

## **Fleetwood Mussel Inspection 29-08-23**

Officers: JH, GG

LW: 17:15 2.0m (Liverpool Tides)

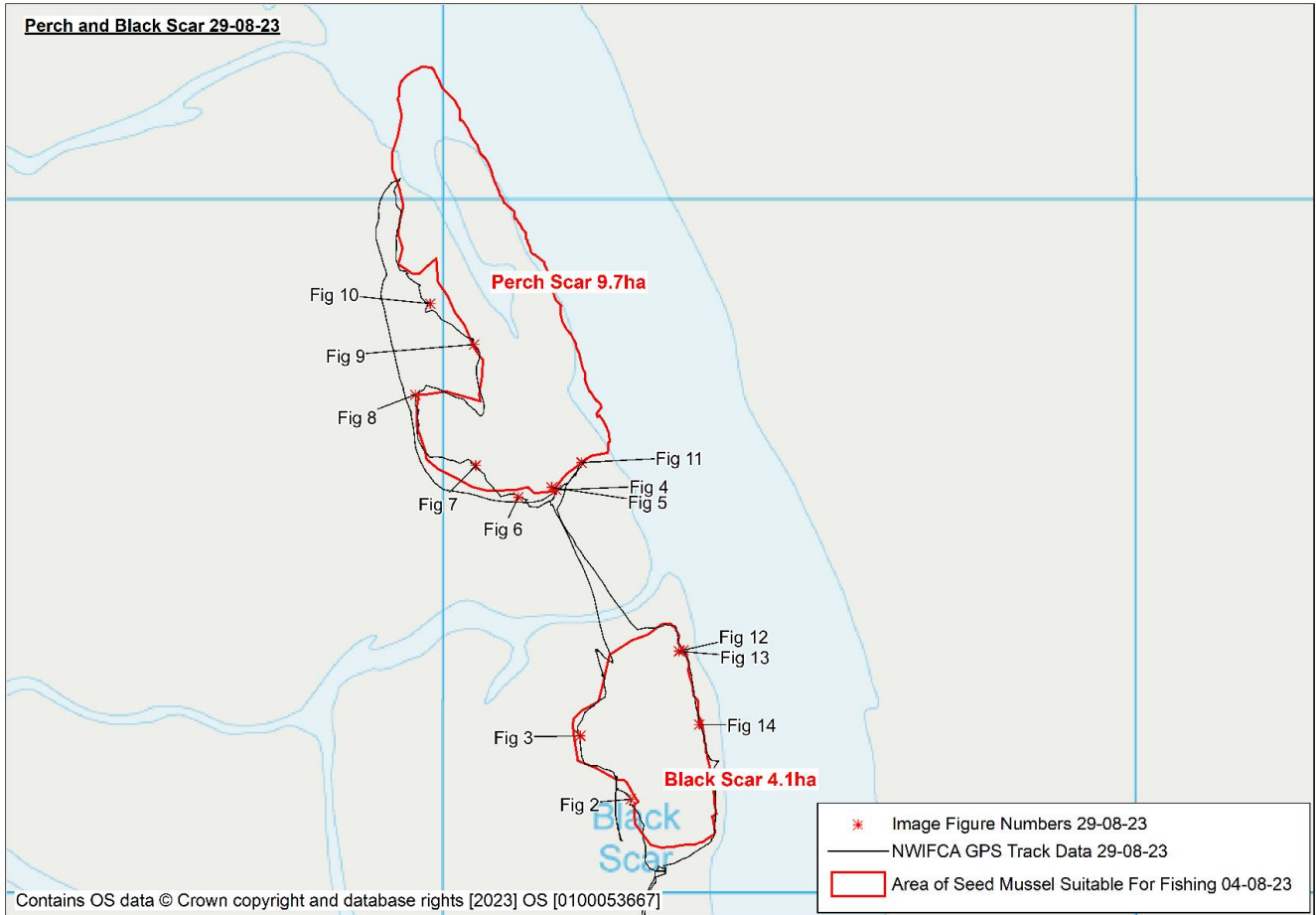
The Fleetwood mussel beds of Perch and Black Scar were surveyed to check the condition of the mussel and that the flexible permit conditions issued under, NWIFCA Restriction on Use of a Dredge were still appropriate. The perimeter of the permitted fishing was inspected (Figure 1). It was not possible to walk the channel side (East) of Perch Scar as the mussel mud was too soft and being slightly restricted from the tide height.

