

South America and Falklands Mussel Inspection (Industry) 08/04/20

Report compiled by Mandy Knott - NWIFCA with information provided by James Wilson and Trevor Jones

Due to COVID-19 restrictions and safe distancing protocols, and the lack of access to this area by quad bike (necessitating RIB or helicopter fly over) NWIFCA officers were unable to carry out an inspection in April. A call was put out to industry via BMWG email, and the following offer of inspection and information was received and accepted.

Inspections carried out by Deepdock, drying out Mare Gratia and hovercraft piloted by Trevor Jones.

LW: 19:15 0.2m (Liverpool tides)

Positions to aim for had been provided by NWIFCA using previous years' data and the quad bike inspection in March - previously reported. The map in Fig. 1 was provided along with co-ordinates to show the areas to be targeted. **NB location of 'Small Island' is estimated from the bottom of the Officers GPS tracks 2020.**

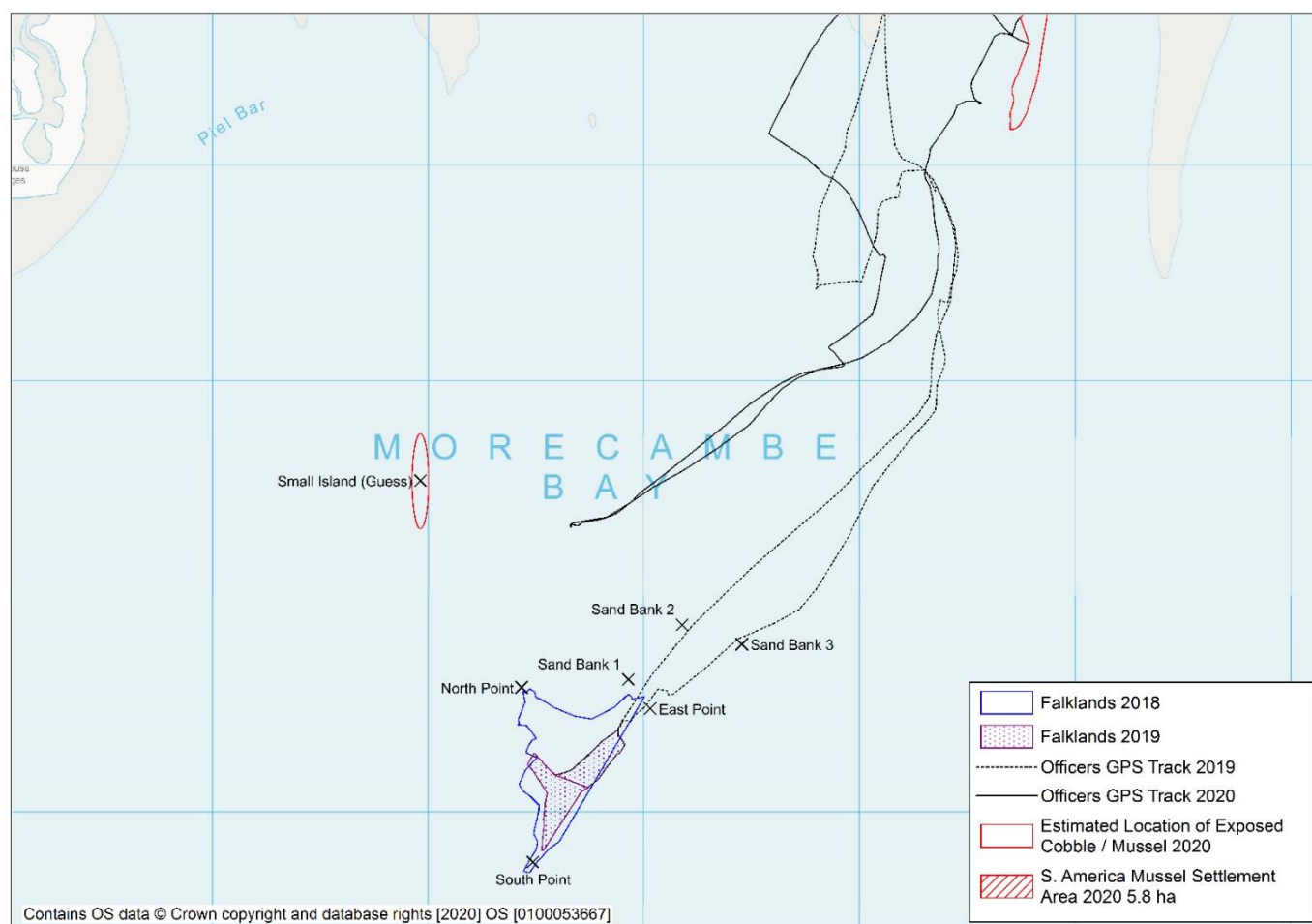


Fig. 1 Map provided to Deepdock showing areas previously inspected 2018 - 20 of South America and Falklands

