

## Aldingham and Newbiggin Cockle Survey 11-07-23

Officers present: ID, JH, MC, GG  
Tides: LW 13:00 2.3m (Liverpool Tides)

Survey method - Jumbo and 0.5m<sup>2</sup> quadrat

51 stations were sampled from a 500m grid. Most of the Aldingham survey location could not be accessed due to the Leven channel being closer to the shoreline. The majority of the cockle is between 10-20mm in length from a 2022 cockle settlement. Size cockle is relatively low in density across the bed. There is evidence of a 2023 cockle settlement across a number of survey stations.

### Means

Means were calculated from all stations with zero counts on the edge of the bed removed. Less than 5mm cockle was not used in the undersize figures due to the high variable survivability of cockle at this small size but has been included as a separate figure.

#### Newbiggin:

Mean number of size cockle	4 per m <sup>2</sup>	(min 0, max 22)
Mean number of undersize cockle	169 per m <sup>2</sup>	(min 0, max 1300)
Mean number of 0-5mm cockle	26 per m <sup>2</sup>	(min 0, max 200)

Mean weight of size cockle kg/m <sup>2</sup>	0.053 kg/m <sup>2</sup>	(min 0, max 0.476)
Mean number of undersize cockle kg/m <sup>2</sup>	0.218 kg/m <sup>2</sup>	(min 0, max 1.612)

#### Aldingham:

Mean number of size cockle	2 per m <sup>2</sup>	(min 0, max 8)
Mean number of undersize cockle	15 per m <sup>2</sup>	(min 0, max 56)
Mean number of 0-5mm cockle	26 per m <sup>2</sup>	(min 0, max 100)

Mean weight of size cockle kg/m <sup>2</sup>	0.027 kg/m <sup>2</sup>	(min 0, max 0.078)
Mean number of undersize cockle kg/m <sup>2</sup>	0.039 kg/m <sup>2</sup>	(min 0, max 0.097)

### Maps

Maps were created showing the overall survey area, density of size cockle, density of undersize cockle (excluding cockles in the 0-5mm size range) the density of the 0-5mm size class, the frequency of size classes, the size of the pie chart indicates the total density of cockles present, and the weight of undersize and size cockle.

### Biomass

	Area (ha)	Size Cockle (tonnes) <sup>1</sup>	Undersize Cockle (tonnes) <sup>2</sup>
<b>Newbiggin</b>	<b>959</b>	<b>500</b>	<b>2100</b>
<b>Aldingham</b>	<b>137</b>	<b>35</b>	<b>50</b>

<sup>1</sup>In regards to biomass size cockle defined as cockle which will not pass through a square gauge 20 x 20mm in size.

<sup>2</sup>The biomass of undersize cockle does not include any estimates of cockle less than 5mm due to the high variability of survival of this size class.

