Leven Cockle Survey 16-09-26

Officers present: ID, JH, GG, LL

Tides: LW 09:24 2.1m (Liverpool Tides)

Survey method Jumbo and 0.5m^2 quadrat

Officers investigated information provided by industry of a video showing wash up of cockle in the upper reaches of the Leven estuary off Sandgate. Whilst completing this check officers discovered access could be gained to some of Aldingham cockle bed which has in recent years been cut off by the river Leven. They also found a large area of cockle that extends South beyond any area previously surveyed. An inspection was completed to find the edges of the bed, a 500m survey grid was placed over the area. Officers continued to survey until either access was not possible by the channels or the density was zero or low. The extension grid was based on a continuation of the Leven survey stations rather than Aldingham to ensure continuity of calculation of biomass. 83 stations were sampled from a 500m grid, 8 from the south of the Leven cockle grid, and 75 from the new grid. One additional survey station was added to ensure coverage of the survey.

Means

Means were calculated from all stations with zero counts removed. Less than 5mm cockle was not used in the undersize figures due to the high variable survivability of cockle at this small size.

Mean number of size cockle	21 per m²	(min 0, max 124)
Mean number of undersize cockle	90 per m²	(min 0, max 540)
Mean number of 0-5mm cockle	5 per m²	(min 0, max 200)
Mean weight of size cockle kg/m²	0.203 kg/m²	(min 0, max 1.184)
Mean weight of undersize cockle kg/m²	0.127 kg/m²	(min 0, max 0.562)

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 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 of cockle present (ha)	Size Cockle (tonnes)[1]	Undersize Cockle (tonnes)[2]
Leven	**1850**	**3759**	**2359**

5-15 Class (tonnes)	15-20 Class (tonnes)	20-25 Class (tonnes)	25-35 Class (tonnes)	>35 Class (tonnes)
727	**622**	**999**	**3622**	**148**

[1]In regards to biomass size cockle defined as cockle which will not pass through a square gauge 20 x 20mm in size.
[2]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.

