



# BURIAL ISLAND AND THE FEATHERS VIDEO SURVEY JUNE 2016

Prepared by AFBI Fisheries and Aquatic Ecosystems Branch for  
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## **Introduction**

The June 2016 video survey of Burial Island and The Feathers seed mussel beds was undertaken by the Agri-Food and Biosciences Institute on the 28<sup>th</sup> of June 2016 onboard the AFBI Research Vessel (RV) *Corystes*. AFBI identified two seed mussel beds within these areas during previous surveys in April and May 2016 (AFBI 2016a, AFBI 2016b). The aim of the present survey was to obtain clear video footage along transects through the beds to ensure that they were still intact and had not been damaged by feeding starfish. The areas covered within the June 2016 survey are shown in Figure 1. The results of this survey are detailed within the paragraphs below.

All care was taken to avoid areas within Burial Island determined to contain live *Modiolus modiolus* within previously AFBI surveys.

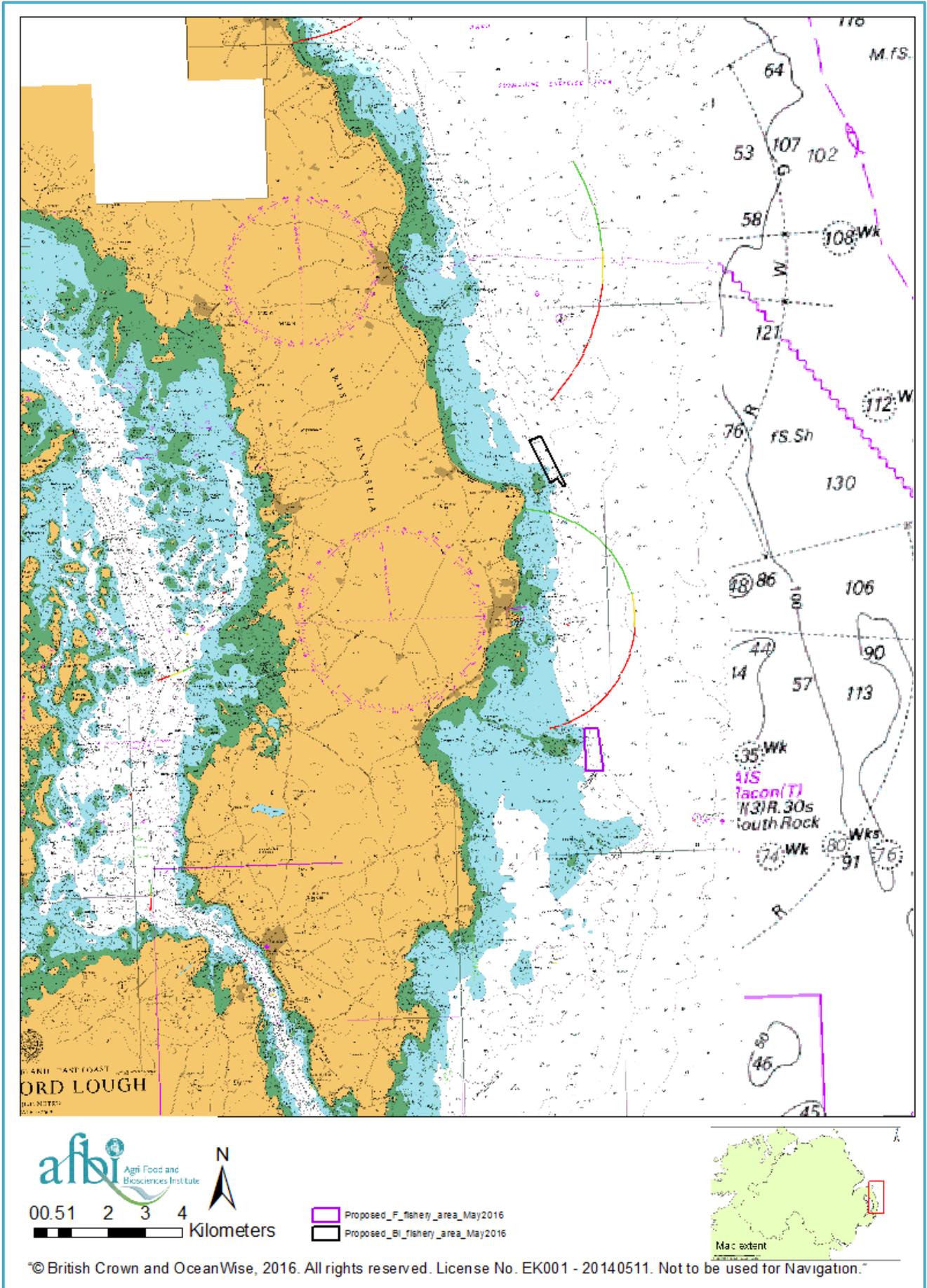


Figure 1: Survey locations for the June 2016 seed mussel video survey.

## **Materials and Methods**

- *Survey methods*

The video survey was undertaken onboard the AFBI RV *Corystes*. Camera footage of the seabed was collected with a towed epibenthic video sled equipped with an Osprey video camera, coupled with two halogen lights, and strip and point lasers for scaling (Figure 2). Camera tows were between 1 and 2 km in length, towed at a speed of 0.5-0.8 knots. The camera provides a large and stable field of view which (under perfect conditions) can display a clear and unambiguous picture of the seabed for the assessment of seed mussel presence. All of the footage has been interpreted by an experienced marine biologist who has undertaken video surveys of the seed mussel beds within previous years.



**Figure 2: Photograph showing the camera sled used during the June 2016 surveys.**

## **Results**

### **Burial Island**

Three video tows were undertaken within the area of Burial Island identified as a seed mussel bed during previous surveys (AFBI 2016a, AFBI 2016b) (Figures 3 and 4). Two size classes of mussels could be observed within the footage (Figure 4). The seed bed at Burial Island looks to be intact and during the course of the survey no large aggregations of starfish were observed.

### **The Feathers**

Three video tows were undertaken within the area of the Feathers identified as a seed mussel bed during previous surveys (AFBI 2016a, AFBI 2016b) (Figures 5 and 6). Two size classes of mussels could be observed within the footage (Figure 6). The seed bed at The Feathers contained areas of dead mussels and during the course of the survey a starfish feeding front was observed within the bed (Figures 6 and 7).



