

**NWIFCA Technical, Science and Byelaw
Committee**

4th of August 2026: 10:00 a.m.

Report no.

1

SURVEY AND INSPECTION REPORT
5TH OF MAY – 21ST OF JULY 2026

Purpose:

- a) To report on the results of the mussel surveys and inspections in the last quarter.
- b) To report on the results of the July 2026 District cockle surveys and inspections
- c) To report on the additional surveys undertaken across the District including clam, shrimp and netting surveys.

Recommendation: Approve the following:

- a) Receive the report and related survey and inspection notes
- b) All District cockle beds, including those in Morecambe Bay, Ribble Estuary and Leasowe, remain closed for the rest of the closed season, and from September 1st 2026 under paragraph 15 of Byelaw 3.

EXECUTIVE SUMMARY

Between May and July 2026, NWIFCA officers completed mussel inspections and cockle stock surveys across the District to assess whether fisheries could be opened for the 2026/27 season. Survey results were assessed against the NWIFCA Cockle Fisheries Management Plan (CFMP) thresholds and supporting ecological considerations.

KEY FINDINGS

1. MUSSELS

- There are currently no mussel beds suitable for seed dredging at this time.
- Little seed settlement has been observed across the District, and officers are not anticipating any further changes.
- Falklands is the only outstanding bed requiring survey, and will be surveyed in August.

2. COCKLES

- Morecambe Bay total biomass remains above the CFMP minimum threshold.
- However, biomass of size cockles has declined by almost 50% since 2025 and is below the minimum opening threshold.
- Ribble (Penfold) and Leasowe also remain well below their respective opening thresholds.
- Juvenile cockle biomass has increased in several areas, providing potential recruitment for future fisheries.

Key information from the summer 2026 survey results:

Table 1. Summary of cockle biomass estimates and whether the 2026 Cockle Fisheries Management Plan opening thresholds have been met.

Cockle area	Cockle beds	Total biomass	Size biomass	Threshold met?	Recommendation
Morecambe	All	Yes	No	No	Closed – size cockle biomass does not exceed the agreed CFMP thresholds
Ribble Estuary	Penfold	No	No	No	Closed – cockle biomass does not exceed the agreed CFMP thresholds
Wirral	Leasowe	No	No	No	Closed – cockle biomass does not exceed the agreed CFMP thresholds

Table 2. Change in estimated size-cockle biomass on Morecambe Bay cockle beds between 2025 and 2026.

Cockle bed	2025 biomass (t)	2026 Biomass (t)	Change
Aldingham & Newbiggin	1,432	1,189	↓17%
Leven	470	482	↑3%
Flookburgh	2,609	1,064	↓59%
Pilling	3,123	1,091	↓65%
Middleton	589	378	↓36%
Warton	Not surveyed	123	na
Morecambe Bay total	8,243	4,327	↓48%

MAIN REPORT

BACKGROUND

Every year NWIFCA officers undertake extensive surveys and inspections of the cockle and mussel beds across the NWIFCA District. The aim of the surveys is to conduct stock assessments on each bed. The aim of inspections is to gather information in areas that either; a) do not have enough stock to warrant a survey, and/or b) conditions of the bed preclude surveying – for example, large channels or short exposure times which limit the time officers can safely access. Inspections may also take place to see if a full stock assessment is needed.

Mussel bed surveys and inspections

Large, accessible mussel beds that are stable (large areas are not frequently washed away) are typically surveyed by the Dutch Wand method. This method allows officers to calculate an overall biomass of stock on the bed, identify the proportion of the population that is size, and map a perimeter. Beds that are typically surveyed by Dutch Wand include: Foulney, Low Bottom, and Walney Channel. Mussel beds which are exposed for short amounts of time or are typically fished for seed mussel and are therefore liable to large changes over short periods are inspected visually, with reports presenting pictures and a description of the stock. Beds that are typically inspected using this approach include: Fleetwood, South America, Falklands, and Heysham.

Mussel inspection methodology overview

Inspections of mussel beds are undertaken by officers who will walk the perimeter of the mussel bed with GPS to map the location and extent. Officers will then access the middle of the bed and as much as can reasonably be accessed, taking notes on the size, coverage, presence of any important features (presence of *Sabellaria*, exposed cobble and boulder substrate, depth of mud, indications of scour, looseness of mussel), and mussel size composition. Full inspection criteria are detailed in the agreed in Agenda Item 10 at the February 6th 2024 TSB meeting (<https://www.nw-ifca.gov.uk/app/uploads/Agenda-Item-10-Seed-mussel-definition-of-ephemerality-TSB-February-2024.pdf>). Typically, these surveys are limited by tides and can only be conducted on spring tides. Inspections are undertaken to assess the suitability of a bed for either a seed or size fishery.

Cockle bed surveys

The purpose of cockle surveying is to establish data regarding the abundance, density and location of cockle stocks to inform fisheries management. Most cockle beds in the district are surveyed using the methodology outlined below.

Cockle survey methodology overview

Cockle surveys are undertaken by splitting each bed extent into a grid of sample points spaced 250-500m apart. Typically, each bed has between 40 and 150 sample points depending on its size. Each year, officers survey a minimum of approximately 750 sample points across the main beds from Morecambe Bay, the Ribble Estuary and Leasowe.

Sample locations are mapped on a GPS to ensure the same locations are surveyed each year. Officers access each sample location by quad, jumbo the sand to fluidise the sediment to cause cockles to rise to the surface and lay down a 0.5m² quadrat. Officers pick and rake the cockles within the quadrat and collect them for analysis in the lab. In the lab, cockles are separated into size cohorts (0.1-<5mm, 5-

<15mm, 15-<20mm, 20-<25mm, 25-<35mm, +35mm) and record the number in each. A total of 200 cockles (100 undersize, 100 size) is taken from the bed as a whole, for analysis of weight and length. From this data, the overall proportion of size and undersize and total stock biomass is estimated.

1. MUSSELS

Between May 5th and July 21st, NWIFCA science officers carried out eight mussel inspections across NWIFCA District. Full inspection reports are provided in Annex 1 of this report. The location and extent of the beds inspected are provided in figures below.

Please note West Kirby and Thurstaston mussel beds will be surveyed after the August 4th meeting date. Therefore, an update on these beds will be provided at the following TSB in November.

Results of the Foulney, Walney Channel, and Low Bottom Dutch Wand biomass surveys from earlier in the year (March-May) are also included here as they were omitted from the previous TSB in May.

Table 1. Mussel survey and inspections this quarter.

Survey Type	No. Sites Surveyed	Sites surveyed	Number of Survey Days	Survey Dates
Mussel DW surveys	3	Foulney x 2 Walney Channel Low Bottom	4	Mar–Jun 2026
Mussel inspections	7	Duddon x 3 Bare ayre x 3 * South America Heysham x 2 Fleetwood x 2 Crookscar Wyre end	13	Mar–Jul 2026

*Undertaken by drone, no survey notes currently available.

a) Morecambe Bay Seed mussel fishery

Mussel beds are assessed each year to see if they can be opened as hand gathered or seed dredge fisheries. Typically, these beds are located within Morecambe Bay. The conditions which we look for to allow a seed fishery to take place are:

- loose mussel;
- a single size class of seed (<1yr old) of dense settlement (not mixed);
- a large amount of mussel mud underneath with little exposed cobble/boulder substrate; and
- a high probability of washing away (evidence of scour or loose mussel and historical trends).

The criteria that should be met in order for a fishery to be considered for opening are detailed in the definition of ‘ephemerality’ and the ‘process for determining ephemerality’ agreed at the February 6th 2024 TSB meeting (<https://www.nw-ifca.gov.uk/app/uploads/Agenda-Item-10-Seed-mussel-definition-of-ephemerality-TSB-February-2024.pdf>). This information is gathered through inspections and presented to the Authority.

This year, there has been little seed settlement seen in the main areas inspected.

1.1 Morecambe Bay mussel beds overview

The location and extent of mussel beds surveyed in Morecambe Bay from March to July 2026 is provided in Figure 1.1. An overview of the status of the bed is provided in the following section. Full inspection reports with images are provided in Annex 1.