South America

Mare Gratia (B932) left Port Penrhyn, Bangor 0600 on Wednesday 08/04/20. Weather conditions exceptionally calm. Vessel arrived in north end of Morecambe Bay 1130-1200. Vessel moved over the ground, using the on board Roxann system to detect any mature seed accumulation – however no strong signals were achieved.

Vessel moved to position described on the NWIFCA chart as Sandbank 1 to anchor / dry out at 1430. With B932 aground in 1m water, survey commenced at 1800 on foot.



Fig. 2 view to the Sandbank 3

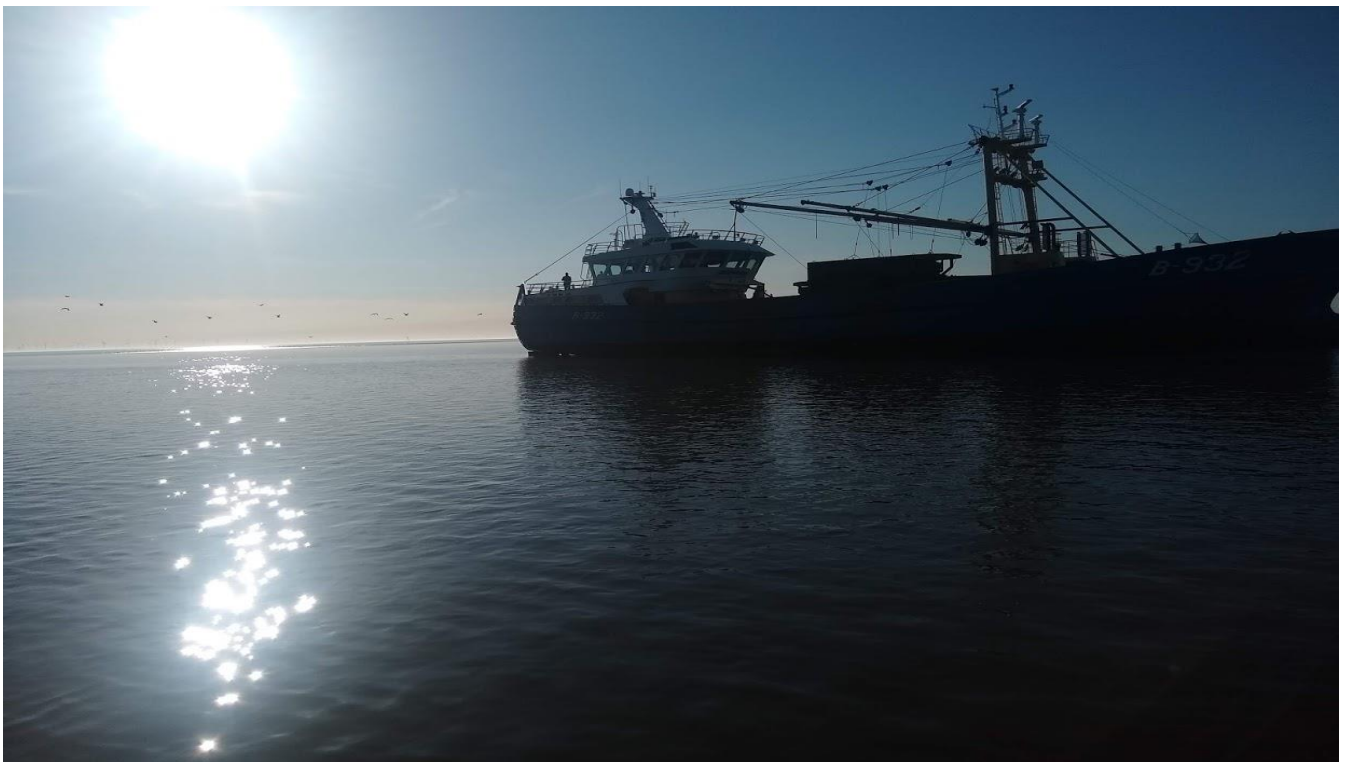


Fig. 3 - B932 aground in 1m of water

An inspection was carried out by walking down towards the Falklands areas that had held mussel in 2018 and 2019 (shown in Fig. 1). Sand with micro ridges and some small amounts of old shell was observed. In a gully area heading back out of the Bay (moving SW) and thought to be within the 2018 mussel area, there was much sign of byssed mussel seed indicating a settlement in late summer / early autumn 2019, but all was reduced to shell with a standing stock of starfish evident.