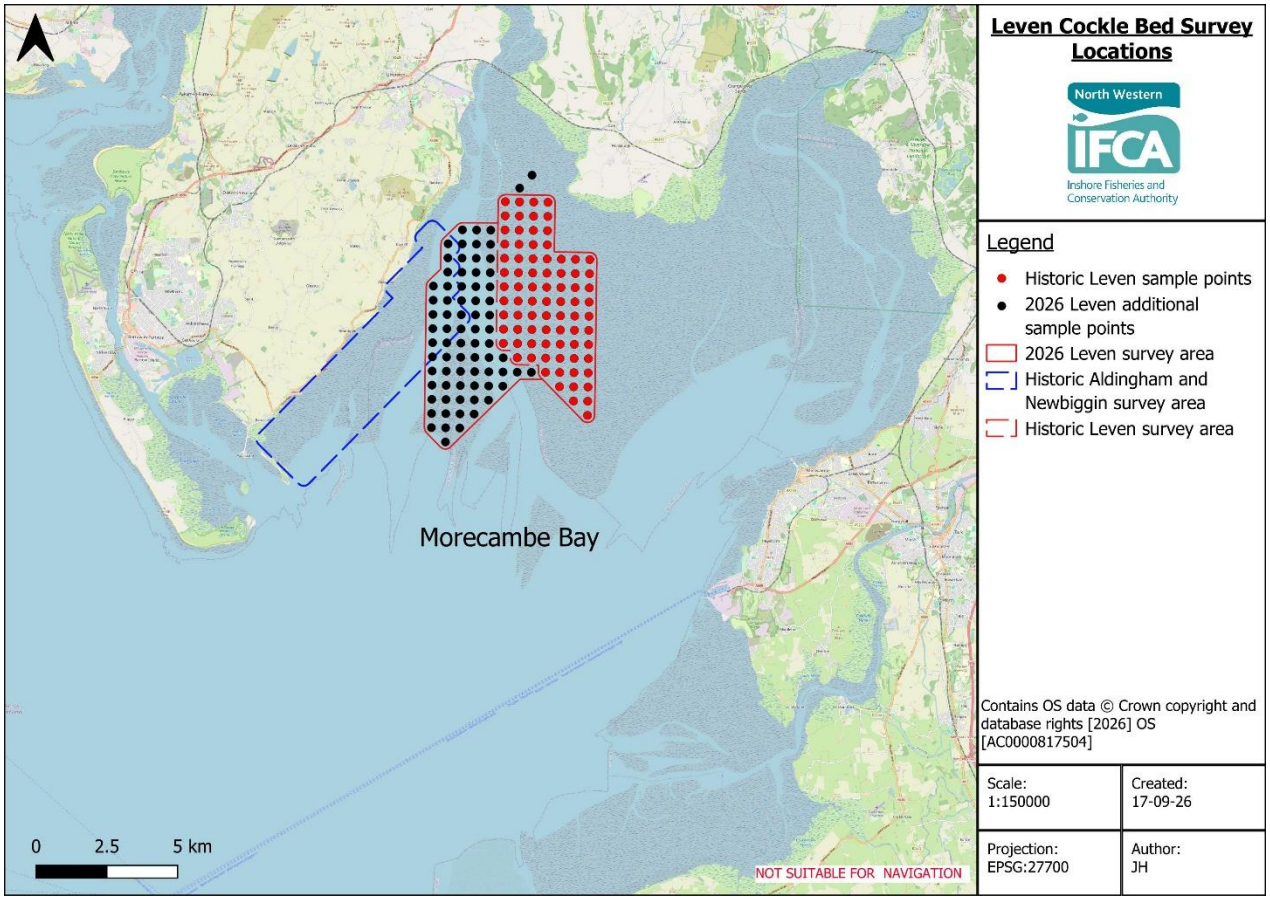


Figure 1. Illustration of position of Leven Survey Area

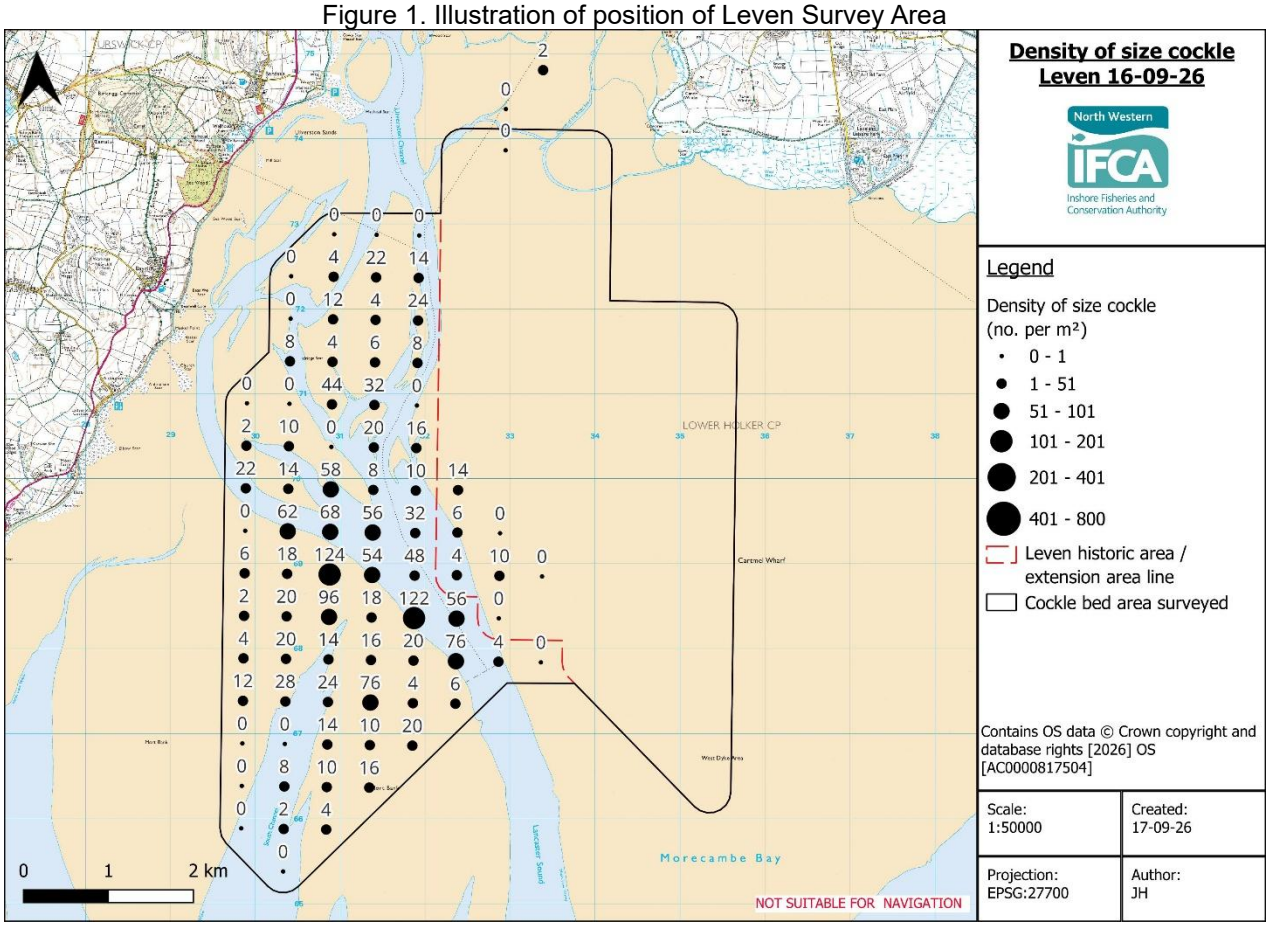