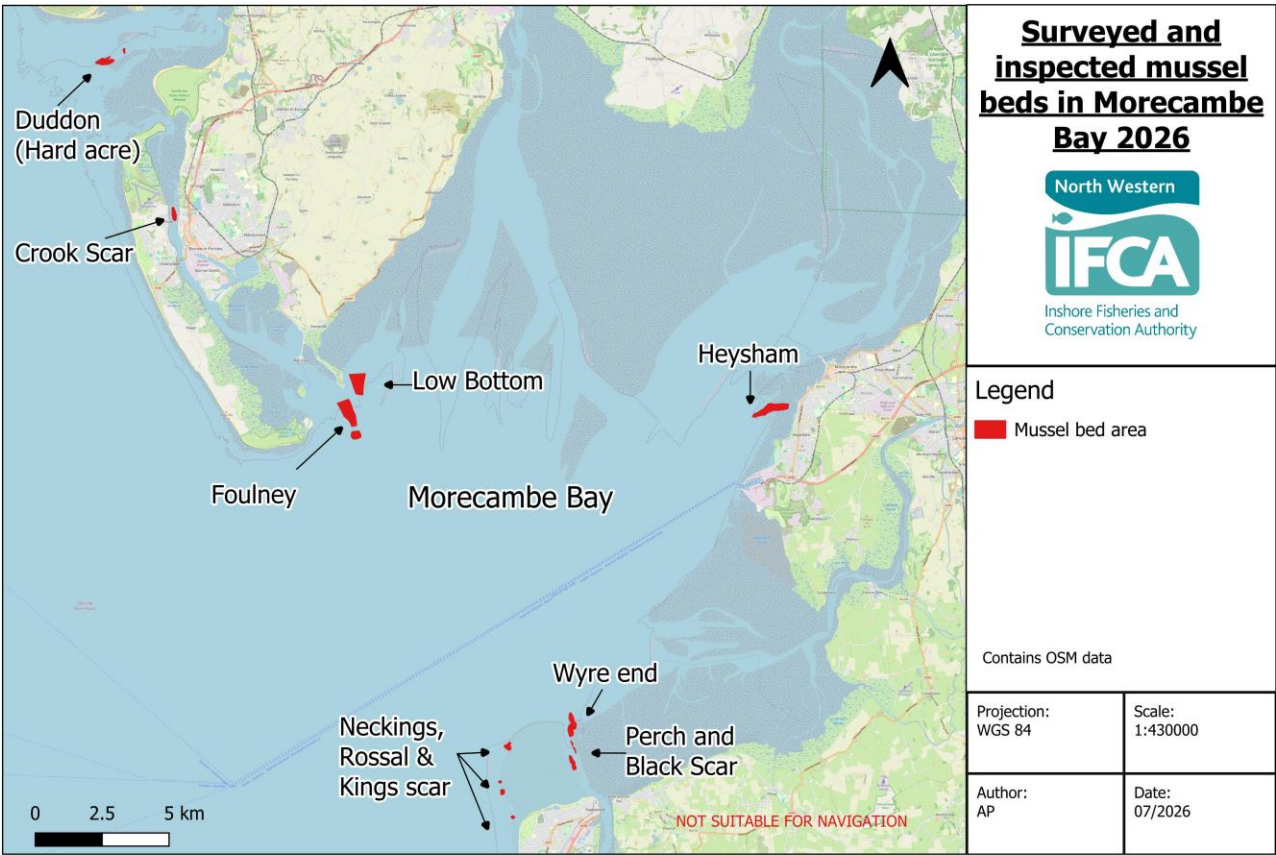


Figure 1.1 Surveyed and inspected mussel beds in Morecambe Bay from March to July 2026.

1) Duddon

The mussel bed at Hard Acre in the Duddon was surveyed three times between May and July 2026. The mussel bed is patchy in places, with some dense patches of seed mussel, mixed with exposed cobble, and larger mussel. The area sits within a river channel and as of the most recent survey in July, is close to reaching size. The area is currently unclassified, and the process for classification is being initiated by the local authority’s environmental health team.

For full inspection details see Annex 1. The most recent survey was undertaken 15th July, the survey note is not currently available.

2) Bare Ayre

The mussel bed at Bare Ayre has been inspected predominantly by drone flight this year. This has formed a thin strip of mussel that runs along the channel has made size. There is also seed mussel that spreads from here to Hest Bank.

No inspection notes are currently available.

3) Heysham

Heysham mussel bed was most recently inspected on June 18th 2025. At the east of the bed there was a low coverage (10-20%) of seed mussel on hard mud. There were large areas of dead shell and exposed cobble with a small number of live undersize mussel. A dense settlement of seed mussel was observed west of Conger Rock, extending towards Dallam Dyke and along the North edge of the skear. Live *Sabellaria alveolata* reef was present along the North and South of the skear.

For full inspection details see Annex 1.

4) Fleetwood (including Perch Scar and Black Scar)

At the time of the most recent inspection on June 17th, Perch Scar and Black Scar had little seed mussel. Perch Scar was still covered in significant amounts of mud, while Black Scar had scoured, but seed was sparse and much of the exposed cobble was covered in algae.

Rossall, Neckings and Kings are not typically commercial beds and are surveyed to monitor additional food availability for birds – these beds had relatively high levels of mussel on them, which was uniform in size and under mud.

For full inspection details see Annex 1.

4) South America

As of March, all areas that previously held mussel have sanded over with no mussel or exposed hard substrate present.

5) Wyre End

As of June 19th, the main area on Wyre End had received a 2026 settlement of seed. Seed varied in density across the main skear. An inspection through the middle of the bed revealed large areas of exposed cobble and significant hair algae growth.

For full inspection details see Annex 1.

6) Crook Scar (Barrow)

As of June 2nd, the northern patch had a bed area of 5ha and the mussel was uniform in size across the whole bed. In areas mussel coverage was 100%, with very thick mussel mud present across the whole bed. The southern patch has noticeably thinned since the previous inspection due to fishing activity. The mussel has remained predominantly size, as observed in the northern bed, but large barnacled mussel was present along with dead shell and exposed cobble.

For full inspection details see Annex 1.

7) Falklands

Officers attempted to access Falklands on July 15th, but were unsuccessful due to difficulties in locating the exact area of the bed. A further inspection is planned for August.

8) Foulney, Low Bottom and Walney Channel

The three main mussel skears in north Morecambe Bay were surveyed earlier this year in April. The results of these surveys are included here as they were not provided in the previous report.

In summary, Foulney and Walney Channel have reduced in total mussel biomass since last spring, although Low Bottom seems to have remained relatively stable. There appears to be a gradual decrease in total biomass over the past six years. Large areas of Foulney size mussel have been washed away since the previous survey, leaving bare cobble. Walney Channel has decreased below the threshold deemed accurate to survey. At the time of survey, there was little evidence of a new seed settlement. Officers note that this year, the southern parts of the Bay appear to have received seed settlements early on, which have not occurred in the north. There is, as yet, no clear explanation for this.

Table 1. Biomass (tonnes) of mussel on each mussel bed surveyed via Dutch Wand method from 2017-2026.

	Year									
Location	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Foulney	4611	na	4532	6771	8251	5256	6067	4196	2885	2575
Walney Channel	na	4822	4191	1623	3081	1139	648	725	447	na
Low bottom	na	na	5097	na	na	1903	2158	2458	2054	1607

The data is also shown in a bar graph to highlight the decrease in mussel biomass over the past 6 years.

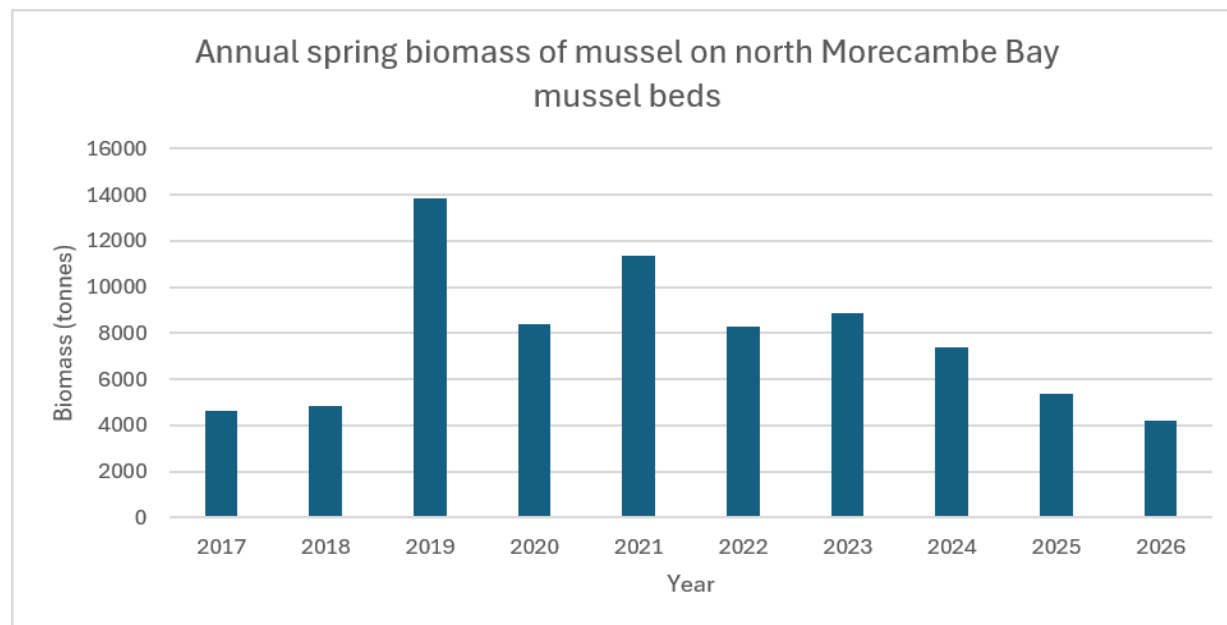


Figure 1.2. Annual spring biomass of mussel in tonnes on north Morecambe Bay mussel beds (inclusive of Foulney, Walney Channel, and Low Bottom).