Moving further down the bank to within the 2019 mussel area there were some signs of more recent sporadic settlement evident.



Fig. 4 - evidence of starfish and mussel shell



Fig. 5 - evidence of sporadic mussel settlement

There was no significant gull activity on this area during the time of the inspection with the majority of the gulls being evident on the area identified as Small Island and also Trailer Bank (as described by Trevor Jones). The latter area also appeared from their position to be inaccessible from the shore, with channel clearly evident.

The inspection was curtailed due to footwear malfunction so the area covered was limited.



Figs. 6 & 7 - evidence of drying bank (Trailer Bank) looking back towards land



Fig. 8 - exposed skear looking north to Mare Gratia

Falklands

Trevor Jones accessed the drying areas to the west of the main Falklands bed by hovercraft. The route taken flew exactly around the outer circumferences of the drying areas. The only footwork was on the dried areas to ascertain quantities, hard in ness and to take pictures.

There were two distinguishable dried areas both holding mussels which have been named for ease as Trailer Bank to the north and close to Walney Channel, and Small Island further south and west of the main Falklands area.

The settlements on both patches were very similar, i.e. a mix of overwintered, quite sizeable mussel, (roughly split between hard-in and just starting to sprout), starfish, smatterings of newly settled spat, and exposed cobble mostly covered with new spat. There were mussels visible under the water between the two areas but it was not possible to go slowly enough to quantify them.

A strange distinguishing feature of Trailer Bank was, however, that it could more or less be bisected on an east-west axis, the northern part of which (nearest to Walney Channel) consisted exclusively of the small spat seen in Figure 12.

Small Island lies adjacent to the drying 1.6 metre mark on the admiralty chart and contains significant quantities of mussels with large numbers of starfish feeding on them (Figs. 9 - 11).

A map has been produced illustrating the areas (Fig. 13). Unfortunately the full tracks from the hovercraft flight are not available, but the area of Small Island has been provided and has been estimated through mapping software as 0.3km² (30 hectares). An estimated position of Trailer Bank sketched on to the underlying NWIFCA map provided by James Wilson is shown at Figure 14. **NB. size of area shown in this sketch not known.**



