Southern IFCA Survey Report

Solent Scallop Survey 2025

1. Introduction

As part of Southern IFCA's management of bivalve species in the Solent, surveys are carried out across the King scallop fishing season to better understand the extent and nature of the Solent King scallop fishery. In 2025, mid-season (Feb), pre-season (Sept) and post-season (Apr) surveys were run.

These surveys aim to provide an understanding of the distribution of the King Scallop (*Pecten maximus*) (hereafter referred to as 'scallop') and to collect information on the population structure of the scallops found within the Solent.

The outcomes of the 2025 surveys enable Southern IFCA to monitor population trends before, during, and after the fishing season (1st November to 31st March), and contribute to the timeseries dataset that began in 2021. This data contributes to the evidence base used to inform management of the fishery through the Solent Dredge Permit Byelaw and enables Southern IFCA to ensure that the Solent bivalve fisheries are managed sustainably.

2. Methodology

- Sites for the Solent Scallop survey were redesigned for the 2025 surveys to bring surveyed areas closer in line with industry fishing activity. Redesigned beds covered areas of the fishery surveyed under the previous bed footprint, as well as emergent areas of the fishery. The survey occurred over 2 days in February (Winter, Mid-the 24/25 season), April (Spring, Post the 24/25 season), and September (Autumn, Pre the 25/26 season).

Figure 1: An N-Viro Dredge

- Southern IFCA chartered the same local, commercial fishing vessel for each survey period to carry out the sampling, using a N-Viro style dredge (Figure 1) and a Queenie dredge towed from the stern of the vessel.
- Within each bed four approx. 4-minute tows were performed, with the skipper identifying the appropriate site and speed of the tows based on fishing activity and conditions. Environmental/vessel data was collected on tow location, time, speed and other relevant factors.
- The contents of the dredges were individually brought inboard, emptied, and sorted, with any scallops put aside for measuring.

- Officers then measured each scallop to the nearest mm in one dimension, the width (longest axis), maintaining separation between those scallops brought up in the two different dredges.
- The catch for each tow was split into over 110mm (the Minimum Conservation Reference Size in ICES VIId) and under 110mm. Both groups of scallops were then weighed.
- On completion of the measurements the scallops were returned to the same area from which they were sampled.
- A map displaying the location of each sampling area within the Solent and the position of tows undertaken during the 2025 surveys is shown in Figure 2. Tows that fall outside of beds are often prospective in nature and are not included within the analyses.