Full Dutch Wand survey results are available in Annex 1 to this report.

NWIFCA District mussel fishery recommendations:

NWIFCA do not propose any seed mussel fisheries (either hand or dredge) in the District at this time.

2. COCKLES

Between June 23rd and July 15th, NWIFCA science officers carried out eight cockle surveys, and three inspections across NWIFCA District. Officers conducted their annual inspection of Warton cockle bed on July 3rd and found there to be sufficient cockle to warrant the first full survey since 2021. Full survey reports are provided in Annex 2 of this report. The location and extent of the beds inspected are provided in figures in the relevant section.

Table 2.1 Cockle survey and inspections this quarter.

Surveys and inspections this quarter	Date
Cockles	
Morecambe Bay (Figure 1):	
Flookburgh	08-07-26 & 09-07-26
Pilling	07-07-26
Newbiggin and Aldingham	29-06-26
Leven	09-07-26
Middleton	30-06-26
Warton	16-07-26
Ribble (Figure 2):	
Southport	23-06-26
Lytham (inspection)	03-06-26
Wirral Coast (Figure 3):	
Leasowe	03-07-26

When analysing results, officers look to answer the following questions which may assist in determining the stock levels, stock trends and HRA requirements.

- 1) What is the **biomass of size and undersize cockle** on individual beds and across the Bay as a whole?;
- 2) What is the **density of size and undersize cockle** on individual beds and across the Bay?; and
- 3) What is the **composition of size classes** on individual beds and across the Bay as a whole?

Additional considerations:

As has been previously discussed, there are several additional considerations when proposing the opening or closing of a fishery, which as yet do not have established parameters:

- 1) Bird food requirements for SPA designated species
- 2) Minimum cockle density spawning requirements
- 3) Location of cockle brood stock for re-seeding
- 4) Criteria for selecting which beds should open in the event of low stock numbers.

Undersize cockle is typically important for contributing to the following years fisheries, and as a food source for knot. Size cockle is important for oystercatcher, potentially contributing to spawning stock, and for the main fishery.

At the TSB meeting on May 5th, the Authority agreed on the first draft of the NWIFCA CFMP, which introduced minimum total cockle biomass for Morecambe Bay from which to recommend the opening or closing of a fishery [NWIFCA cockle fisheries management plan April 2026.pdf](#) (Figure 2.1).

However, there are outstanding questions on the requirements of birds for food and the location of potential sources of cockle brood stock for Morecambe Bay. Furthermore, cockle survivability of juvenile cockle is highly reliant on environmental factors.

Table 21: Minimum cockle biomass thresholds required for a fishery to open for each of the district's main sites, where commercial cockle beds exist..

Threshold	Morecambe Bay	Leasowe	Ribble Estuary ⁶	Solway Firth ⁷
1. Minimum total biomass needed to be left on the site (t)	10,000	800	1,500	TBC
2. Minimum biomass of sized cockle to be left on the site (t)	4,000	800	900	TBC
3. Minimum TAC (t)	400	300	300	TBC
4. Minimum buffer (% of TAC)	10%	10%	10%	TBC
5. Minimum biomass of sized cockle required for a fishery to open (t)	4,440	1,130	1,230	TBC

Figure 2.1. Minimum cockle biomass thresholds for opening fisheries as agreed in the NWIFCA CFMP.

2.1 Morecambe Bay June-July 2026 Cockle Results

Morecambe Bay cockle surveys were conducted between June 29th and July 16th.

Morecambe Bay is considered in its entirety due to the overarching SPA and SAC designation of the site; however, individual beds may be **opened if they meet the HRA requirements for the site as a whole.**

In May 2026, TSB agreed to the NWIFCA CFMP which set cockle biomass thresholds for recommending sites open. The minimum total biomass threshold for Morecambe Bay to be considered open is **10,400 tonnes** (minimum biomass needed to be left on site + Minimum TAC + Minimum buffer). It also stipulated a minimum biomass of size cockle required for the site to open, for Morecambe Bay; this is **4,440 tonnes of size cockle.**

Survey reports for all Morecambe Bay cockle beds were finalised on July 17th and are provided in Annex 2 of this report. Please note, as of April 2024, officers have standardised the survey note figures. The size of the pie charts corresponds to set values, making them comparable between beds and future surveys.

Officers collected and analysed 15,118 cockles from 453 sample points across approximately 7,753ha of Morecambe Bay. Figure 2.1.1 shows the location and extent of sample points for the respective beds. The additional points added to Flookburgh and Newbiggin to incorporate areas identified by industry in the 2024/25 fishing season, and capture the full extent of the beds were retained for 2026. Warton was newly surveyed this year.

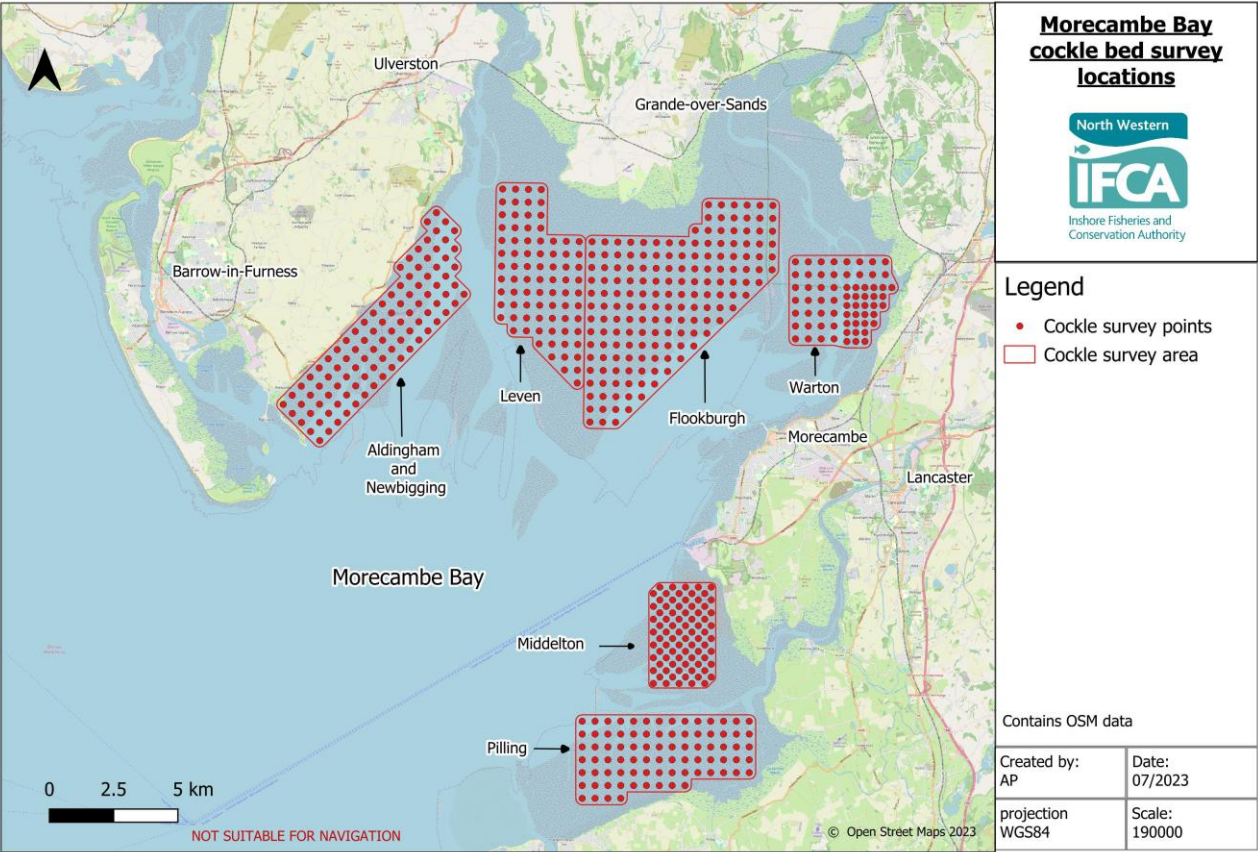


Figure 2.1.1 The location of sample points across Morecambe Bay cockle beds 2026

A summary of the June/July survey results is provided in table 2.1.1.