Fig. 9 mixed ground evident with size mussel and bare cobble Small Island

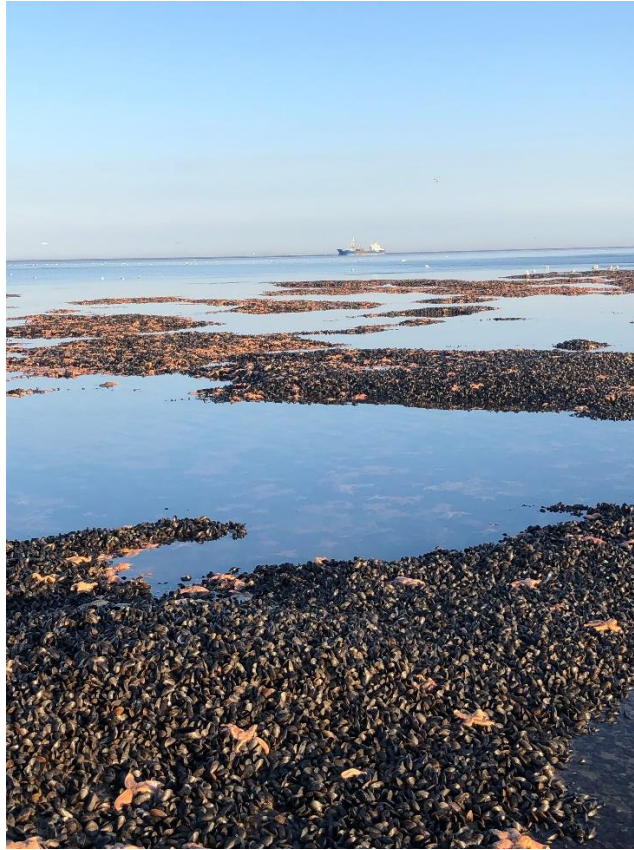


Fig. 10 view across Small Island back to dried out Mare Gratia



Fig. 11 evidence of dense starfish aggregation and predation Small Island



Fig. 12 evidence of 2020 settlement amongst size mussel Trailer Bank

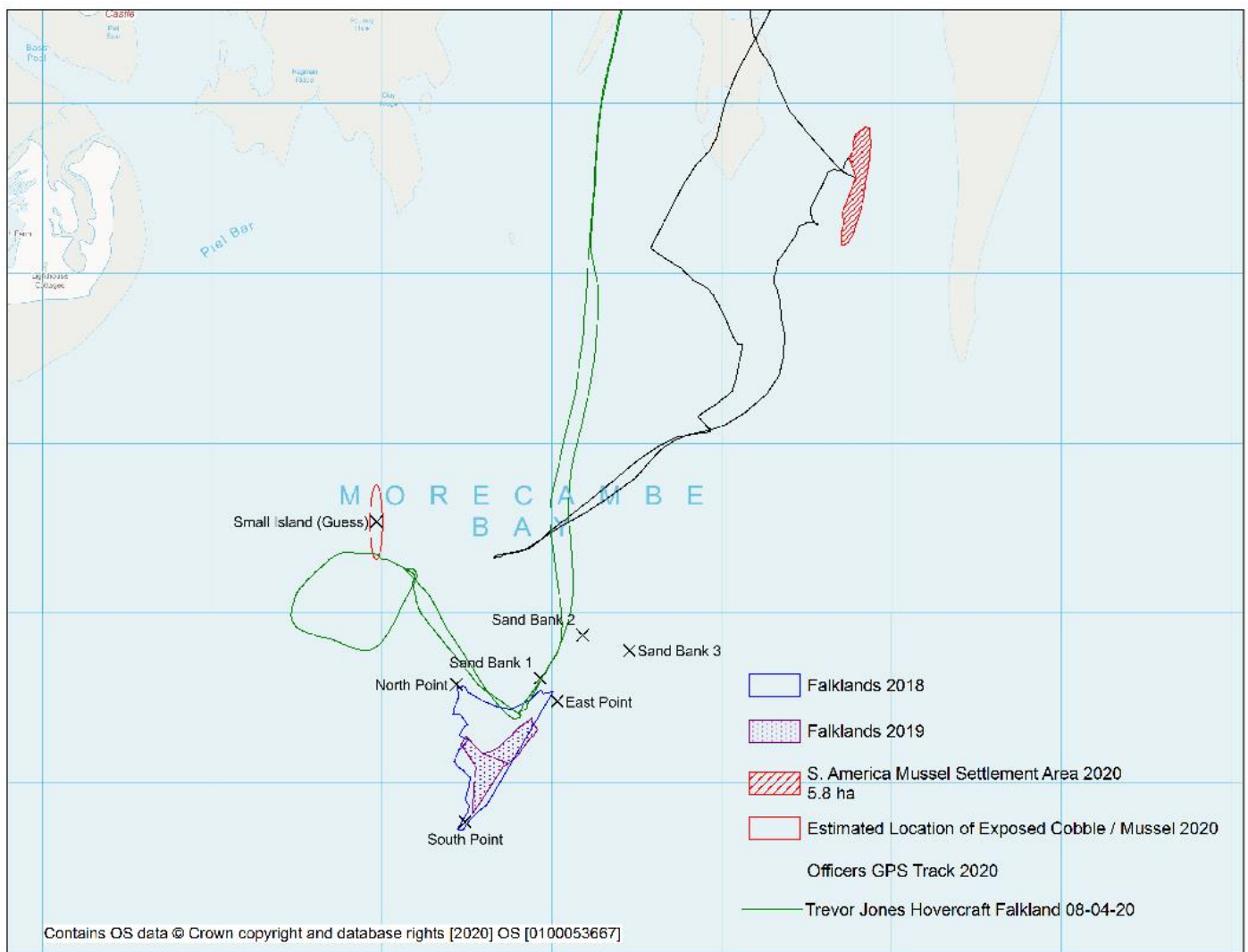


Fig. 13 - map illustrating positions of the size of the area holding mussels on the Falklands skear 2018 & 2019, officers ATV inspection tracks 13-03-20, an estimated location of the exposed cobble / mussel area from the ATV inspection 13-03-20, the mussel area on South America 13-03-20, and the hovercraft tracking 08-04-20.