### **Black Scar**

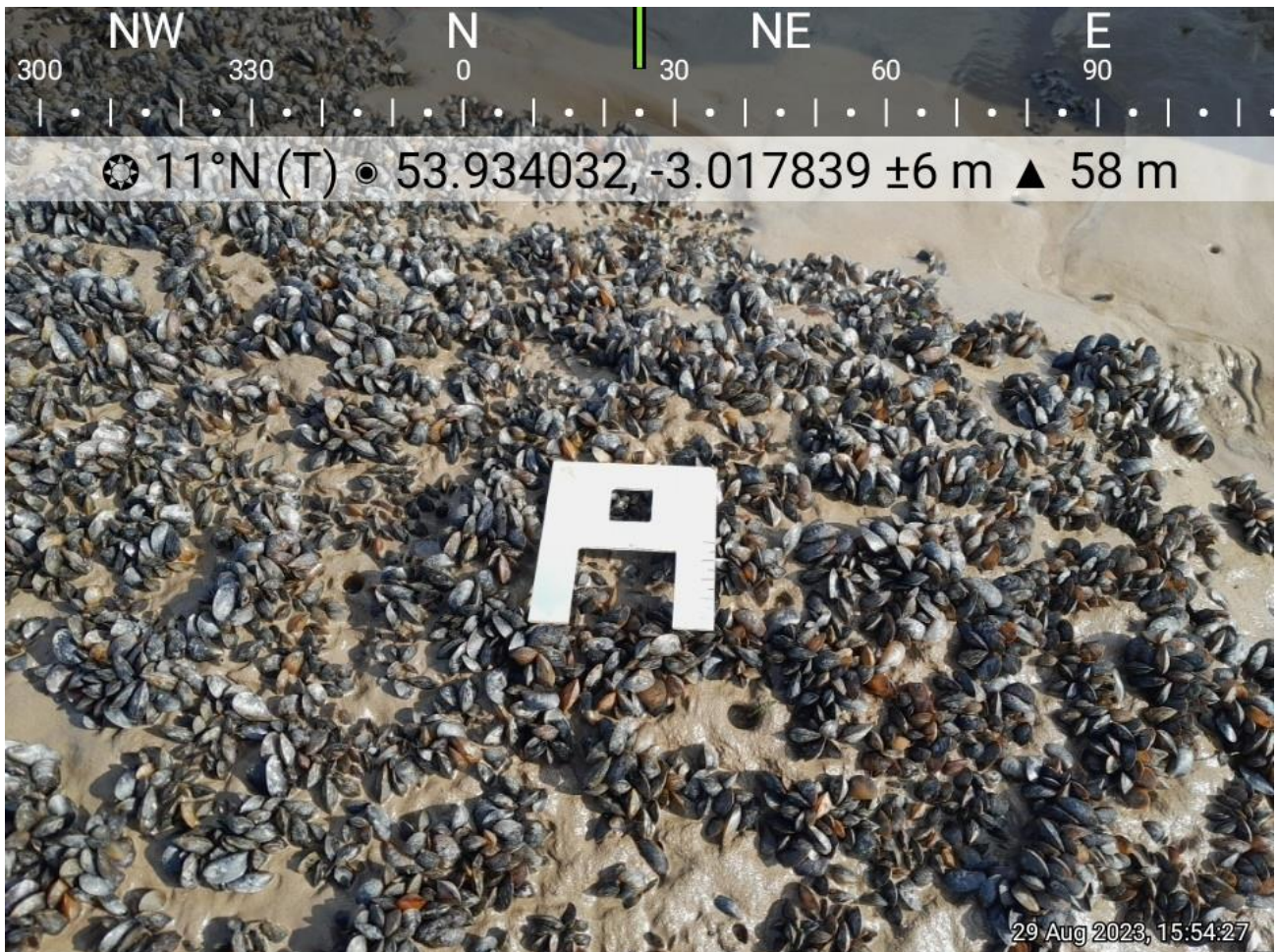
The 2023 mussel settlement on Black Scar is still present and the mussel is of a similar size of approximately 20-25mm mm in length (Figure 2). The coverage of mussel has reduced due to fishing and scour, on the western of the bed, where density has reduced to 30-40% (Figure 3). On the eastern edge of the bed the density of mussel is still high with 70-80% coverage (Figure 13 and 14). The mussel is still on a significant layer of mussel mud (Figure 13 and 14). There has been little to no change in the area of seed mussel suitable for fishing and therefore the previous bed area is still appropriate of approximately 4.1 hectares. The thin strip of exposed cobble along the channel edge, outside of the permitted fishing area is still present.