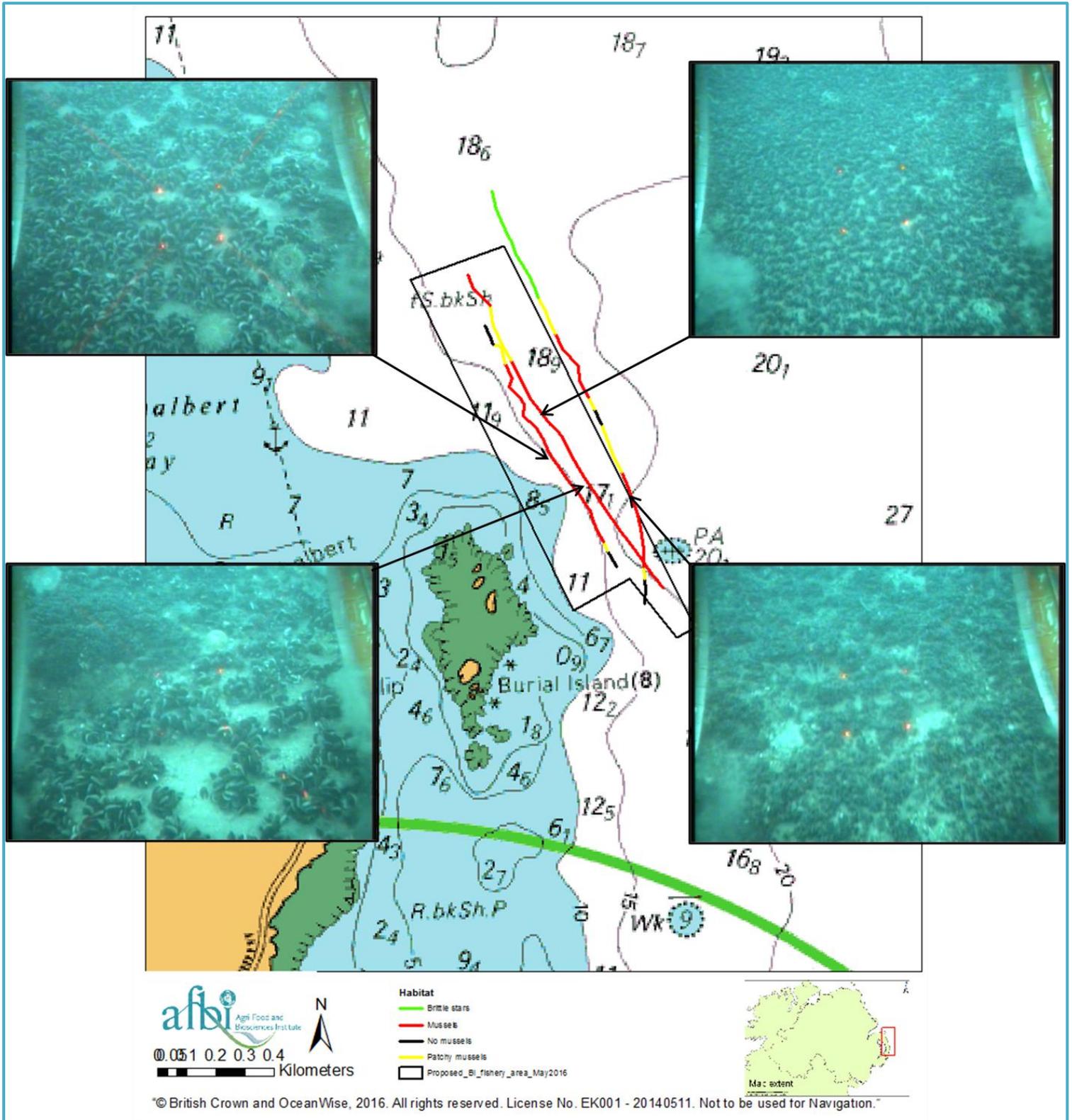


Figure 4: Location of video tows undertaken within the area of Burial Island during the June 2016 seed survey with screen grabs taken from the video footage showing the habitat present.