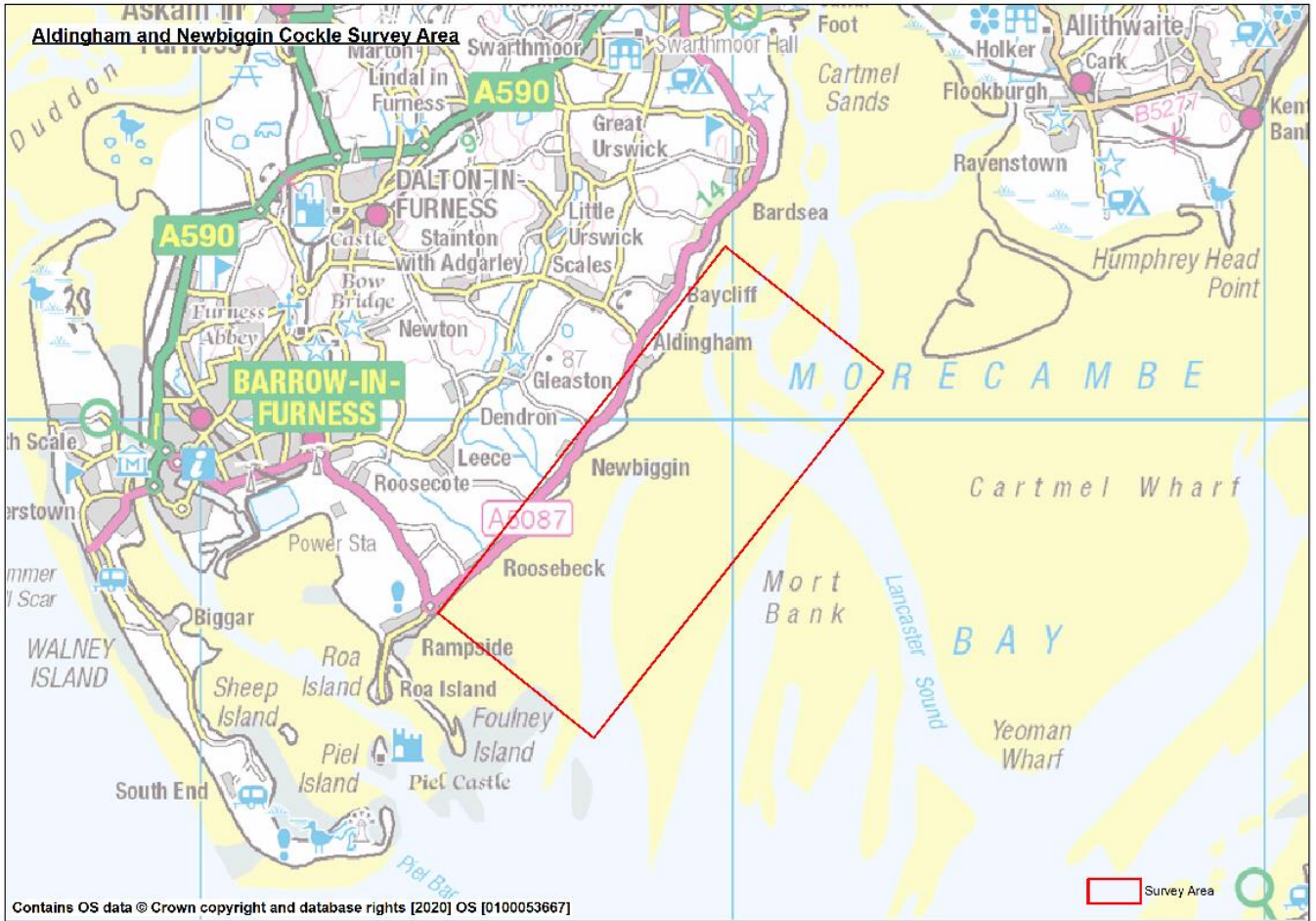


Figure 1. Illustration of position of Aldingham and Newbiggin Survey Area

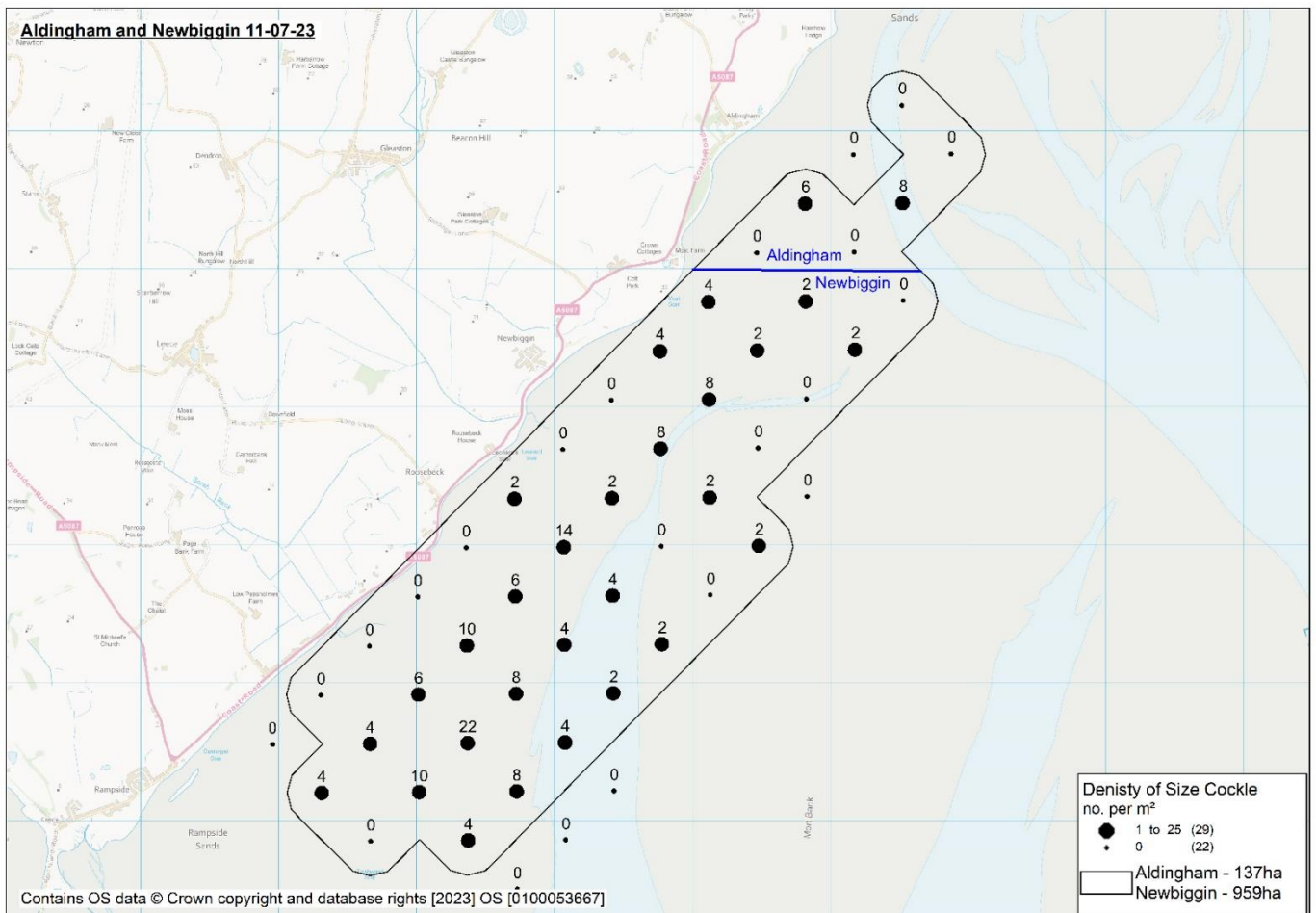


Figure 2. Density of size cockle per m<sup>2</sup> Aldingham and Newbiggin July 2023

