10-99 tubes/m², but these patches occupied less than 10% of the ground. The presence of this species is recorded during the annual cockle surveys, from which it has been found to be a common inhabitant of the Wash intertidal beds, particularly on the lower, sandy areas. Figure 4 shows the extent of *Lanice* distribution found during the 2014 cockle surveys. This data found that *Lanice* distribution over the Wrangle Flats was approximately 181 hectares, of which 7.6 hectares (4.2%) were within the area of the proposed lays.
- Shore crab (*Carcinus maenas*) – Seen in low numbers during both the 2009 and 2014 site survey. These were mostly found within the run-offs.
- Common periwinkle (*Littorina littorea*) – Although this species is commonly found on the Wash sandbanks, particularly within mussel beds, only 1 individual was seen within the proposed lays during the 2014 site survey.
- Strands of unidentified red and green algae were present within the run-offs within the proposed lays. Their respective coverage were <1%.

Seal haul-out sites

There is only one seal haul-out site in the vicinity of the proposed lays. This is situated 1.35km to the south east of the proposed lay, on the edge of the Wrangle sand, close to the Scullridge buoy.

Conclusion

On occasions the Wrangle Flats supports dense beds of cockles and widespread patches of lugworms and sand mason worms. The area in the vicinity of the proposed lays is relatively barren, however, compared to areas higher up the sand. The cockle survey record shows this area has historically only supported very low densities of cockles that have probably washed down the two run-offs that cut through the proposed lays rather than having settled there. These have not been present in sufficient densities to support a fishery, either hand-worked or dredged.

The most noticeable invertebrate species in the site is the lugworm, *Arenicola marina*, which is present in densities of approximately 1-9 worms/m². Although

this density has increased since the previous survey in 2009, the species has a widespread distribution over the inter-tidal beds in the Wash, so the proposed lays would only have a negligible impact on their overall population. Similarly with the Sand Mason worm, *Lanice conchilega*, which is also present in patches within the proposed lays.

The nearest seal haul-out site is 1.35km away. This is more than double the 600m radius of disturbance accepted for human disturbance on seals. Further, as most activity on the proposed lays is likely to be over high water periods, when the seals are not hauled out, disturbance will be minimal.