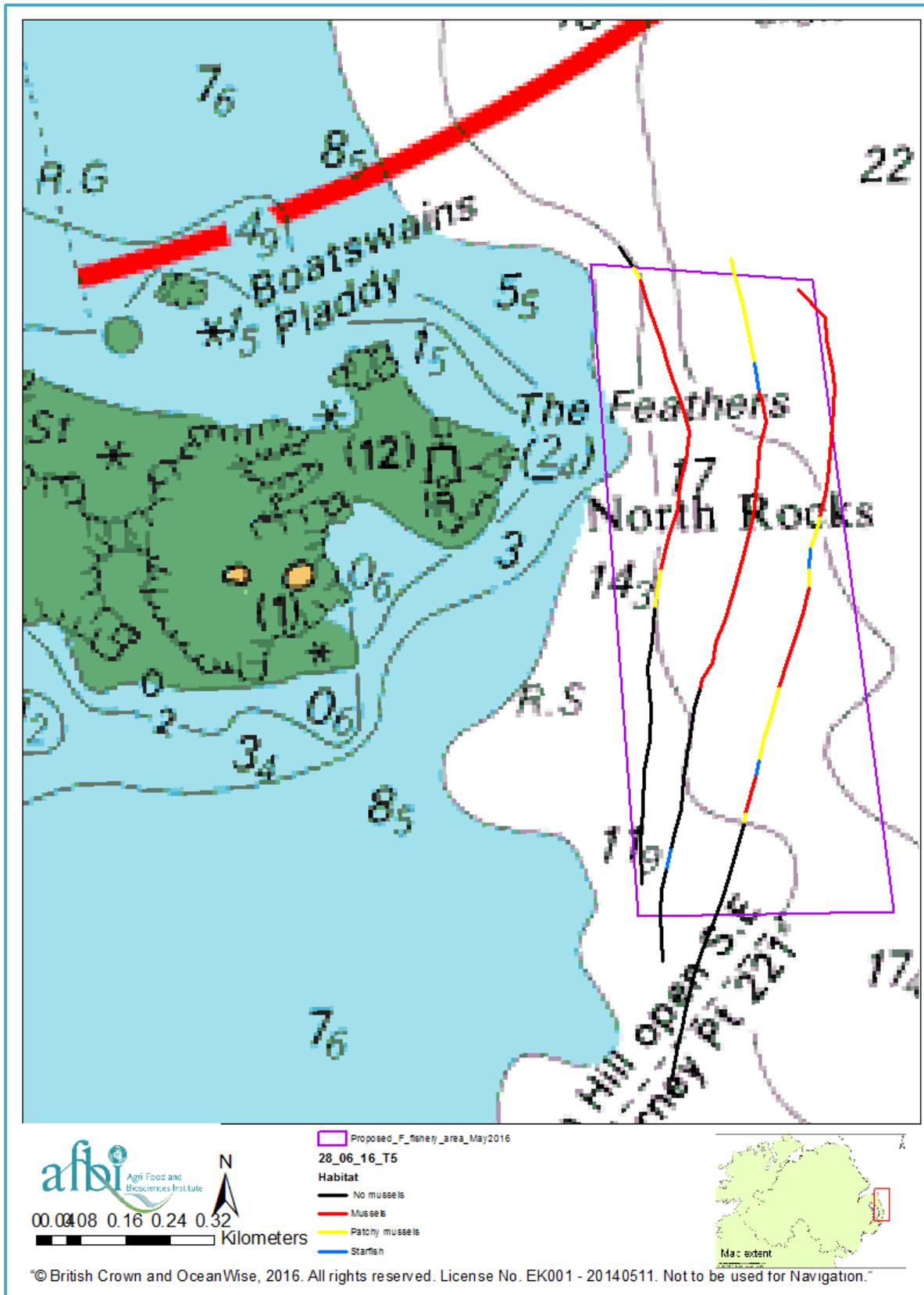