Figure 2. Density of size cockle per m² Leven September 2026

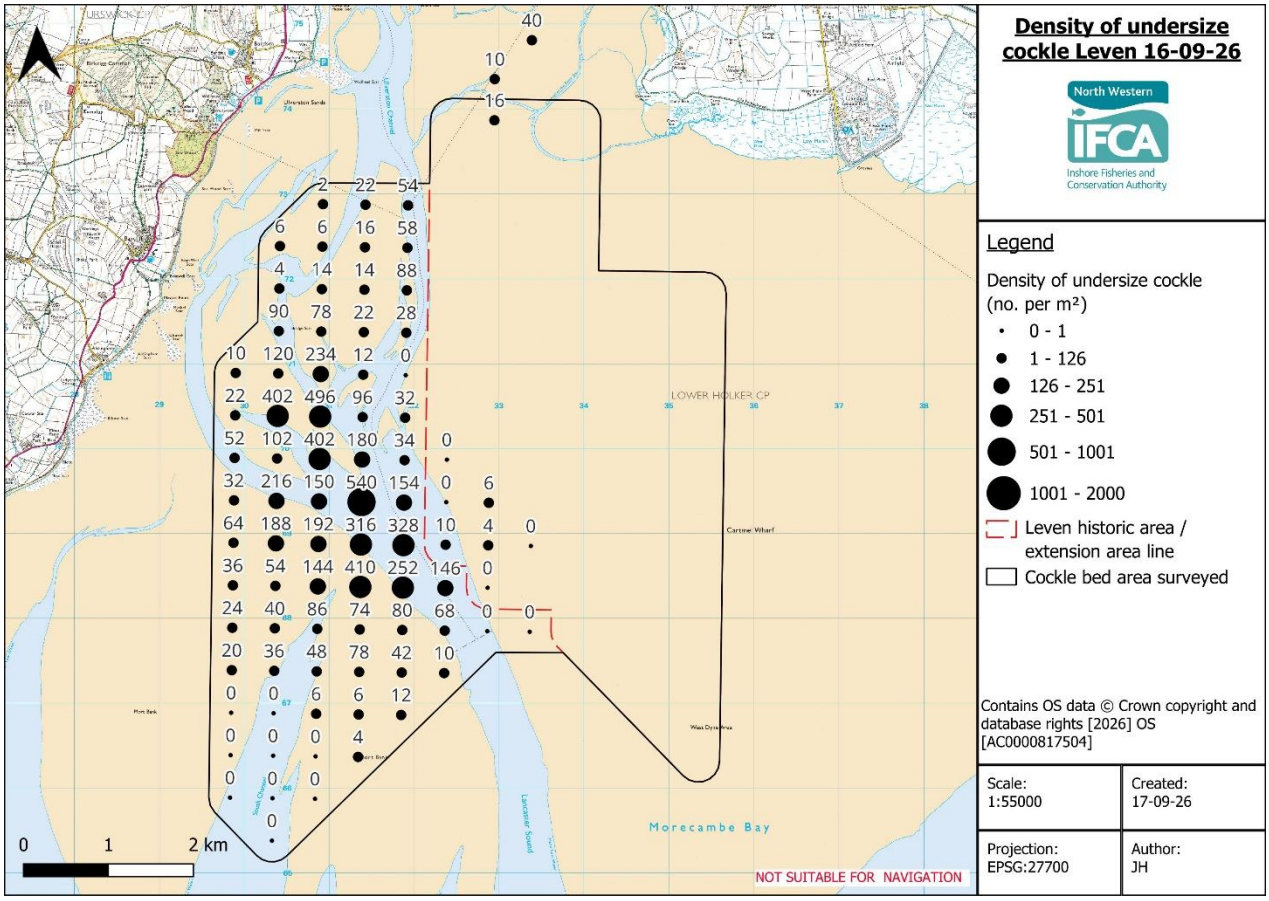


Figure 3. Density of undersize