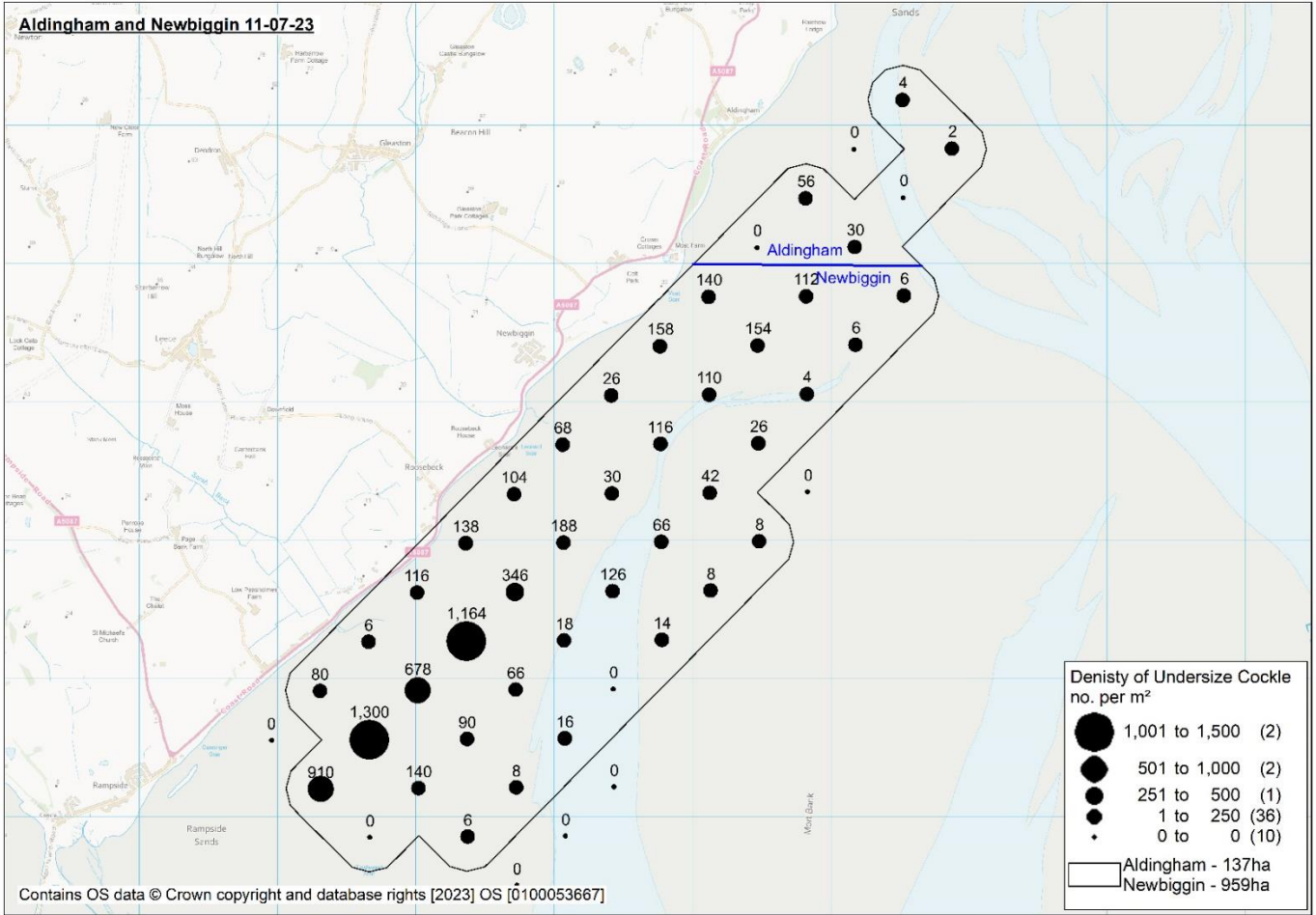


Figure 3. Density of undersize cockle per m<sup>2</sup> Aldingham and Newbiggin July 2023