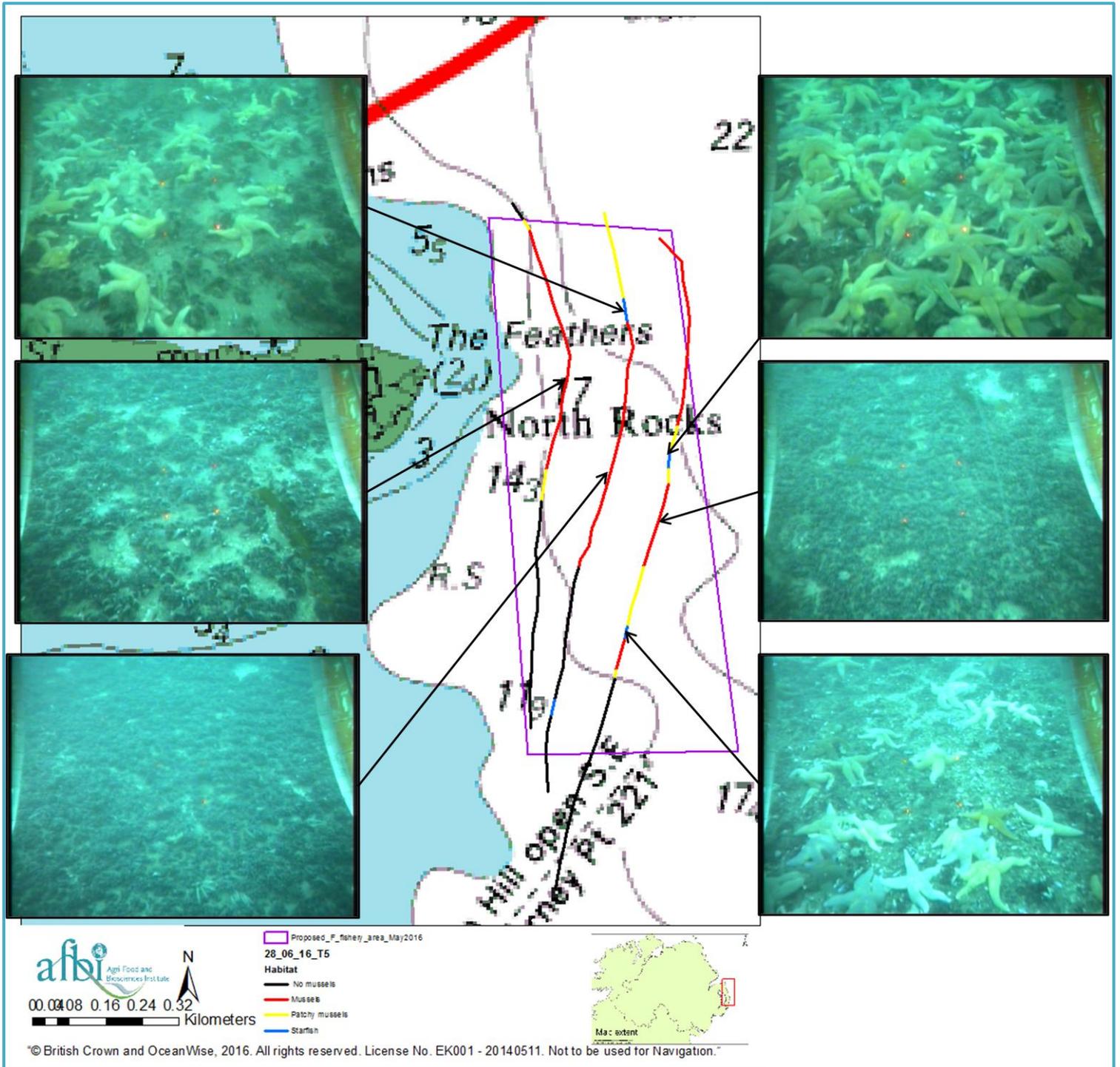


