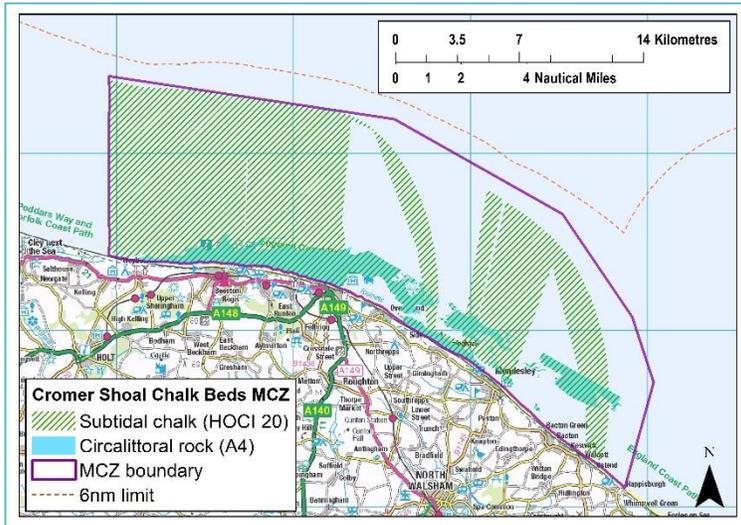


Understanding human impacts on the Cromer Shoal Chalk Beds MCZ, and its effect on crabs and lobster



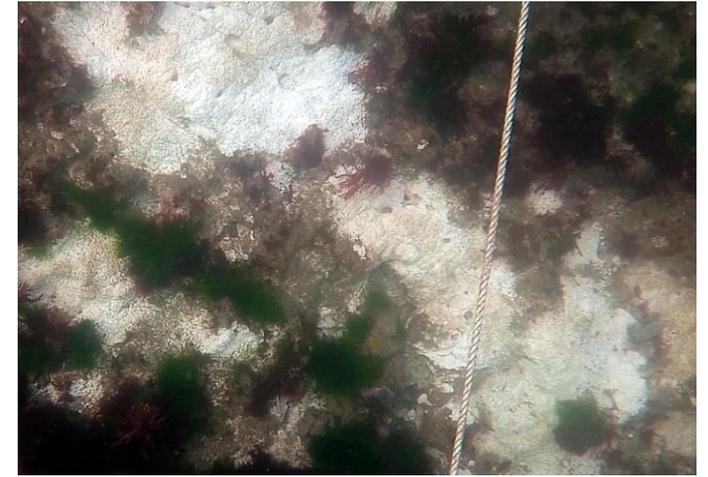
Background

The Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ) is one of the most important Marine Protected Areas for marine chalk habitats in the UK and Europe.

Marine chalk is particularly important because of its scarcity and the distinct communities that it supports. This includes a nationally significant crab and lobster industry worth an average £2.4 million a year and it is crucial to the heritage, character and economy of the North Norfolk Coast.

In 2018 Natural England (NE) received evidence that crab and lobster potting was impacting the physical structure of the chalk bed, an internationally rare habitat. It is NE's duty to advise the Eastern Inshore Fisheries and Conservation Authority (EIFCA) on the significance of this damage.

The impacts from potting are not well studied, and the extent and significance of the reported damage required investigation before any further advice could be given.



Example of rope abrasion found within the MCZ

Project Objectives

During 2019 NE, in partnership with the University of Essex, collected further evidence as Phase One of this investigation:

- to provide clear and proportionate evidence based statutory advice to EIFCA;
- to enable the fishers to see and understand their impact and to suggest mitigation measures;
- and to provide an opportunity to promote the importance of the chalk bed and marine environment more widely using novel three dimensional photogrammetry (3DPG) modelling techniques.



Project Results

To provide advice we needed to categorise the impacts on the chalk, and understand the relationship between the chalk and crab and lobsters. During our dive survey we found:

- 11 categories types of damage were observed
- The three chalk bed sites showed numerous occurrences of damage in comparison to the chalk/flint cobble plain site where no damage was observed
- The severity of damage varied across the sites surveyed, with West Sheringham most impacted by severe types of human-attributed activity
- Pots, anchors and ropes cause varying severity of damage to the chalk bed
- Not all categories of damage are attributed to human activity (including potting, shipping and recreational boating)
- Human attributed damage is additional to natural damage
- Adult crabs were found in areas of higher complexity, juveniles were found everywhere
- There were too few lobsters to identify preferences

The results from this project help to further our understanding on the effects of potting on the marine environment.



3D model of a traditional parlour pot on the chalk bed

Next Phase

Phase One highlighted the need for further research to reduce the impact of the potting activity whilst preserving the historically important industry.

A larger scale study is planned as Phase Two which will provide a better understanding of the scale, frequency and causes of the damage observed. The next phase of the project will;

- use a Remotely Operated Vehicle (ROV) to investigate the extent of damage,
- look at fishing gear types and practices to investigate potential adaptations to reduce impacts on the reef,
- and assess the impacts of potting and anchoring activity against the conservation objectives of the MCZ.

The ongoing investigation complements an adaptive risk management approach by EIFCA; an approach informed by assessment of the activity and the sensitivity of the designated features, with incorporated monitoring and review to better inform management.

We hope this investigation will support joint working between industry, regulators and partners to achieve sustainable management of the Cromer Shoal Chalk Beds MCZ and other MPAs designated for chalk habitats elsewhere.

Ultimately this work will support the best possible fisheries management so that the sea is used sustainably and provides for people and wildlife long into the future.



Collecting video footage using the URCHIN six camera array

How to get involved

We are looking to contract local fishers to assist in the next phase of this project. If you are interested, or have any questions please contact;

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The information in this leaflet refers to Natural England Research Report 04412, *Human Impacts on Cromer Shoal Chalk Beds MCZ: Chalk complexity and population dynamics of commercial crustaceans*. The full report is available online here: <http://publications.naturalengland.org.uk/>

This project was funded through Natural England Fisheries and Marine Monitoring Programmes, The University of Essex faculty seedcorn grant and Impact Acceleration Account grant and the Defra Capital fund.

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