Table 2.1.1. Biomass calculations of size, undersize and combined biomass of cockles on Morecambe Bay cockle beds June-July 2026. *figures represent the max cockle biomass

Cockle bed	Date surveyed	Area of cockle present (ha)	Size cockle (tonnes)	Undersize cockle (tonnes)	Total cockle biomass (tonnes)
Aldingham and Newbiggin	June 29 th 2026	1,050	1,189	883	2,072
Leven	July 9 th 2026	1,000	482	692	1,174

Flookburgh	July 8 th & 9 th 2026	2,600	1,064	2,348	3,412
Warton Sands	July 16 th 2026	906	123	2,348	2,064
Middleton	June 30 th 2026	747	378	897	1,275
Pilling	July 7 th 2026	1,450	1,091	621	1,712

a. Biomass of size and undersize cockle across Morecambe Bay

Table 2.1.2 provides yearly maximum cockle biomass figures from summer 2017 to 2026. All surveys presented here were undertaken between June/July each year and are therefore comparable.

In July this year, there is an estimated 11,709 tonnes of cockle across 7,753ha surveyed in Morecambe Bay. Of this, 4,327 tonnes are size cockle, and 7,382 tonnes are undersize cockle. This is a significant decrease in size cockle from 2026, where the total reached 8,243.

Table 2.1.2. The yearly biomass of figures for size, undersize and total biomass of cockles on Morecambe Bay cockle beds from Jun/July 2017 to 2026. *figures represent the max cockle biomass

Year	All surveyed Morecambe Bay cockle beds				Beds opened
	Area (ha)	Size cockle (tonne)	Undersize cockle (tonne)	Total cockle (tonne)	
2017	5,177	6,980	4,230	11,210	Flookburgh Leven Pilling
2018	6,088	7,000	12,140	19,140	Flookburgh Leven Pilling Newbiggin
2019	6,705	4,635	12,900	17,535	Flookburgh Leven Pilling Newbiggin
2020	8,085	12,580	3,975	16,555	Flookburgh Leven Pilling Newbiggin
2021	7,089	6,450	955	7,415	Pilling
2022	6,582	3,950	1,990	5,940	None
2023	7,730	3,035	12,975	16,010	None
2024	7,247	7,308	5,586	12,894	Flookburgh Leven Pilling
2025	7,598	8,243	3,057	11,300	Flookburgh Leven Pilling Newbiggin
2026	7,753	4,327	7,382	11,709	TBC

Figure 2.1.2 shows the data from table 2.1.2 in graphical form to demonstrate the trends in cockle biomass across Morecambe Bay since 2017 (a and b), and the composition of this year's size and undersize cockle (c).

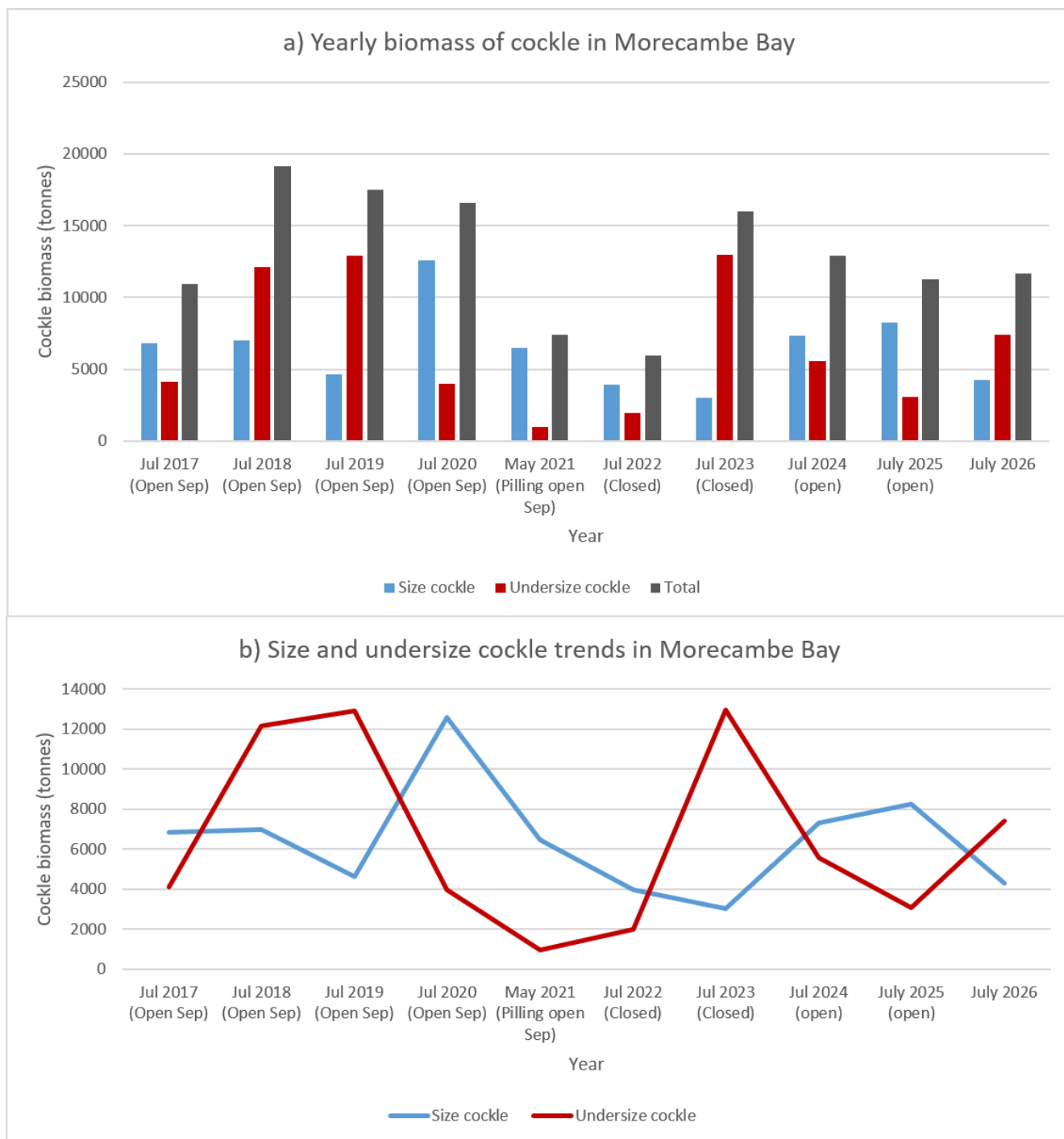


Figure 2.1.2. Summary of Morecambe Bay cockle survey results from July 2017-2026. a) shows the yearly biomass of size, undersize and total cockle in Morecambe Bay from 2017 to 2026, and b) the relational trend in size and undersize cockle from 2017 to 2026.

For the past two years (2025 and 2026) the total biomass of cockle has remained relatively stable across Morecambe Bay from approximately 11,300 tonnes in 2025, to 11,709 tonnes in 2026 (Figure 2.1.2 a). This exceeds the 10,440 tonnes minimum *total* (size + undersize) biomass threshold required for Morecambe Bay to be considered for a fishery opening (See pg. 66 of NWIFCA CFMP).

The total biomass of size cockle, however, has decreased by almost half, from 8,243 tonnes in 2025, to 4,327 tonnes in 2026 (Figure 2.1.2.a).

The biomass of size cockle does not exceed the 4,440 tonnes minimum biomass threshold required to recommend opening a fishery in Morecambe Bay (See pg. 66 of NWIFCA CFMP).

Figure 2.1.2.b indicates the trend in the biomass of size (blue) and undersize (orange) cockle for Morecambe Bay as a whole since 2017. High levels of undersize cockle typically preceded an increase in the biomass of size cockle, one to two years later. This year we are again seeing a decrease in size cockle and upswing in undersize.

b. Individual beds

An analysis of survey data for each of the main cockle beds in Morecambe Bay is presented below.