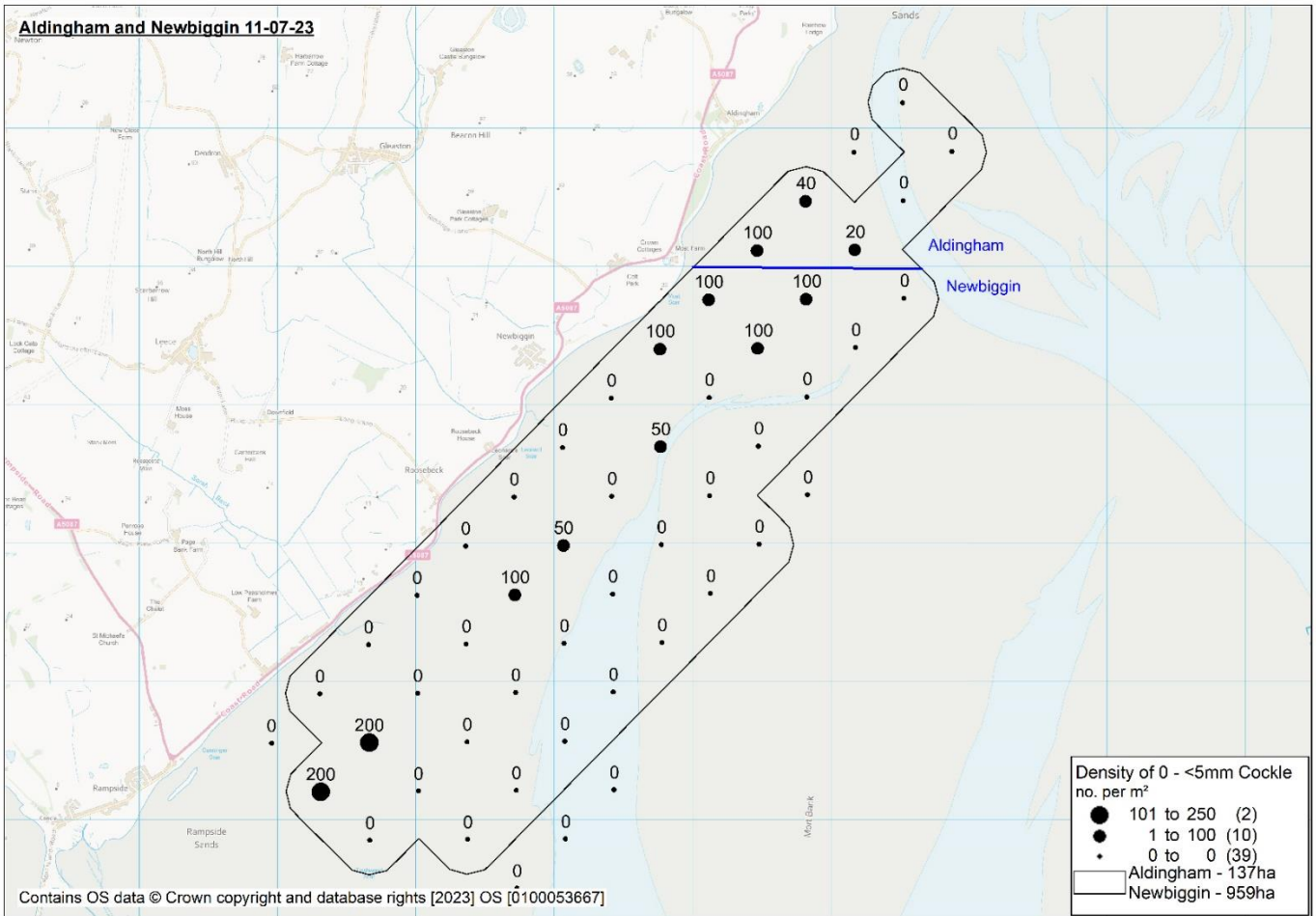


Figure 5. Density of 0-5mm cockle per m<sup>2</sup> Aldingham and Newbiggin July 2023