Figure 1. Position of proposed lays, W1 and W2

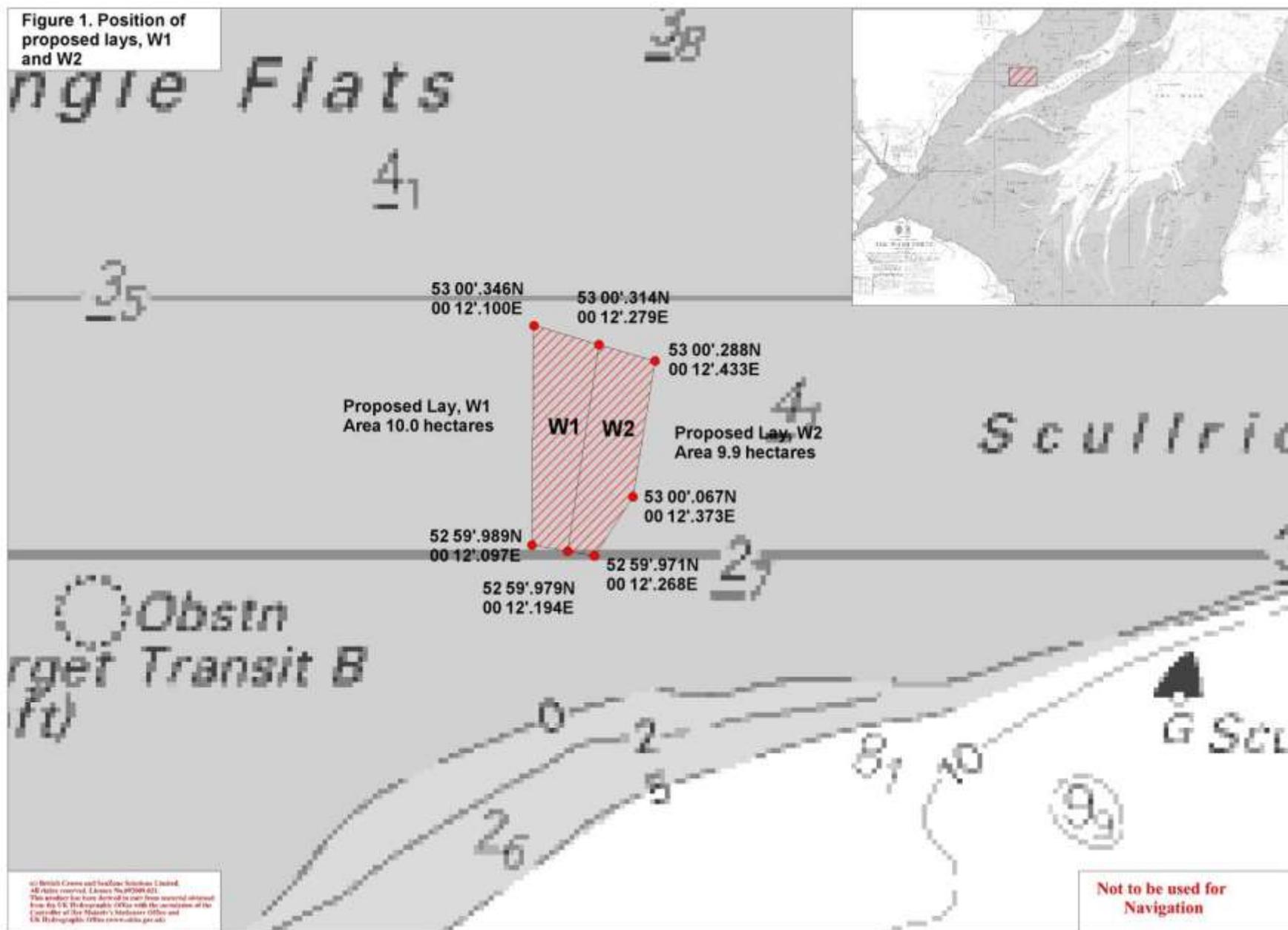
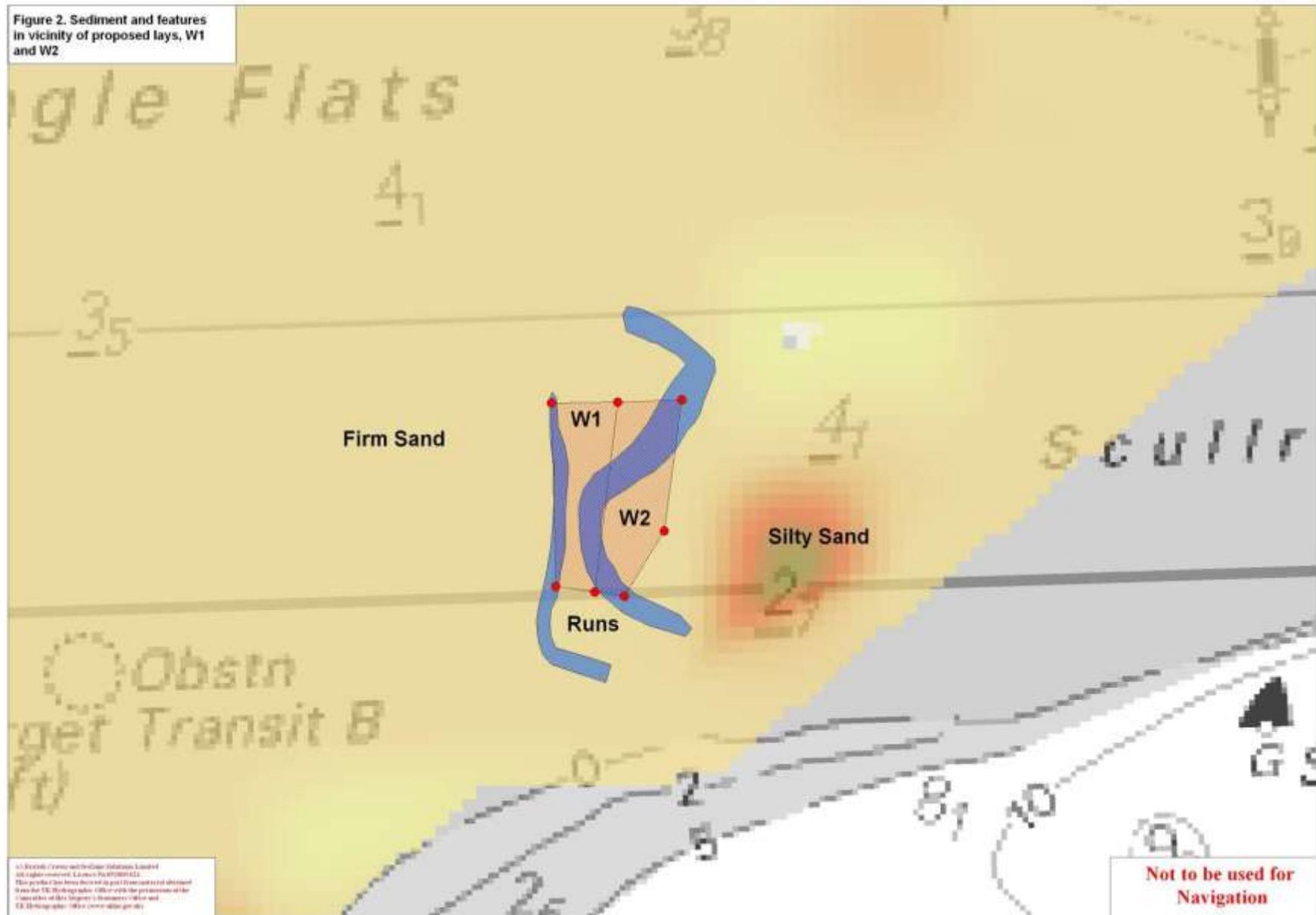