Survey results for each cockle bed are provided in Annex 2. It is also important to consider all information provided when building a recommendation for a fishery, and not any one piece in isolation. For example, understanding the composition of size and undersize on a bed, distribution of cockle, and total overall biomass can help with determining an appropriate recommendation.

Table 2.1.3. Biomass of size cockle for each Morecambe Bay bed from 2017 to 2026

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Aldingham and Newbiggin		900	820	3200	1900	1050	535	846	1432	1189
Leven	2202	1200	500	3100	700	500	400	573	470	482
Flookburgh	4074	2700	1700	3300	1000	850	825	3629	2609	1064
Pilling	571	2200	1200	2400	2300	1200	800	1742	3143	1091
Warton	na	na	65	280	110	na	na	na	na	123
Middleton	na	na	350	300	450	350	475	518	589	378
Morecambe Bay all beds	6847	7000	4635	12580	6460	3950	3035	7308	8243	4327

The above data is also presented in figure 2.1.3 below.

c. Biomass of size and undersize cockle for individual beds

Figure 2.1.3 shows the biomass of size cockle for each surveyed Morecambe Bay cockle bed from 2017 to 2026, and which beds were opened for fishing that same year.

This year:

1. **Flookburgh:** has seen a >50% decrease in size cockle from 2,609 tonnes to 1,064 tonnes. Total biomass (size + undersize) remains consistent.
2. **Leven:** Overall biomass remains low, there has been minimal increase in size, but undersize biomass has more than doubled since 2025.
3. **Pilling:** has significantly decreased in both size and undersize. Size cockle has decreased >50% from 3,143 tonnes in 2025 to 1,091 tonnes in 2026.
4. **Newbiggin:** remained relatively stable in comparison to 2025.
5. **Leven and Middleton:** have remained consistently low, with only marginal changes.
6. **Warton:** This bed has not seen stock in the past seven years. Recent surveys have identified it has approximately 123 tonnes of size, and 1,941 tonnes of undersize cockle. Making it a potential 2027/28 season fishery.
7. Biomass of undersize is high this year, with some stock available to grow on for the following years fisheries.

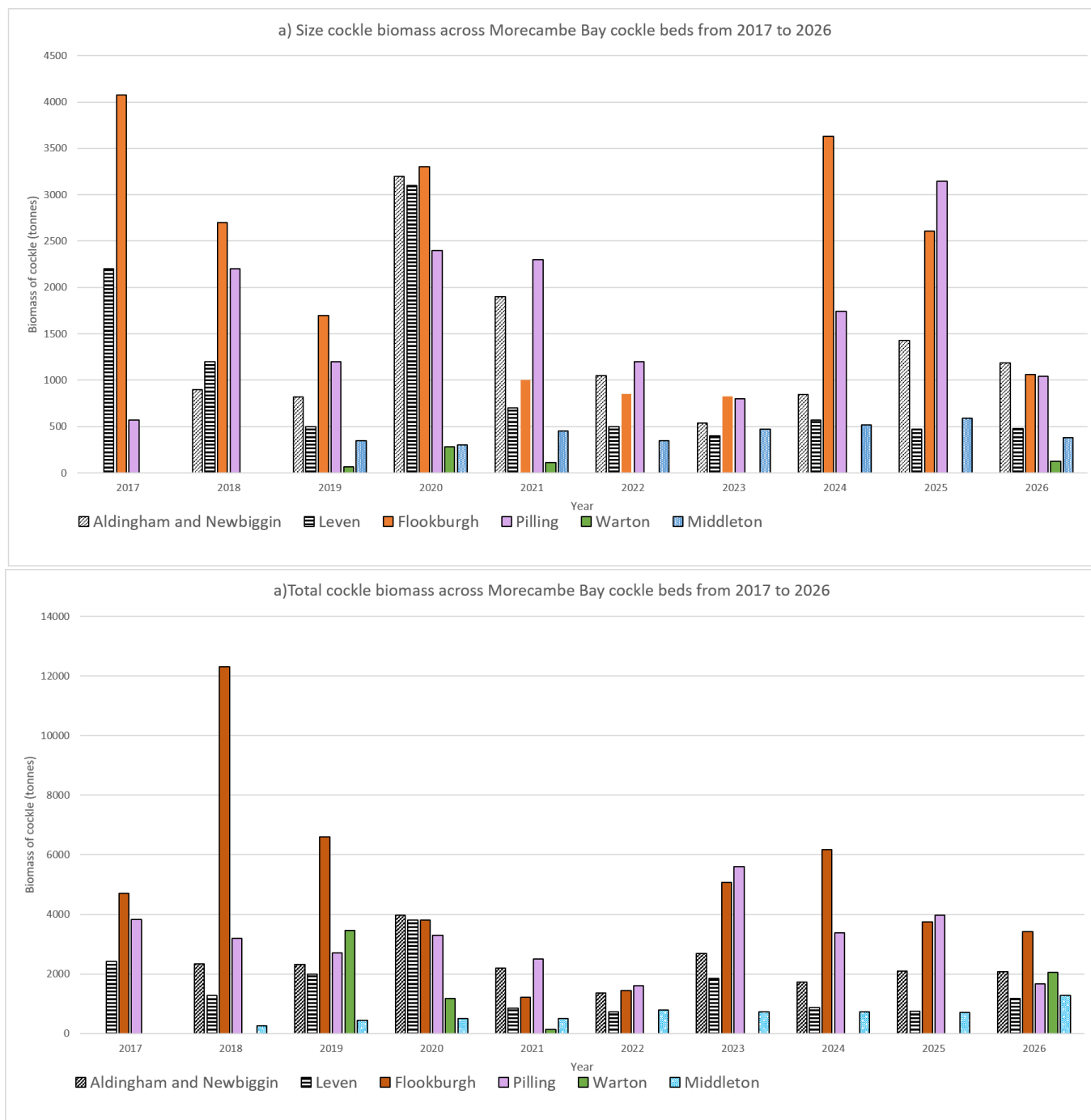


Figure 2.1.3 Biomass of cockles on the individual Morecambe Bay cockle beds from 2017 to 2026. a) biomass of size cockle per bed each year, and b) total biomass of cockle per bed each year.

d. Biomass of cockle size classes on each bed

Figure 2.1.4 shows the biomass of cockles in each size class (0-5 mm, 15-20mm, 20-25mm 25-35mm and 35+mm) for the main Morecambe Bay cockle beds in July 2026.

This year, all beds have had a decrease in the 25-35 size class which makes up the majority of size stock biomass. There is an increase in the overall volume of undersize cockle coming through on many beds, which may support a following year fishery.