### **Perch Scar**

The 2023 mussel settlement on Black Scar is still present and the mussel is of a similar size of approximately 20-25mm mm in length (Figure 13). Coverage varies across the bed depending on the level of scour. To the South and East of the bed coverage remains high at 80-90% (Figure 4, 5 and 11), to the North and West of the bed coverage has reduce to 30-50% coverage (Figure 7 and 9). Similar to Black Scar the mussel mud was thick (Figure 7 and 9), in places up to a metre thick. There is some exposed stony substrate (Figure 6, 8 and 10) to the East of the mussel bed which was previously covered by soft sediment (Muddy sand). This area will be removed from the permitted fishing area. There has been little to no change in the area of seed mussel suitable for fishing and therefore the previous bed area is still appropriate of approximately 9.7 hectares.



**Figure 1.** Location and extent of the Perch and Black Scar seed mussel and locations of figure numbers 29-08-23.



**Figure 2.** 20-25mm Seed Mussel on Black Scar 29-08-2023.



Figure 3. Scoured Mussel on Eastern Edge of Black Scar 29-08-2023.

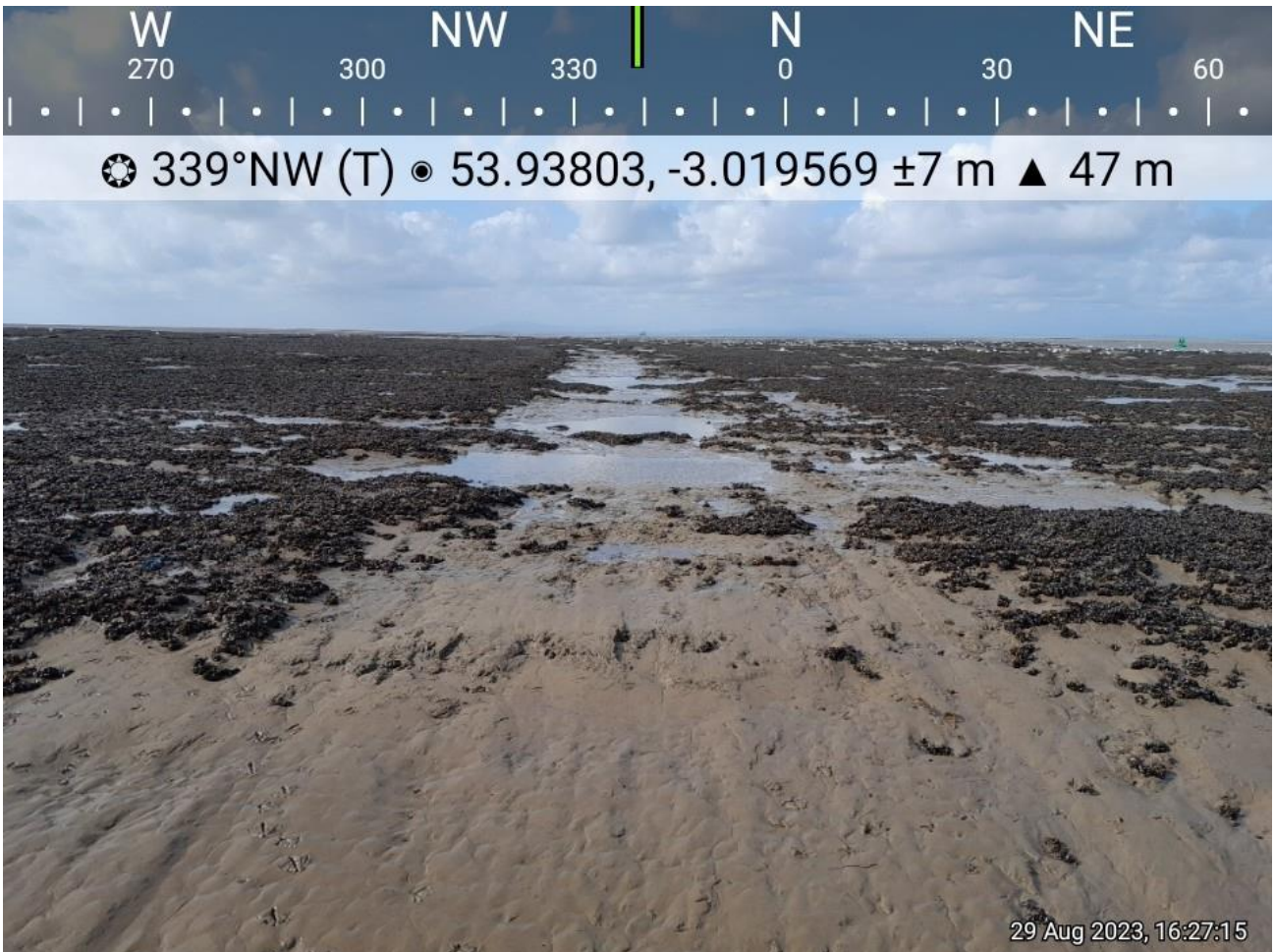


Figure 4. Loose, dense mussel on thick mud with dredge track on Perch Scar 29-08-2023