Figure 2. Sediment and features in vicinity of proposed lays, W1 and W2



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Figure 3. Extent of cockle beds in vicinity of proposed lays, W1 and W2

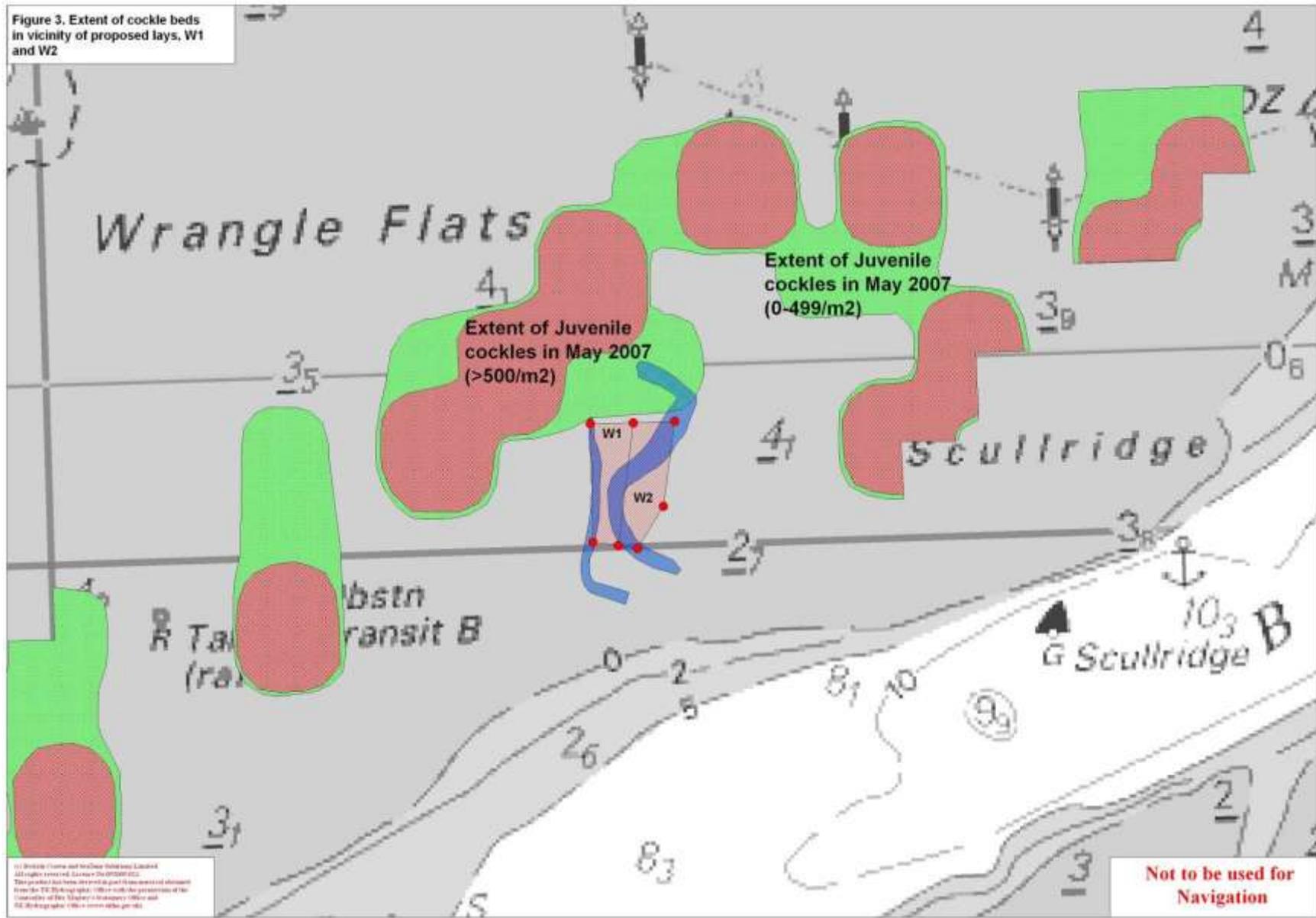
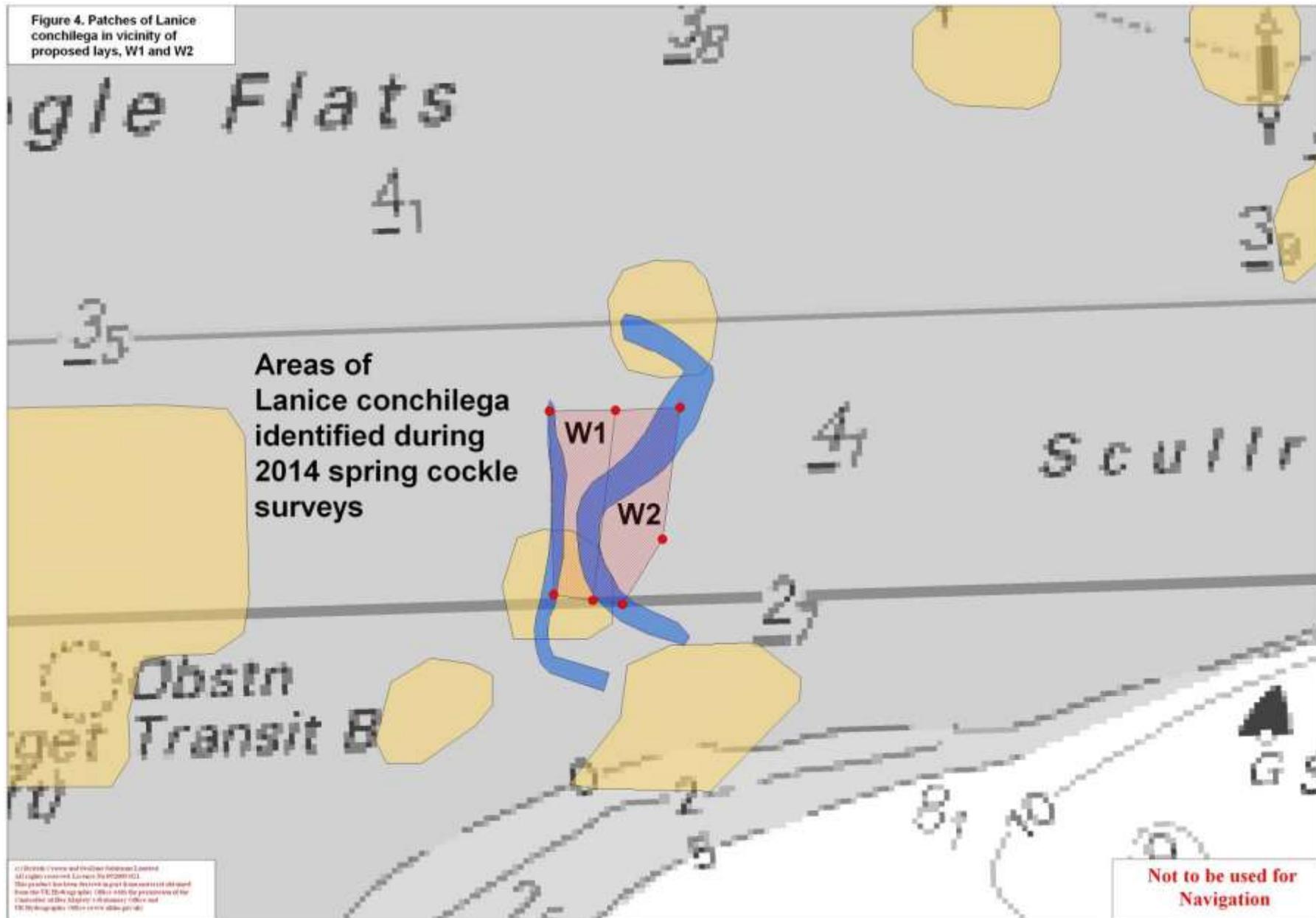