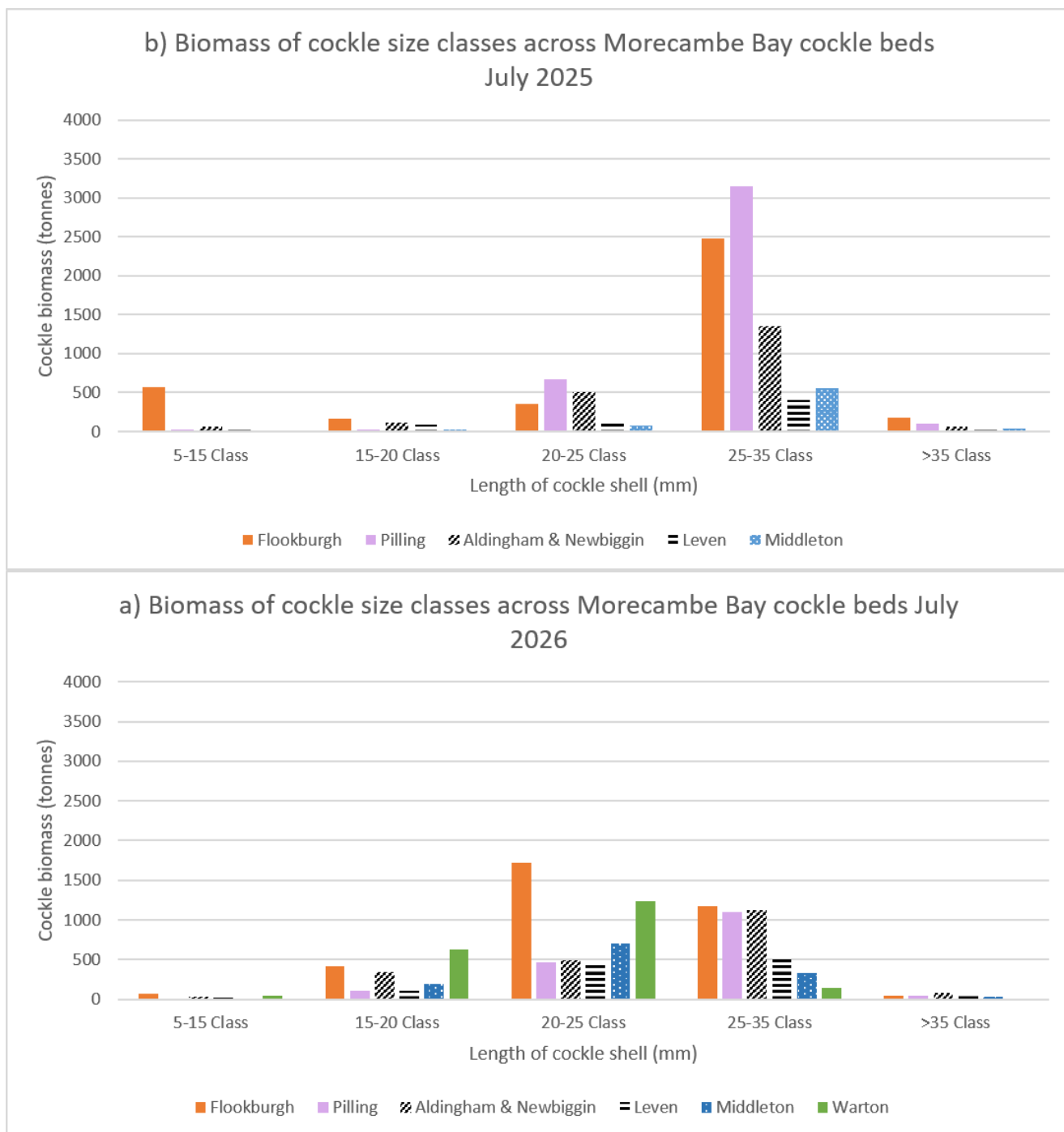


Figure 2.1.4. The biomass of different size classes of cockle for each of the Morecambe Bay cockle beds. 3.a demonstrates this for 2025, and figure 3.b for 2026 for comparison.

e. Composition of size classes on individual beds

The composition of size classes across a bed is important to consider as it has implications for fisheries management, and fishing highly mixed stock may have an impact on juvenile cockles' survivability.

Size composition and distribution figures for each bed are provided in Annex 2. This year, the main beds do not have highly mixed stock, and where size cockle is present, it is often not in high densities.

Summary:

The results of the 2026 Morecambe Bay cockle survey show:

1. The total biomass across Morecambe Bay remains consistent with the previous year
2. The total size biomass across Morecambe Bay has decreased by approximately half.
3. The total undersize biomass has more than doubled.
4. Few beds have enough size stock, in high densities, to support a fishery.

Development of recommendations

When developing recommendations, officers look at the following criteria:

- 1) The total cockle biomass (size and undersize) across Morecambe Bay
- 2) The biomass of size biomass across Morecambe Bay and on individual beds
- 3) The presence of undersize cockle
- 4) The minimum thresholds as stipulated on page 66 of the NWIFCA CFMP, and Figure 2.1 in this document.

Morecambe Bay cockle fishery recommendations:

Officers recommend that none of the cockle beds in Morecambe Bay are opened this 2026/27 fishing season (see page 1 for recommendation)

This recommendation is based on the following reasons:

- 1. Minimum biomass of size cockle** – There is insufficient cockle biomass to support a fishery at this time.
- 2. There is little mussel biomass across much of Morecambe Bay this year**, to provide further feeding opportunities for birds (See section 1)
- 3. The biomass does not exceed the agreed threshold limits presented in the NWIFCA CFMP.**

2.2 Ribble cockle beds July 2026 results

Southport (Penfold)

The full survey report for the Southport cockle bed is provided in Annex 2 of this report. The location and extent of the Penfold cockle bed in the Ribble Estuary is provided in Figure 3.1 below.

This year officers inspected the bed on June 23rd.

Officers collected and analysed 270 cockles from 55 sample points out of 150, across 800ha of Penfold. Figure 2.2.1 shows the location and extent of sample points for Southport.

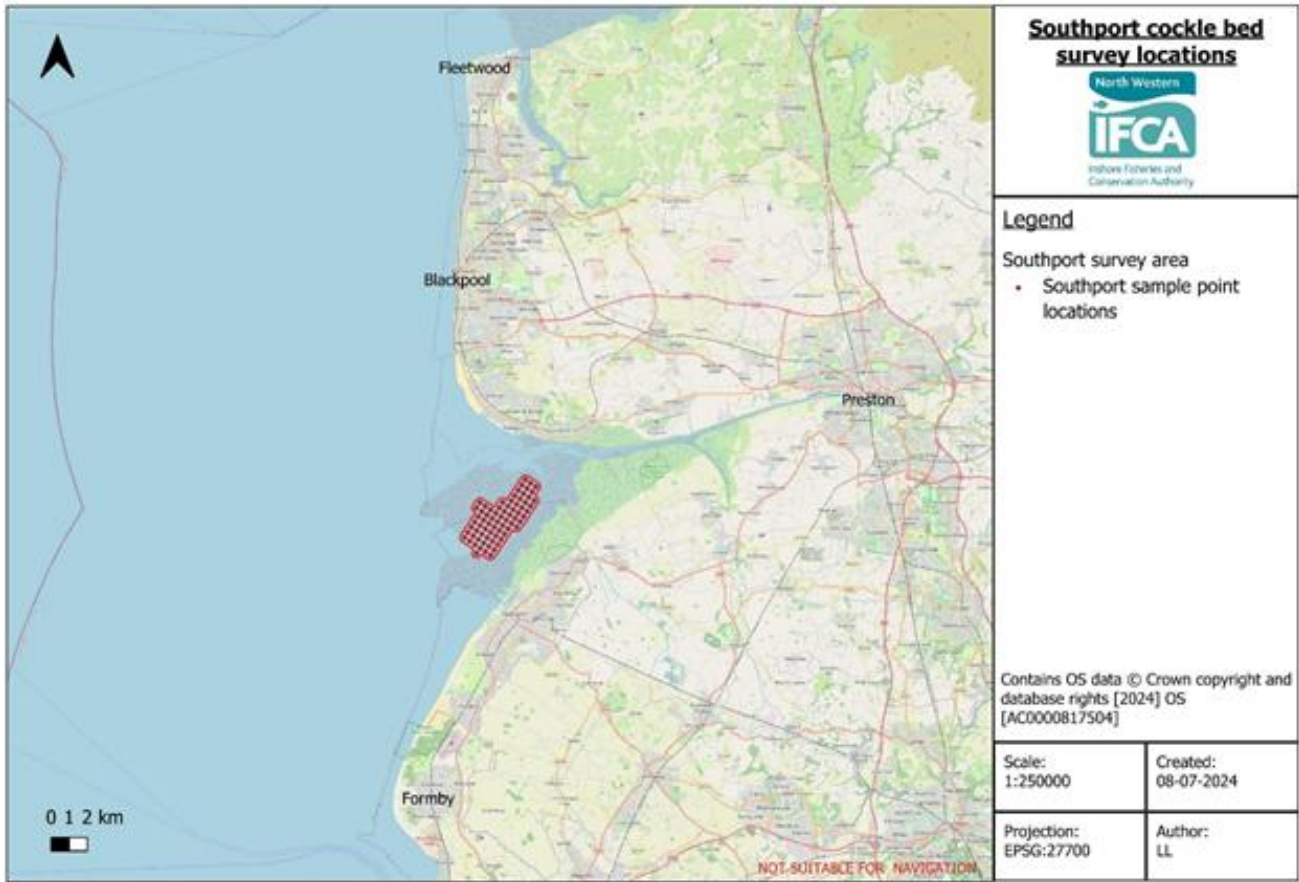


Figure 2.2.1. Surveyed cockle beds in the Ribble, June 2026.

a. Biomass of size and undersize cockle across Penfold

Table 2.2.1 provides yearly maximum cockle biomass figures from 2022 (date of earliest survey) to 2026. All surveys presented here were undertaken between June/July each year and are therefore comparable.

In June this year, there is an estimated 32 tonnes of size cockle and 178 tonnes of undersize over 294 hectares of Southport cockle bed.