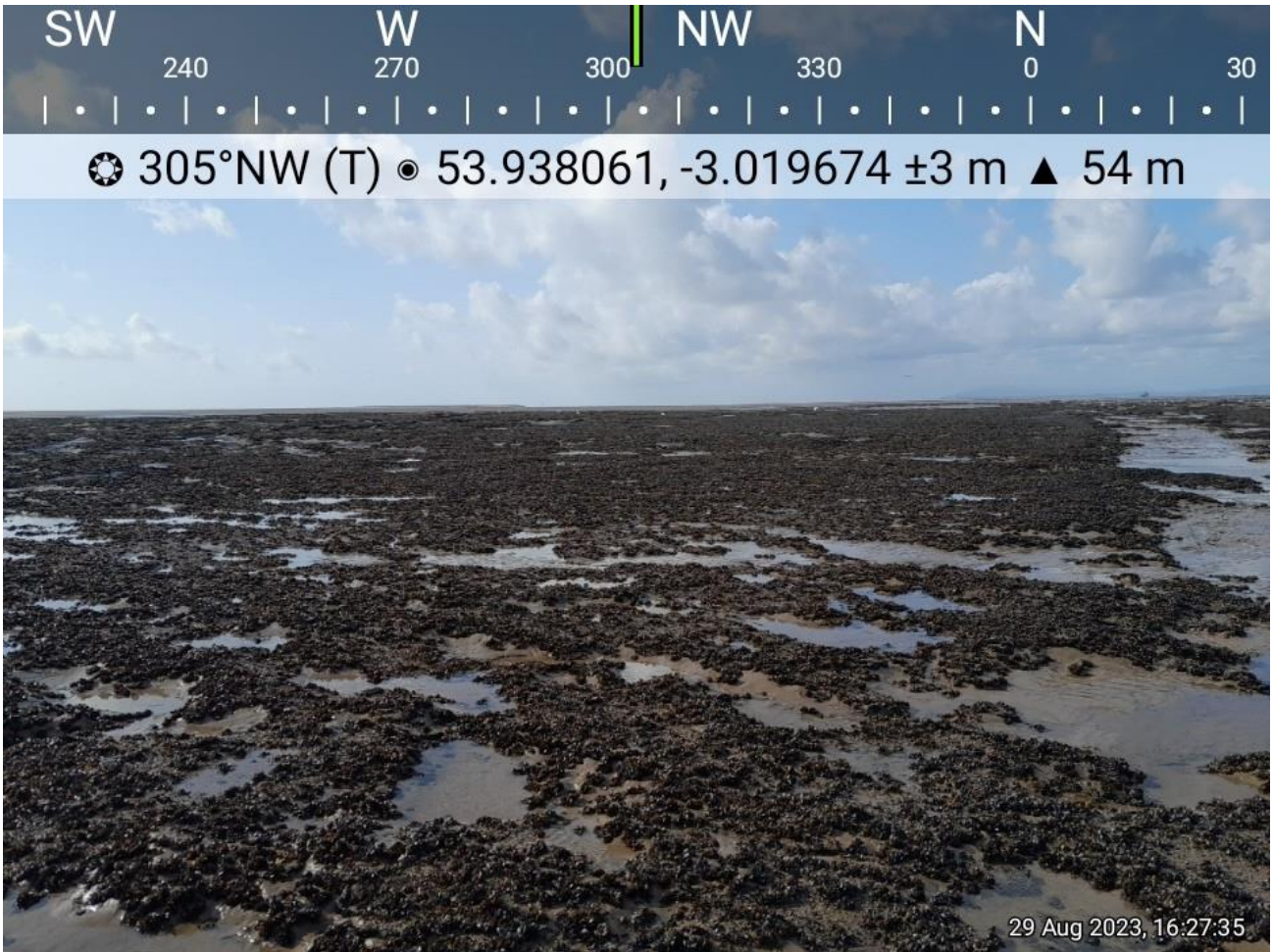


Figure 5. Loose, dense mussel on thick mud Perch Scar 29-08-2023.