Figure 5: Location of video tows undertaken within the area of The Feathers during the June 2016 seed survey showing observed Habitat type (in terms of seed (red line), patchy seed (yellow line), Starfish aggregations (blue line) or no seed (black line)).



**Figure 6: Location of video tows undertaken within the area of The Feathers during the June 2016 seed survey with screen grabs taken from the video footage showing the habitat present.**

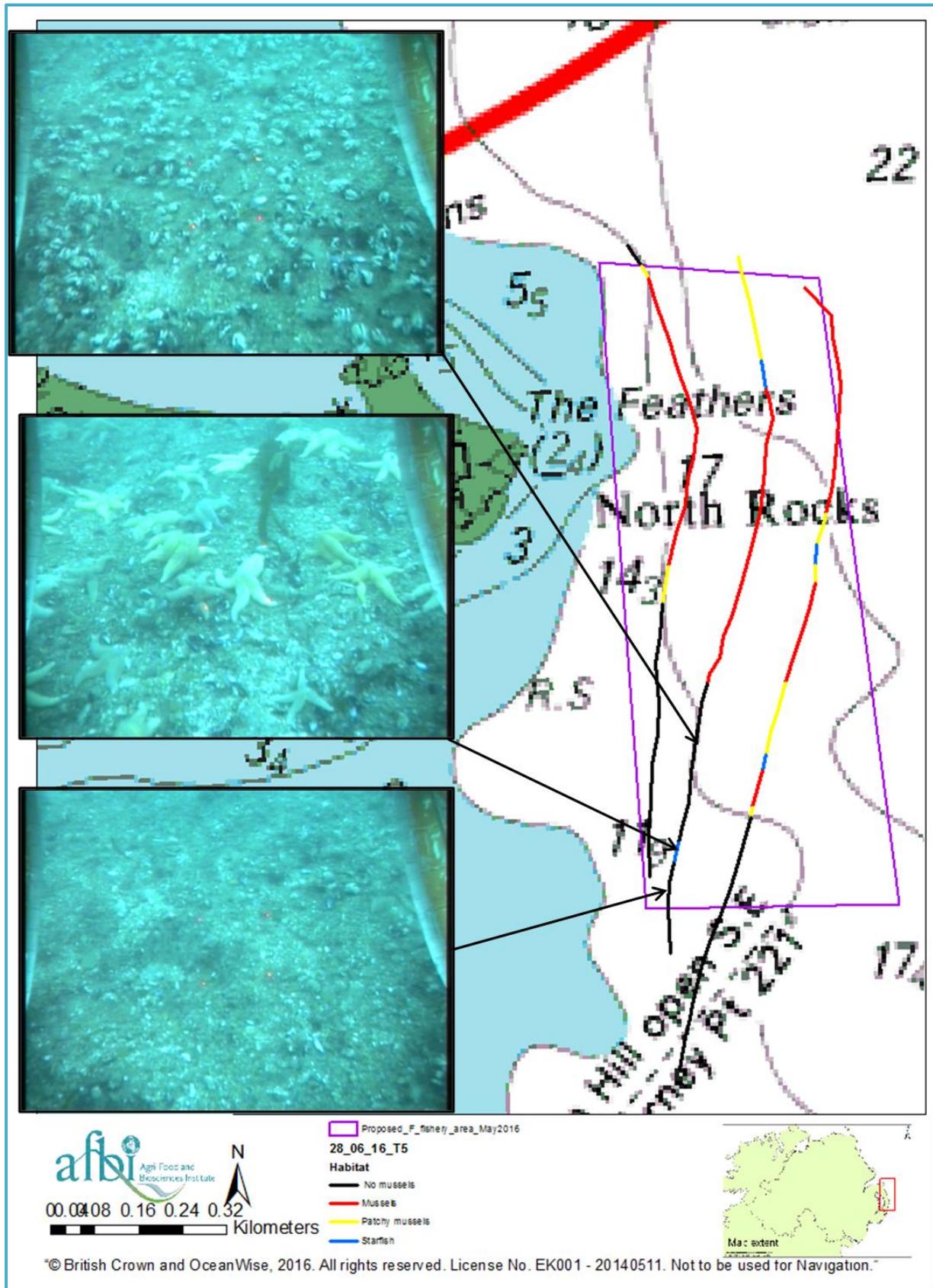


Figure 7: Location of video tows undertaken within the area of The Feathers during the June 2016 seed survey with screen grabs taken from the video footage of Tow 4 showing dead mussels (top image), starfish feeding front (middle image) and mussel shell (bottom image).

## **Discussion**

### **Burial Island**

The June 2016 surveys outlined above indicated that the mussel bed within the Burial Island area is presently intact (Figures 3 and 4).

**However, due to the presence of a starfish feeding front within adjacent mussel beds, AFBI would therefore recommend that this area be opened to fishing on the next suitable tide.**

### **The Feathers**

The June 2016 surveys outlined above indicated the presence of a starfish feeding front and areas of dead mussels within the area of the Feathers mussel bed (Figures 5 to 7 inclusive).

**AFBI would therefore recommend as a matter of urgency that this area be opened to fishing on the next suitable tide before the starfish can advance further.**

**References**

AFBI, 2016a. Outer Ards Seed Mussel Stock Assessment: April 2016. Report to the Department of Agriculture, Environment and Rural Affairs. pp27

AFBI, 2016b. Outer Ards Seed Mussel Stock Assessment: May 2016. Report to the Department of Agriculture, Environment and Rural Affairs. pp29