cockle per m² Leven September 2026

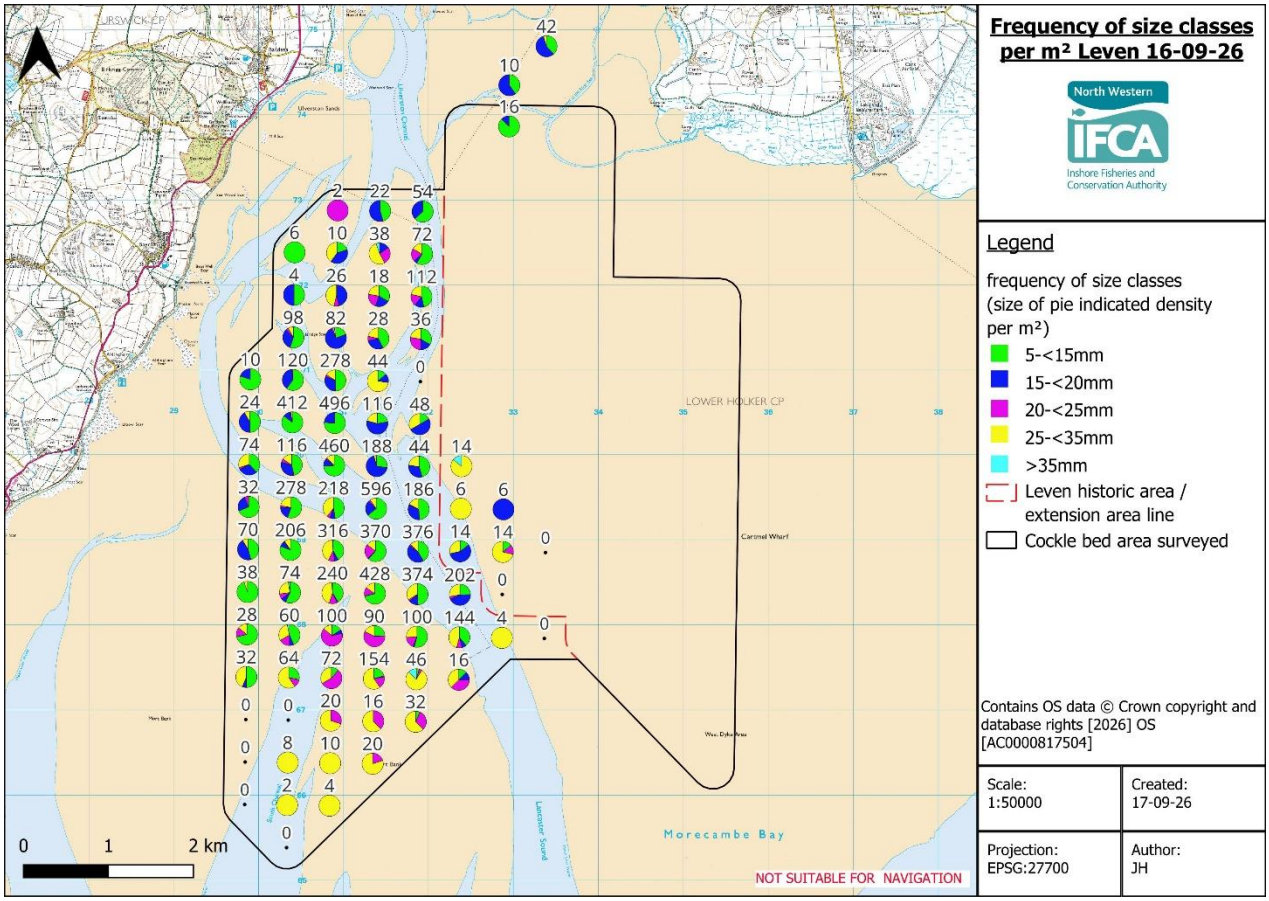


Figure 4. Frequency of size classes of cockle per m² Leven September 2026