Table 2.2.1. The biomass of size, undersize and total biomass of cockles on Penfold cockle bed from 2022 to 2026.
*figures represent the max cockle biomass

Year	Southport cockle bed				Bed recommended opened
	Area (ha)	Size cockle (tonne)	Undersize cockle (tonne)	Total cockle (tonne)	
2022	877	1,200	1,300	2,500	Yes
2023	637	800	120	920	No
2024	600	380	87	467	No
2025	355	113	24	137	No
2026	294	32	178	210	No

Figure 2.2.2 shows the data from Table 2.2.1 in graphical form to demonstrate the trends in cockle biomass across Penfold since 2022.

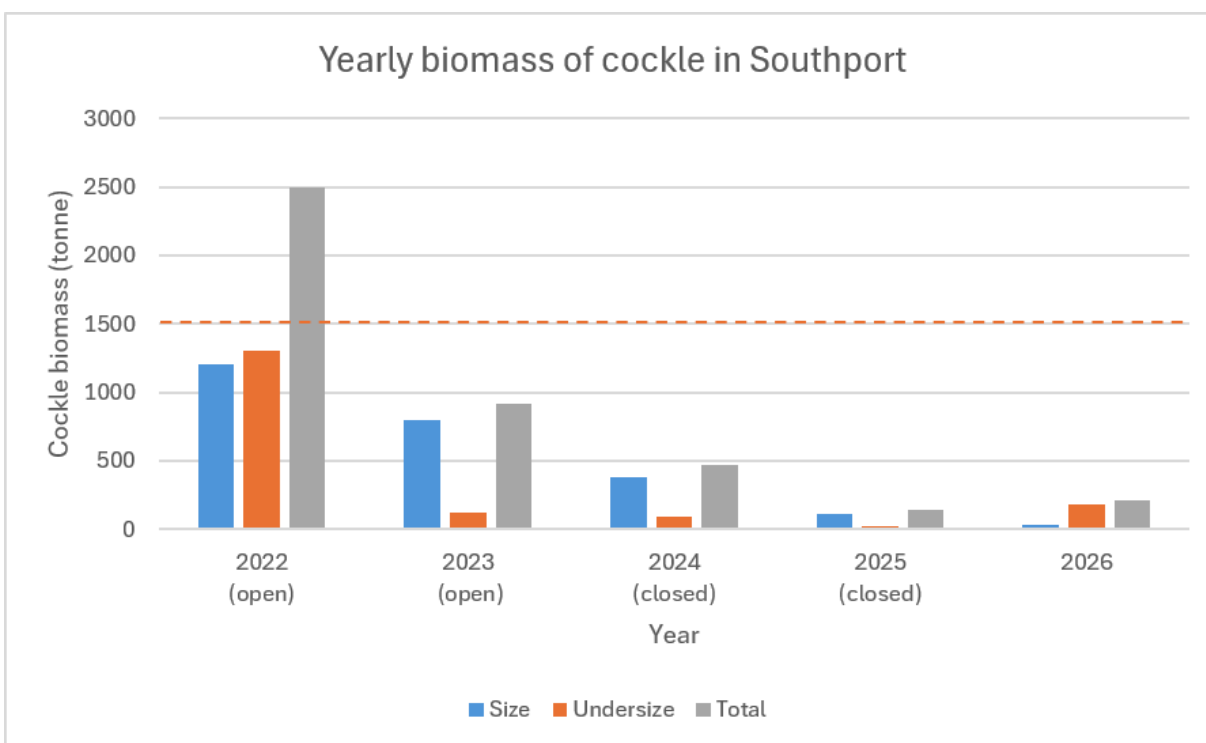


Figure 2.2.1. The yearly biomass of size, undersize and total cockle on Penfold cockle bed from 2022 to 2026. The orange line indicates the minimum total cockle biomass threshold required for a fishery to be recommended open (as agreed in the NWIFCA CFMP).

This year there has been a further decrease in the biomass of size cockle, with a marginal increase in undersize. Overall, the total biomass is still very low. The bed has continued to decline since 2022, and received no obvious spat settlement that has survived to contribute to a new population. In addition, the total area where cockle is present has also decreased, indicative of the bed decreasing in size.

b. The density of size and undersize cockle on Southport

There has been a continual decrease in the density of cockle across the bed. Average density of size cockle on Southport is 0.6 cockle per m². This is a significant decrease from 14 per m² in July 2023.

Average density of undersize cockle at 9.2 cockle per m² also remains low.

Less than 5mm cockle are not used in the undersize density or biomass figures due to the highly variable nature of survivability. This year, no spat was identified during the survey.

Summary

The results of the 2026 Ribble cockle survey show:

1. The biomass of size cockle has continued to decreased by approximately 50% each year since 2022;
2. The biomass of undersize cockle remains low;
3. The bed extent over which cockles are found has also decreased for the fourth year in a row;
4. The average density, and maximum density of size cockle has decreased.

Ribble cockle fishery recommendation:

Officers recommend that Penfold is not opened this 2026/27 fishing season (see page 1 for recommendation)

This recommendation is based on the following reasons:

1. **Minimum biomass of size cockle** – There is insufficient cockle biomass to support a fishery at this time.
2. **There is insufficient undersize biomass** – There is minimal size cockle biomass present to contribute to the following year's fishery.
3. **The biomass does not exceed the agreed threshold limits presented in the NWIFCA CFMP.**

2.3 Wirral coast cockle beds:

Leasowe

The location and extent of the Leasowe cockle bed on the Wirral Coast is provided in Figure 2.3.1. This year officers surveyed the bed on July 3rd. The full survey report is detailed in Annex 2.

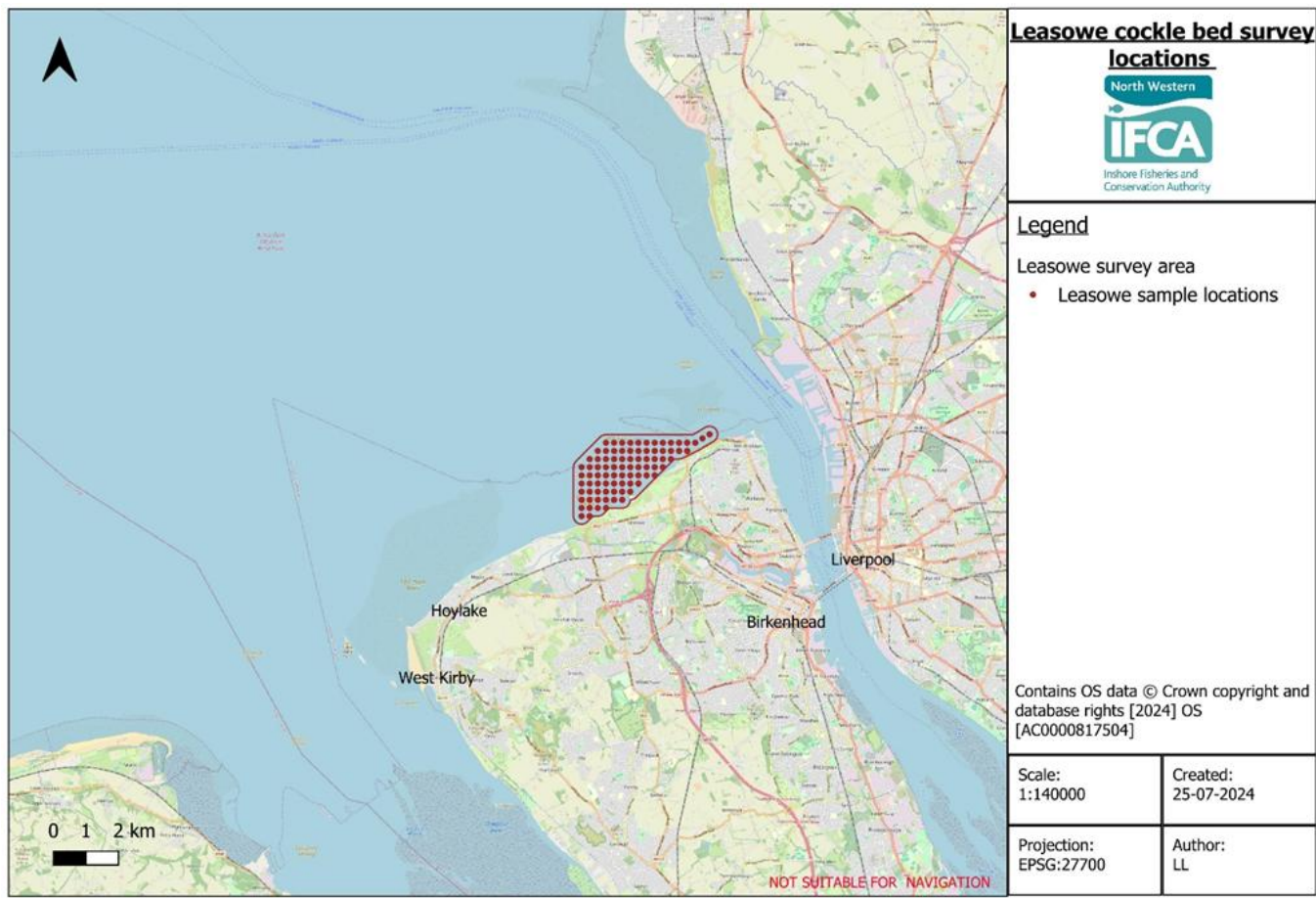


Figure 2.3.1. The location of surveyed points on the Leasowe cockle bed July 2026

a. Total biomass estimates

Estimates of undersize, size and total cockle biomass are provided in table 2.3.1 from 2017 to July 2026 for comparative purposes.