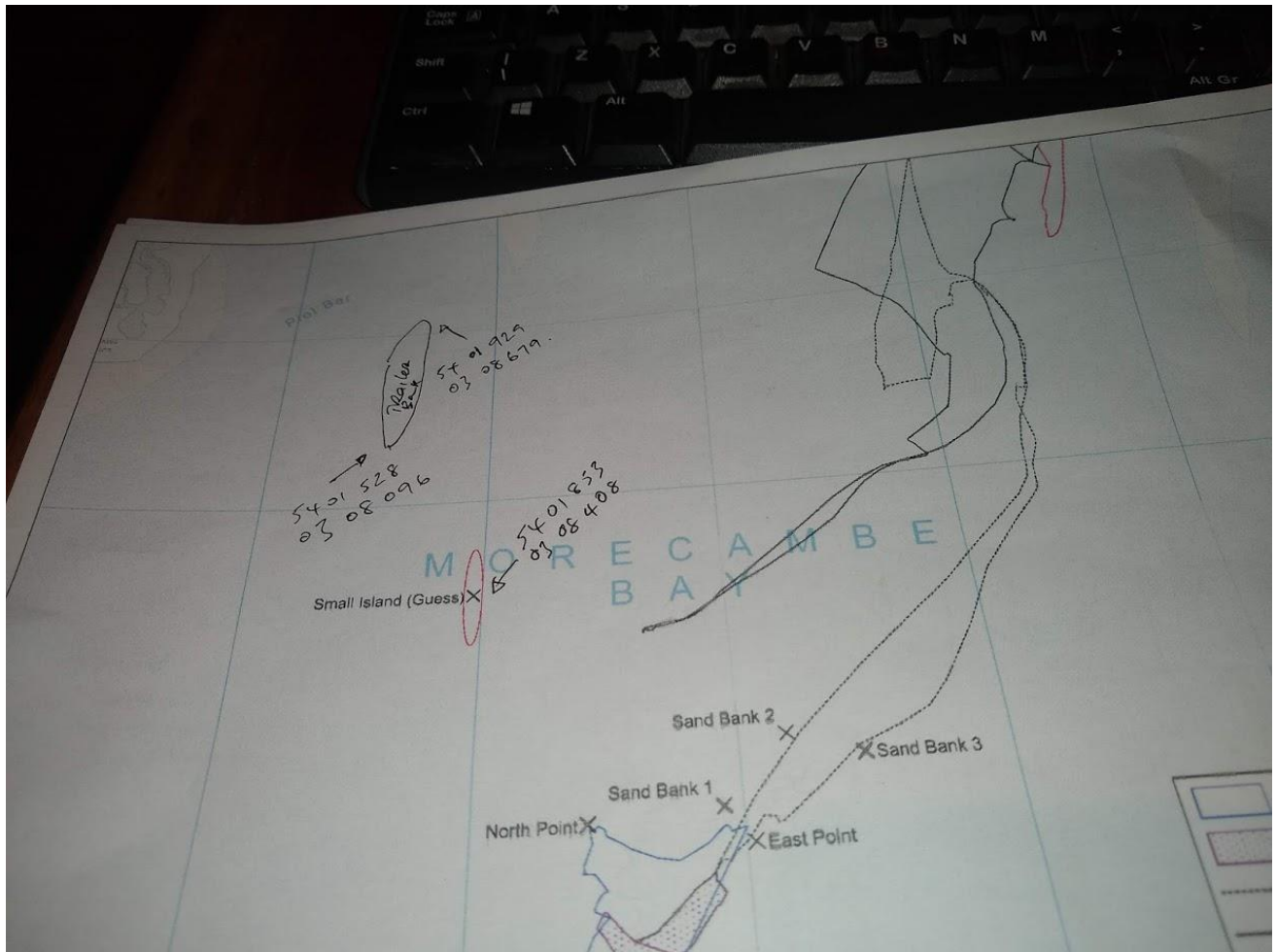


Fig. 14 - estimated position of Trailer Bank provided by James Wilson