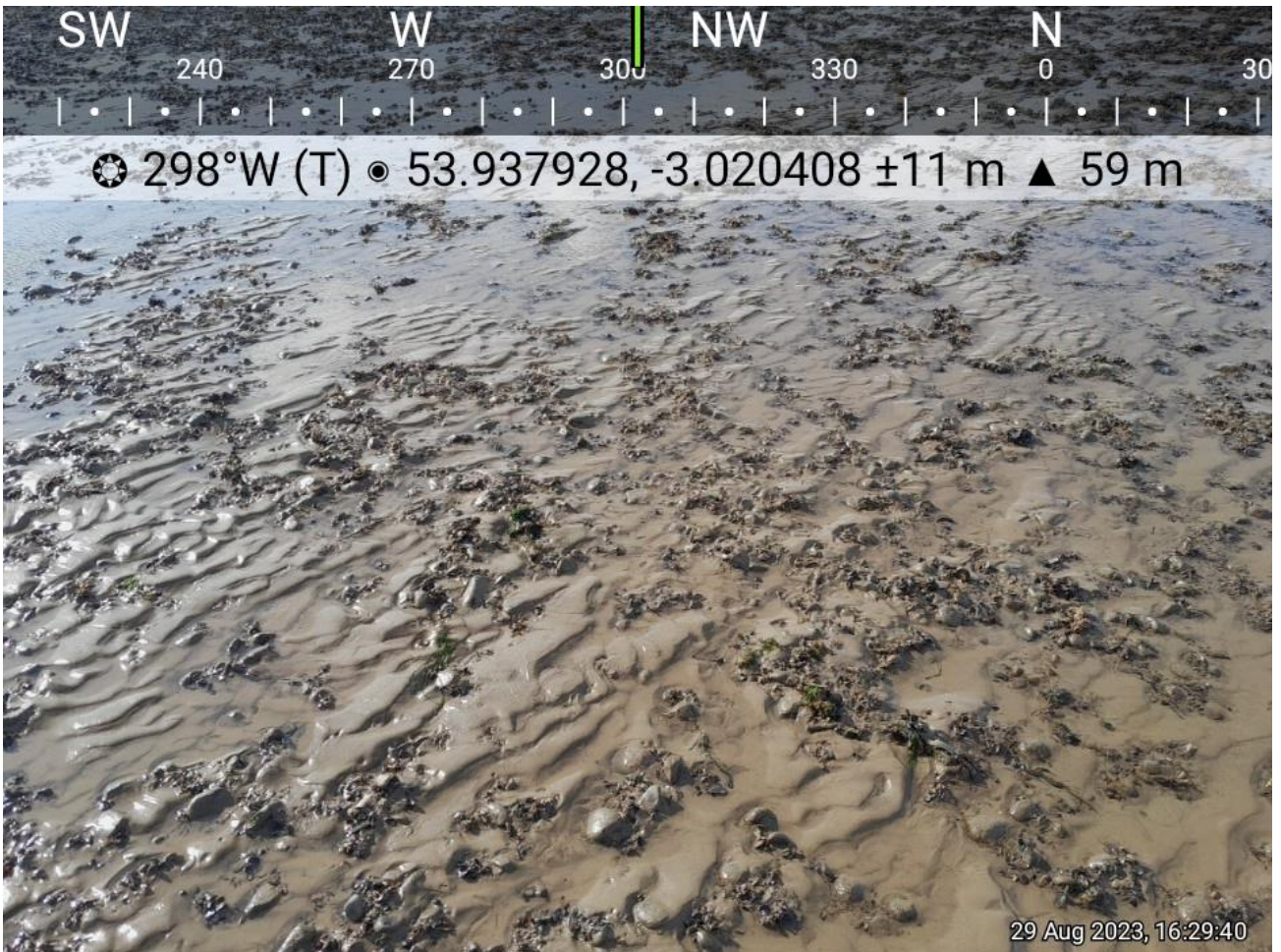


Figure 6. Exposed Stony substrate previously covered by sand Perch Scar 29-08-2023



Figure 7. Evidence of Mussel Scour and deep mussel mud on Perch Scar 29-08-2023.



Figure 8 Exposed Stony substrate previously covered by sand Perch Scar 29-08-2023.

## West Elevation

☉ 108°E (T) ● 53.939896, -3.021432 ±9 m ▲ 53 m



Figure 9. Evidence of Mussel Scour and deep mussel mud on Perch Scar 29-08-2023.

## South East Elevation

☉ 304°NW (T) ● 53.940418, -3.022402 ±10 m ▲ 25 m



Figure 10. Exposed Stony substrate previously covered by sand Perch Scar 29-08-2023.

## South Elevation

☉ 25°N (T) ● 53.938388, -3.019028 ±4 m ▲ 48 m



Figure 11. Loose, dense mussel on thick mud Perch Scar 29-08-2023.

## North Elevation

☉ 173°S (T) ● 53.935974, -3.016728 ±8 m ▲ 47 m



Figure 12. Channel edge of Black Scar with higher density seed mussel and mussel mud 29-08-2023.



Figure 13. Mussel at 20 mm on Perch Scar 03-08-2023.



Figure 14. Channel edge of Black Scar with higher density seed mussel and mussel mud 29-08-2023.