Figure 4. Patches of *Lanice conchilega* in vicinity of proposed lays, W1 and W2



Areas of *Lanice conchilega* identified during 2014 spring cockle surveys

W1

W2

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Vision

The Eastern Inshore Fisheries and Conservation Authority will lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry



Information Item 8

Marine Protected Area Sub Committee meeting

15 October 2014

Management of Fishing Activities in European Marine Sites

Report By: J C Stoutt, Senior Marine Environment Officer

Purpose of report:

This report provides a brief background and an outline of progress and next steps for this project, which is a key priority for the Authority. Quarterly updates are provided to the full Authority meetings, but as the project relates to Marine Protected Areas, it is appropriate to also report to this Sub-Committee.

Recommendations

Members are asked to note the report.

Background

Marine protected areas are zones of the seas or coasts where wildlife is protected from damage and disturbance². A combination of national and international designations exists to make up the network of marine protected areas around the UK. These include European Marine Sites, which are Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) that occur in marine or coastal locations, and protect habitats and species of European importance.

IFCAs, Defra and the Marine Management Organisation have legal obligations to ensure that fishing activities that could adversely affect European Marine Sites are managed in such a way to secure compliance with Article 6 of the EU Habitats Directive³ - that is, to avoid the deterioration and/or disturbance of designated habitats and species. During 2012, a new approach was outlined by Defra to ensure that management measures were implemented for high risk features by December 2013, and additional measures in place by 2016. Following this approach, the ten IFCAs and the MMO have implemented byelaws to protect identified features at high risk from certain fishing activities within European Marine Sites throughout their districts. Work is now underway to complete the assessment of impacts of fishing activities on lower risk features within European Marine Sites, and to develop management measures as required.

² <http://www.naturalengland.org.uk/ourwork/marine/mpa/ems/default.aspx>

³ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01992L0043-20070101&from=EN>

Progress to date

The Eastern IFCA district contains 15 European Marine Sites, and an additional three sites that straddle the district's seaward boundary, within which a total of 3,549 possible fishery/sub-feature interactions have been identified for consideration.

Blue and red interactions

Of these, 1,363 interactions are immediately discounted as being not physically possible (for example, handwork (access from land) with sub-tidal sand). Of the remaining 2,186 interactions, 359 had been deemed to be high-risk and have been managed through the Eastern IFCA Protected Areas byelaw (324) and through the MMO's byelaw for the Inner Dowsing, Race Bank & North Ridge Special Area of Conservation⁴ (35).