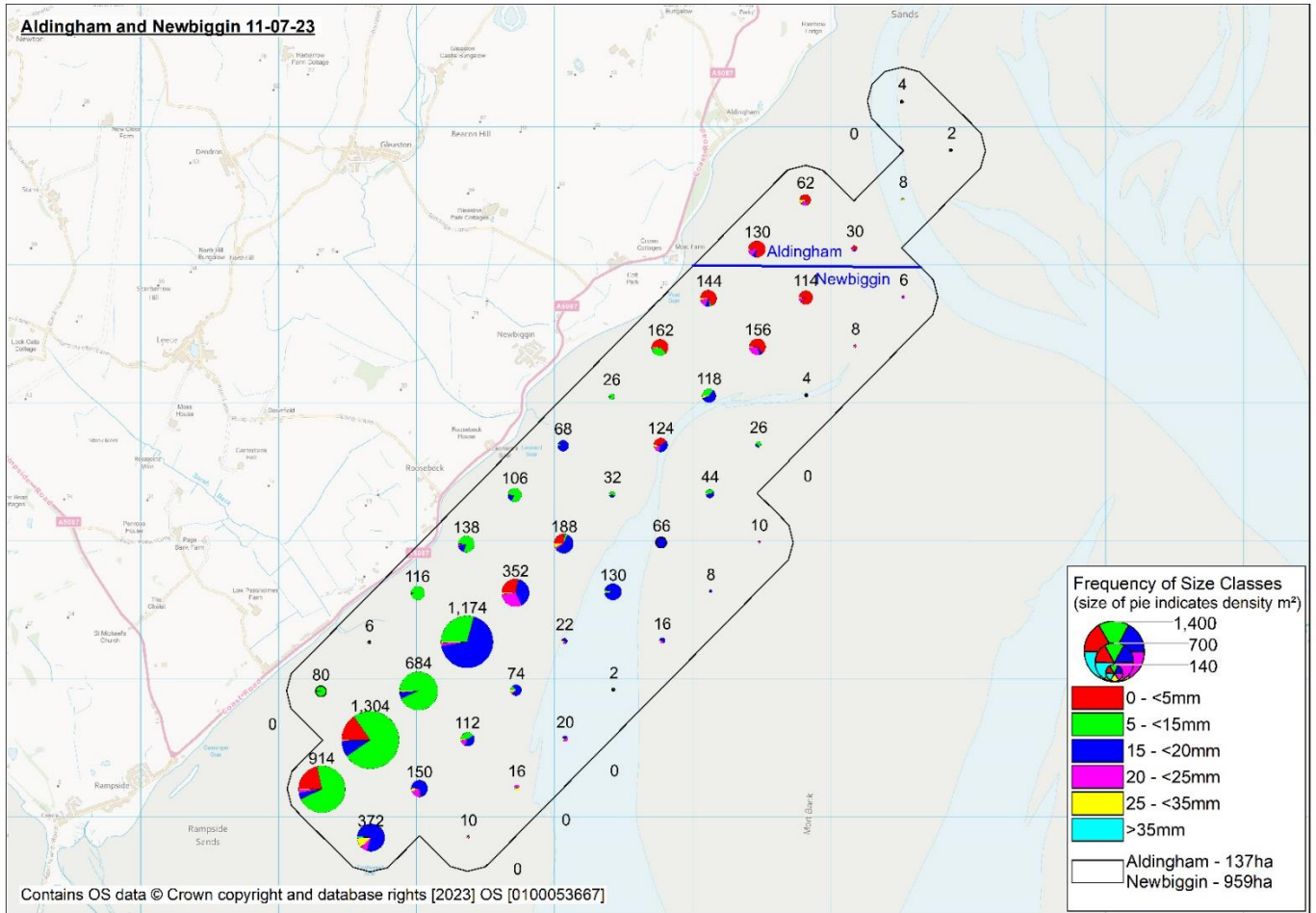


Figure 4. Frequency of size classes of cockle per  $m^2$  Aldingham and Newbiggin July 2023