Table 2.3.1. The biomass of size, undersize and total biomass of cockles on Leasowe cockle bed from 2017 to 2026. *figures represent the max cockle biomass

Year	Leasowe cockle bed				Bed opened
	Area (ha)	Size cockle (tonne)	Undersize cockle (tonne)	Total cockle (tonne)	
2017	212.4	3,523.5	292.8	3,815.8	Open
2018	238	700	10	710	Closed
2019	220	1,200	500	1,700	Open
2020	199.5	607	20	627	Closed
2021	206	367	16.5	383.5	Closed
2022	225	120	100	220	Closed
2023	235	171	604	775	Closed
2024 (July)	213	799	751	1,550	Closed
2024 (September)	256	1,370	350	1,720	Open
2025 (July)	162.5	705	8	713	Closed
2026	194	313	123	436	Closed

Figure 2.3.2 shows the data from Table 2.3.1 in graphical form to demonstrate the trends in cockle biomass on Leasowe since 2017 (a and b).

The total biomass of cockle has decreased from approximately 1,720 tonnes in Sep 2024, to 436 tonnes in July 2026. The total biomass of size cockle has decreased to 436 tonnes (Table 2.3.1), **below the minimum size threshold of 1,130 tonnes required to open a fishery.**

Figure 2.3.2.b indicates the trend in the biomass of size (blue) and undersize (orange) cockle for Leasowe since 2017. This year, size cockle has decreased considerably, and undersize has increased but still remains low.

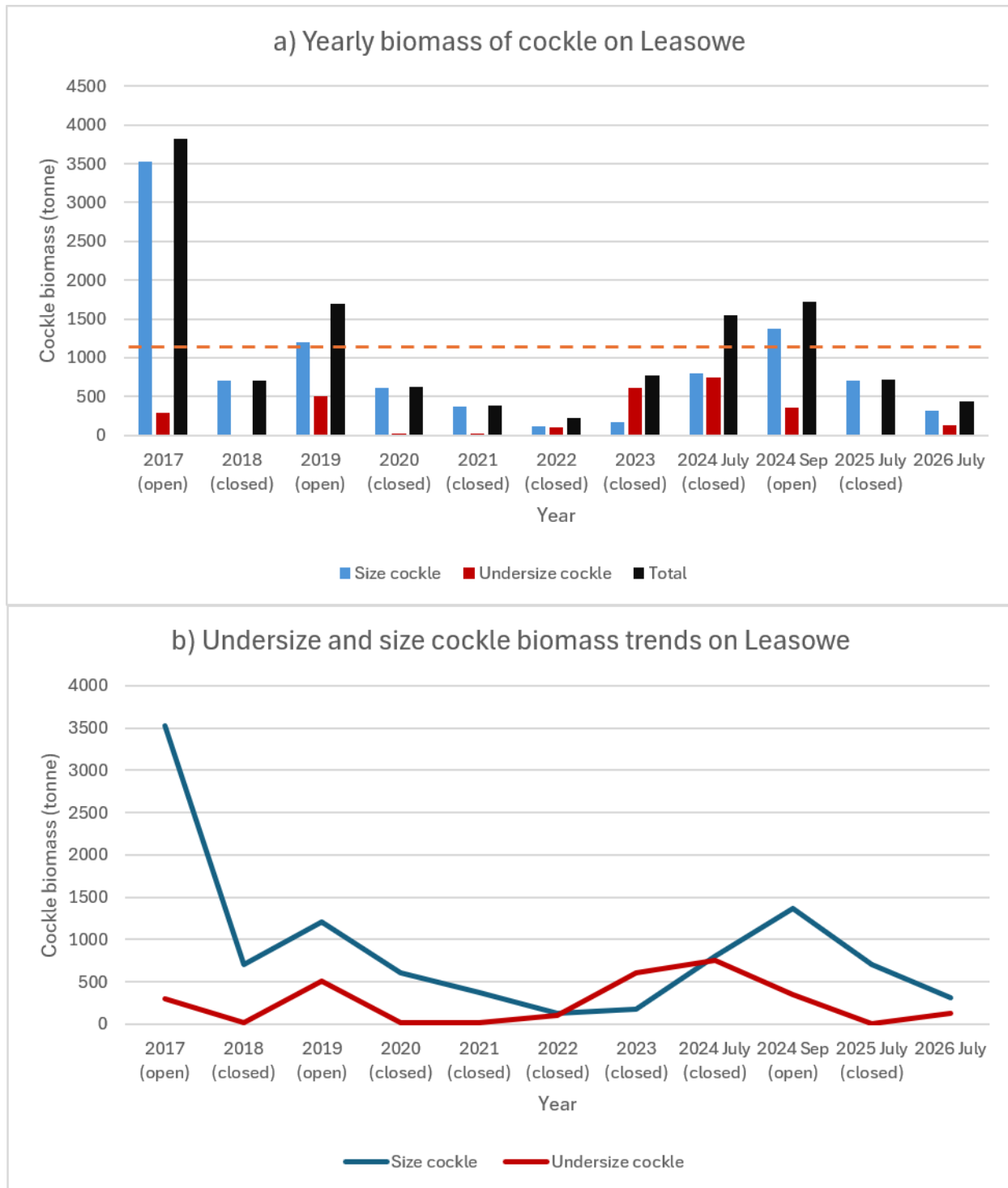


Figure 2.3.2. The yearly biomass of size, undersize and total cockle on Leasowe cockle bed from 2017 to 2026. The orange line indicates the minimum tonne of size cockle required to open as agreed in the NWIFCA CFMP (1130 tonnes).

The average density of size cockle in the area where cockle is present on Leasowe is low at 11 cockle per m², a decrease from the previous year.

Average density of undersize cockle on Leasowe is down to 23 cockle per m². There has been a continual decrease in undersize cockle density since its peak in of 863 per m² in July 2023. There was little evidence of a spat fall this summer.

b. Biomass and composition of cockle size classes

The composition of size classes across a bed is important to consider as it has implications for fisheries management, and fishing highly mixed stock may have an impact on juvenile cockles survivability.

This year, the composition is predominantly size (25 mm+) at 327 tonnes, with 109 tonnes in the sub 25mm category, leaving little to grow on to size.

Leasowe cockle is known to grow quickly in the summer months, however, the remaining 109 tonnes of undersize biomass is unlikely to grow on to support a significant increase over the 1130 tonne minimum threshold of size required this year.

Leasowe cockle fishery recommendation:

Officers recommend Leasowe is not opened this 2026/27 fishing season (see page 1 for recommendation)

This recommendation is based on the following reasons:

- 4. Minimum biomass of size cockle** – There is insufficient cockle biomass to support a fishery at this time.
- 5. There is insufficient undersize biomass** – There is minimal size cockle biomass present to contribute to the following year's fishery.
- 6. The biomass does not exceed the agreed threshold limits presented in the NWIFCA CFMP.**

3.OTHER SURVEYS

In addition to the mussel and cockle surveys noted above, NWIFCA officers have also carried out the following surveys in the last quarter:

Table 3.1. Surveys conducted between March and July 2026

Survey Type	No. Sites Surveyed	Sites surveyed	Number of Survey Days	Survey Dates
Shrimp samples	3	Fleetwood x 3 Halfmoon x 3 Flookburgh x 2	8	Mar–Jun 2026
Wirral Netting	2	Wirral x 2 Formby x 2	4	Apr–Jun 2026
Clam surveys	1	Leasowe	2	Apr 2026

The results of these surveys are contributing to longer-standing research projects such as the Byelaw 2 review (clam surveys), investigation into Smoothhound wash-ups (Wirral netting), and the joint Salford University project on the decline in shrimp in Morecambe Bay (shrimp samples). The results of these surveys will be presented to the Authority alongside the project outcomes later in the year.

NWIFCA, 21st July 2026