Eastern IFCA's Protected Areas byelaw was signed off in May 2014, and applies in the main to towed, demersal fishing gear (e.g. trawls and dredges) where they interact with three habitat features in two separate European Marine Sites⁵. The innovative, flexible nature of this byelaw means that it can be applied, following due process, to additional features and fishing activities in any European Marine Site within the Eastern IFCA district – should the Authority's fishing impact assessments identify any threat to the integrity of the sites.

Table 1. Summary of interaction risk level in European Marine Sites within or partially within the Eastern IFCA district.

Risk level (Interaction category)	Number of interactions		
	EMS fully within EIFCA district	EMS straddling EIFCA district ⁶	Total
High risk (reds)	324	35	359
Medium risk (ambers and greens)	1614	213	1827
No risk (blues)	1260	103	1363
Total	3198	351	3549

⁴ <https://www.gov.uk/government/publications/inner-dowsing-race-bank-and-north-ridge-european-marine-site-specified-areas-bottom-towed-fishing-gear-byelaw>

⁵ http://www.eastern-ifca.gov.uk/index.php?option=com_content&view=article&id=137:protected-area-byelaw&catid=10:newsandpress&Itemid=202

⁶ IFCA's and MMO are required to collaborate to assess fishing activities and develop management measures within straddling sites, for the medium risk interactions. The Marine Environment Officer – Consultation Lead attended a meeting in The Hague in August 2014 to discuss management options for straddling sites in the southern North Sea.

Amber and green interactions

The remaining 1,827 interactions are the “amber and green” interactions that require further assessment by the Authority in order to ascertain whether new management measures are required.

In order to manage this volume of work, Eastern IFCA officers have worked closely with Natural England colleagues to prioritise the assessment of the amber and green fishing interactions in European Marine Sites. A screening exercise was undertaken for all the sites in the Eastern IFCA district, based on known fishing activity and feature sensitivity. This identified 181 high priority interactions where fishing activities were known to occur over a given feature or sub-feature of moderate or high sensitivity. These 181 interactions will each require consideration in a Habitats Regulations-style assessment.

In anticipation of the requirement for these assessments, Eastern IFCA research and environment officers undertook an evidence review to ascertain the level of information currently available to support this process. The review focused on three categories of evidence, namely fishing activity data, feature or sub-feature presence and extent, and fishing impact evidence. A gap analysis report was produced in August 2014 and recommendations made where significant gaps had been identified. Eastern IFCA officers have already taken steps to improve the reporting and storage of fishing activity data for the district; however it is recognised that the small scale and varied nature of inshore fishing activities, coupled with a lack of automated monitoring on smaller vessels, means that accurate fishing effort data is not readily available in the majority of cases. Natural England is undertaking a national programme to improve its marine evidence base, which includes the delivery of data packages to IFCA's specifically to assist in their fishing impact assessment work; the second package was received on 1st October 2014. In addition, Natural England is working to deliver supplementary conservation advice with more detailed targets relating to conservation objectives, with the first packages due in spring 2015. Natural England and the Centre for Environment, Fisheries and Aquaculture Science produced an updated version of the national Fishing Impact Evidence Database, in September 2014, which underpins the fishing impact assessments currently being undertaken by Eastern IFCA Research Officers to inform the Habitats Regulations Assessments.

In August 2014, Eastern IFCA officers submitted the first draft Habitats Regulations Assessment to Natural England for the high priority amber interaction “digging with forks/estuarine birds” in the Stour & Orwell Special Protection Area. Natural England have provided constructive feedback and when finalised, this document will form the template for the remaining 180 high priority amber assessments. These assessments will be undertaken by the Marine Environment Officers supported by the Research Officers and IFCOs over the next eighteen months.

Consideration at site level identified that approximately half of the amber and green interactions (907) were not occurring within the given sites. The evidence

base for the interactions that fall into this final category has been collated in a "Non-occurring interactions report" that has recently been submitted to Natural England for comment (early October 2014).

The remaining 739 amber and green interactions were categorised as low priority, where the fishing activity was not thought to occur at a sufficient level to risk damage or deterioration to the sub-feature. Verification of these interactions will take place during the course of the project, and will either result in these interactions being added to the "non-occurring interactions" category, or will require them to be assessed in the same way as the high priority interactions.