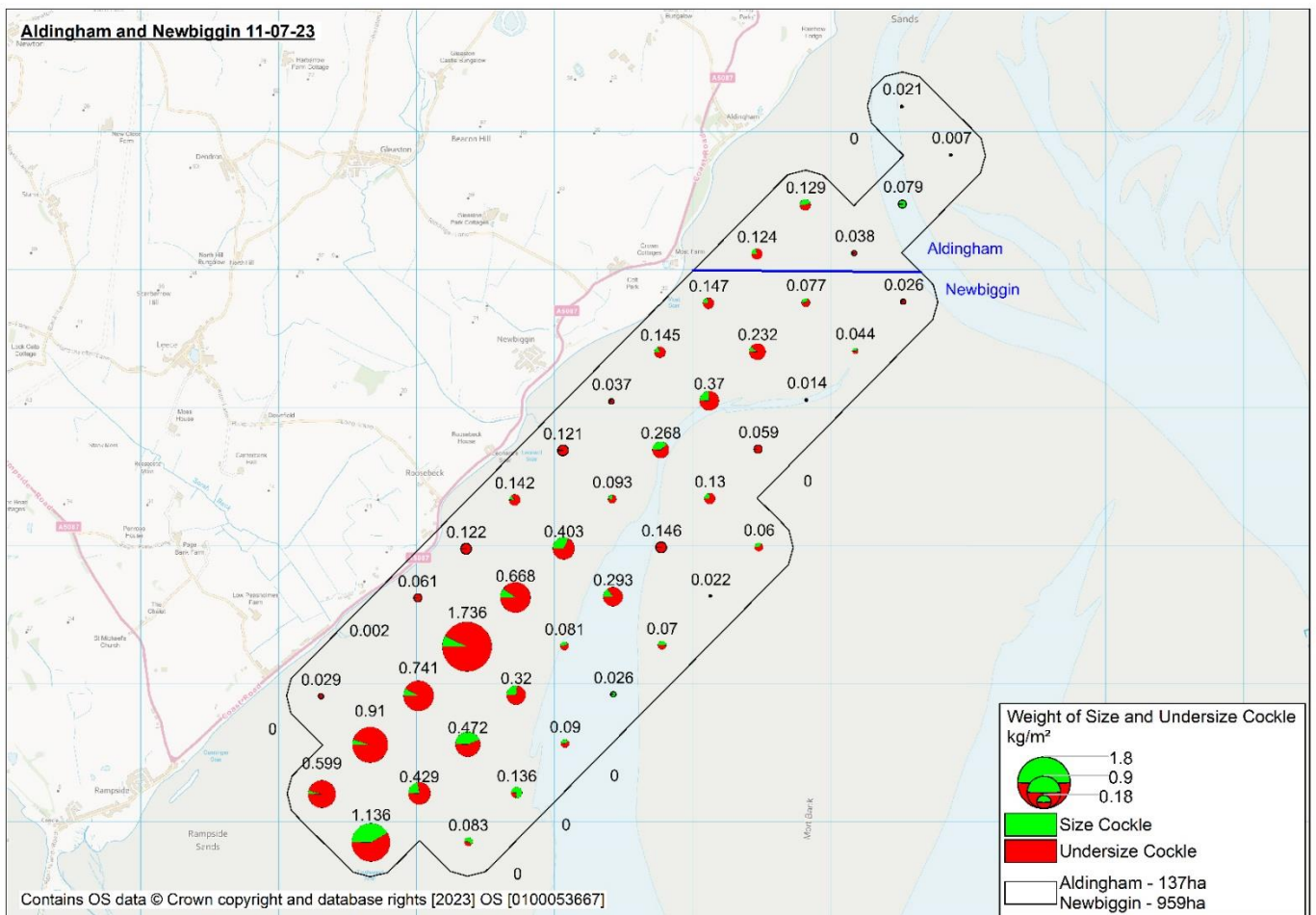


Figure 6. Weight of size and undersize cockle  $kg/m^2$  at Aldingham and Newbiggin July 2023.