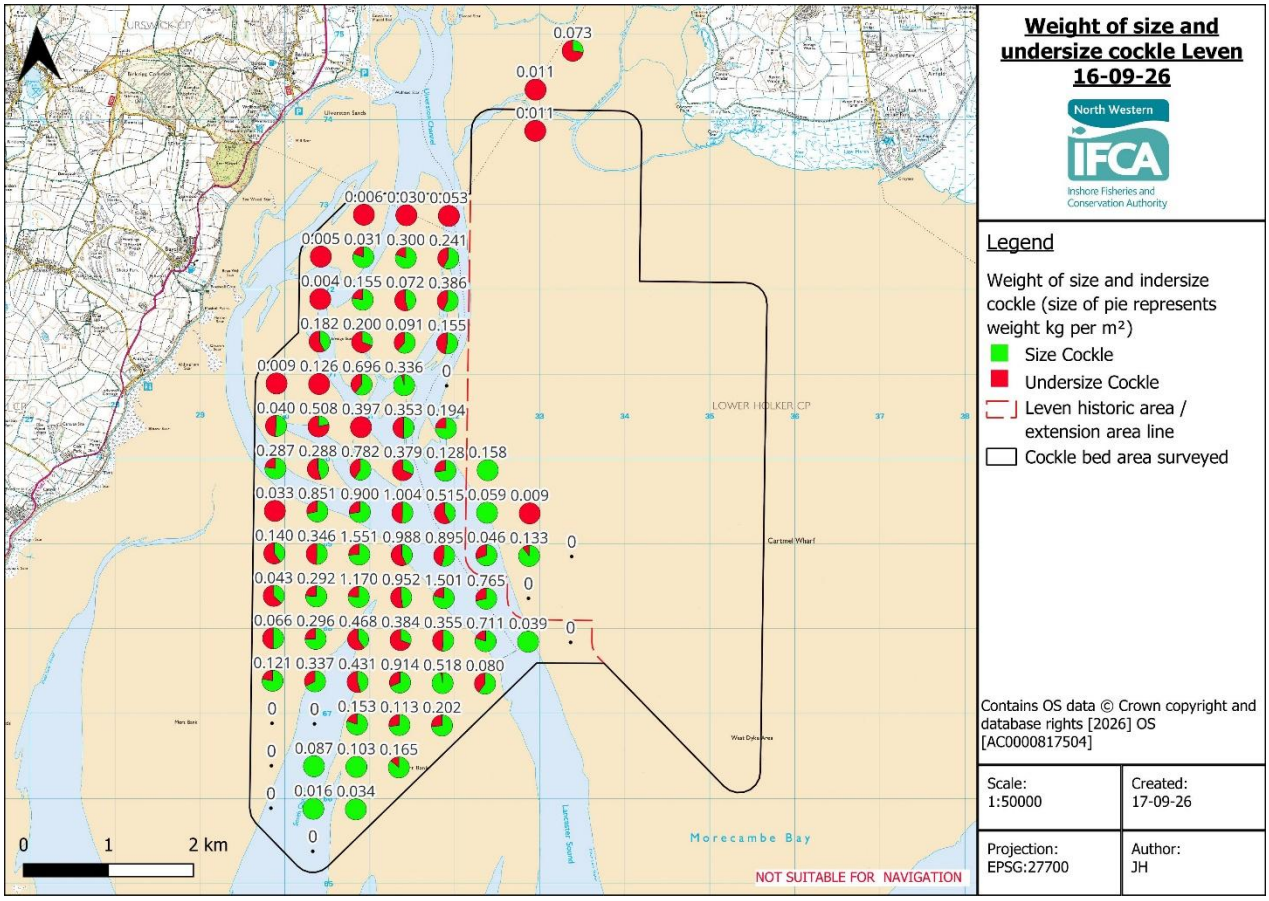


Figure 5. Weight of size and undersize cockle kg/m² at Leven September 2026