Table 2. Summary of Eastern IFCA's amber and green interactions screening results

Interaction category	Number of amber and green interactions		
	EMS fully within EIFCA district	EMS straddling EMS district	Total
Non-occurring	796	111	907
Low priority	666	73	739
High priority	152	29	181
Total	1,614	213	1,827

Progress reporting and publicity

Given the level of external interest in the management of fishing activities in European Marine Sites, IFCA's and the MMO provide quarterly progress reports to Defra on this project. This also helps IFCA's collaborate on this work and avoid duplication of effort. Since Eastern IFCA have taken the approach of conducting a detailed evidence review before embarking on the individual assessments, the number of habitats regulations assessments completed to date is low. However, the work will gather pace as the evidence packages put in place are used to support multiple assessments and as officers develop experience in undertaking the assessments. Also, after a period of flux including the loss of the Head of Environment and Research and the transfer of the Marine Environment (Data) officer to the Marine Protection team, the Marine Environment team is now fully staffed with the Consultations lead joining the team in May 2014 and employment of the Data Lead from 1st October 2014. Completion of the non-occurring interactions report within recent weeks has also accounted for a significant proportion of all the interactions in the Eastern IFCA district.

Monitoring of high risk features

Since the Protected Areas byelaw came into effect in May 2014, monitoring of fishing activity around the closed areas has been undertaken by the Authority's enforcement function. No infringements have been identified during these patrols. A programme of surveys has been undertaken by the Research team in the Wash and its approaches to map the extent of the boulder and cobble feature protected under Regulatory Notice 2. The feature was found to be covered by a layer of mobile sediments during these surveys. The *Sabellaria spinulosa* feature, protected under Regulatory Notice 1, was due to be surveyed during

August/September 2014 but weather conditions and other research commitments have delayed this work. Officers will continue to liaise with Natural England in relation to the seagrass feature in the north Norfolk coast, protected under Regulatory Notice 3. The seagrass feature in the Humber estuary (Regulatory Notice 4) was re-surveyed in August 2014 – a slight expansion in area was noted, although overall the feature extent remained extremely small. These four Regulatory Notices need to be reviewed within two years of being implemented; this work has been incorporated into the project plan.

Next steps

Development of management measures

The project plan (provided at the 15th Full Authority meeting on 29th July 2014) identifies an 18-month period of assessment and liaison with Natural England, which will feed into a rolling process for the development of management measures via site management boards. These boards will be convened when sufficient assessments have been completed for management options to be drawn up for given European Marine Sites. Unlike the high risk features, for which a byelaw was required, IFCA's and the MMO are able to consider a range of management options, including non-regulatory measures (such as codes of conduct). Should the preferred management option be to implement the Protected Areas Byelaw under new Regulatory Notices, the full information gathering and consultation process would be undertaken. The operational procedure to introduce, vary or revoke Regulatory Notices will be presented to the Authority at the 16th Fully Authority meeting.

Existing management within Sites of Special Scientific Interest

The management of certain fishing activities within European Marine Sites that are also Sites of Special Scientific Interest (SSSI) is being considered at a national level by IFCA's and Natural England. It has been suggested that existing SSSI legislation (Countryside & Rights of Way Act 2000) should be utilised to manage activities such as bait collection, rather than IFCA's introducing byelaws, to avoid creating additional regulation. Eastern IFCA officers are due to explore this with Natural England, with a focus on the Stour & Orwell Estuaries Special Protection Area (the Authority's recent draft habitats regulations assessment identified an adverse effect on site integrity from this activity in combination with other activities).

Background documents

In addition to the footnote references, the following documents are of relevance to this report:

1. Eastern IFCA Research & Environment Plan 2014/15
2. Eastern IFCA Fisheries in European Marine Sites – Evidence Gap Analysis report. August 2014
3. Eastern IFCA Fisheries in European Marine Sites – Project Plan Gantt chart

4. Eastern IFCA *draft* Fisheries in European Marine Sites: Habitats Regulations Assessment of high risk amber and green interactions. Assessment document HRA_UK_9009121_002. August 2014.