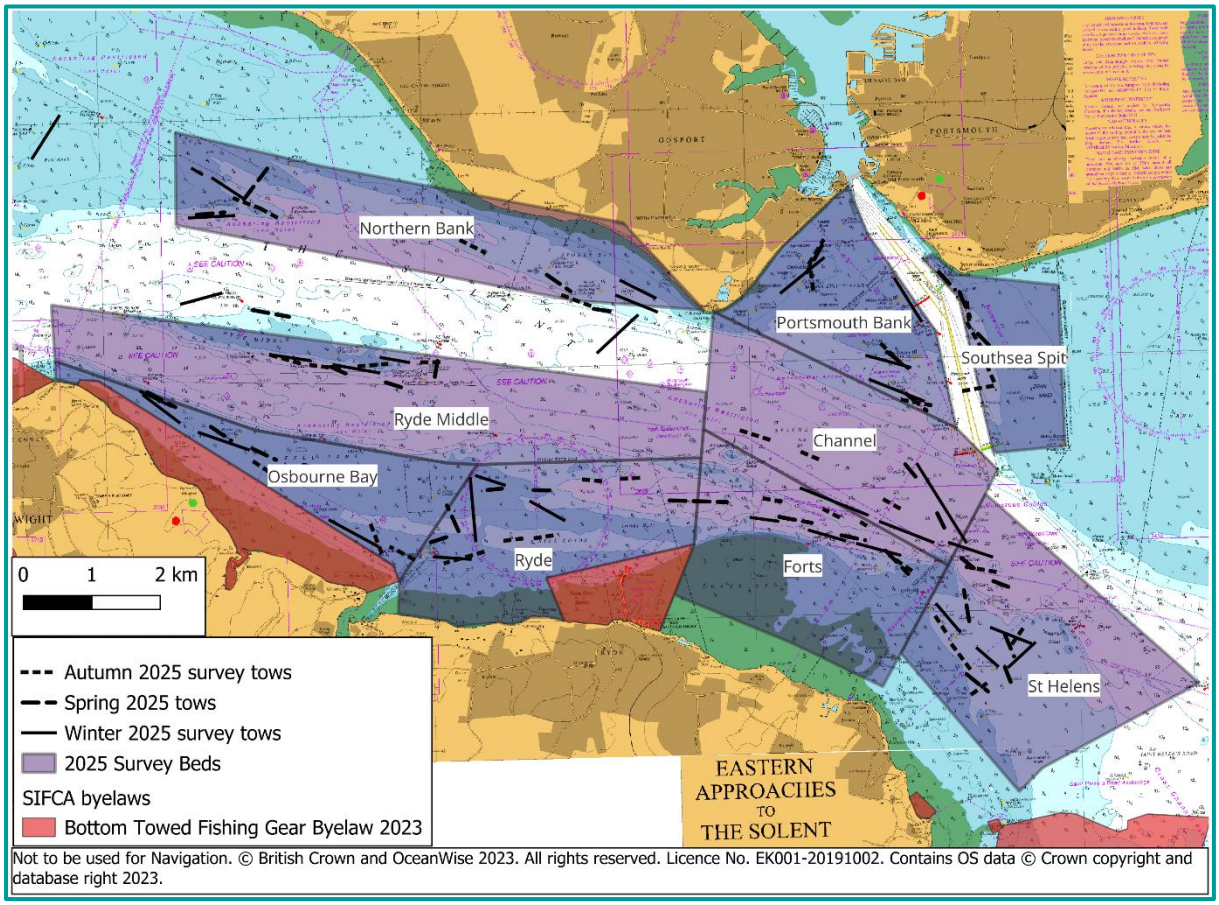

Figure 2: Location of the 9 revised sampling sites for the Solent scallop fishery, and the position of tows within these sites during 2025. Please note Southsea Spit was first sampled in Spring 2025 reacting to high levels of fishing activity over that ground in the second half of the 24/25 season.

3. Results

Across the 9 sites (NB: Southsea Spit was only sampled from Spring 2025), 1,628 scallops were sampled in Winter 2025, 1,428 were sampled in Spring 2025, and 2,170 were sampled in Autumn 2025 across all dredges operated.

3.1 Catch Per Unit Effort (CPUE) – N-Viro Dredge

The weight data collected from the industry standard N-Viro dredge was transformed to provide a value for Catch Per Unit Effort (CPUE), defined as kg of scallops per metre of dredge per hour (kg/m/hr). CPUE was calculated for total weight of scallops, weight of scallops over the Minimum Conservation Reference Size (MCRS), and weight of scallops under the MCRS.

It should be noted that the dredging method is inherently size selective due to the need for commercial vessels to maximise retention of scallops over MCRS and minimise catches (and secondary sorting requirements) of scallops under MCRS. As such the data for CPUE under MCRS will not be representative of this size class as it cannot be guaranteed that all scallops under MCRS have been sampled. However, comparisons can be made between sites and over time to look for changes, in the knowledge that the sampling method is consistent and there is no statistical difference in the catch between dredges used from different vessels.

3.1.1 CPUE between Sites for the 2025 Surveys

In this section, CPUE data for the total sampled population, the sampled population over MCRS, and the sampled population under MCRS is compared between sites for the 2025 surveys. This analysis provides an indication of the varying density of scallop across the different beds of the fishery.

Winter 2025

- A Kruskal-Wallis test found statistically significant differences between sites for Total CPUE ($p < 0.05$) and CPUE Under MCRS ($p < 0.01$), but not for CPUE Over MCRS.
- For Total population sampled, the site with the greatest median CPUE was St Helens (166 kg/m/hr), while the site with the lowest median CPUE was Northern Bank (4.97 kg/m/hr) (Figure 3). A Dunns' post-hoc analyses found no statistically significant differences between the sites for the Total population sampled, indicating that the variance in the data within sites is greater than the variance between sites.
- For Over MCRS population sampled, the site with the greatest median CPUE was St Helens (42.6 g/m/hr), while the site with the lowest median CPUE was Northern Bank (4.97 kg/m/hr) (Figure 4).
- For Under MCRS population sampled, the site with the greatest median CPUE was St Helens (127 kg/m/hr), while the site with the lowest median CPUE was Northern Bank (0 kg/m/hr) (Figure 5). A post-hoc Dunns test found a statistically significant difference between the median CPUE at these two sites ($p < 0.05$).

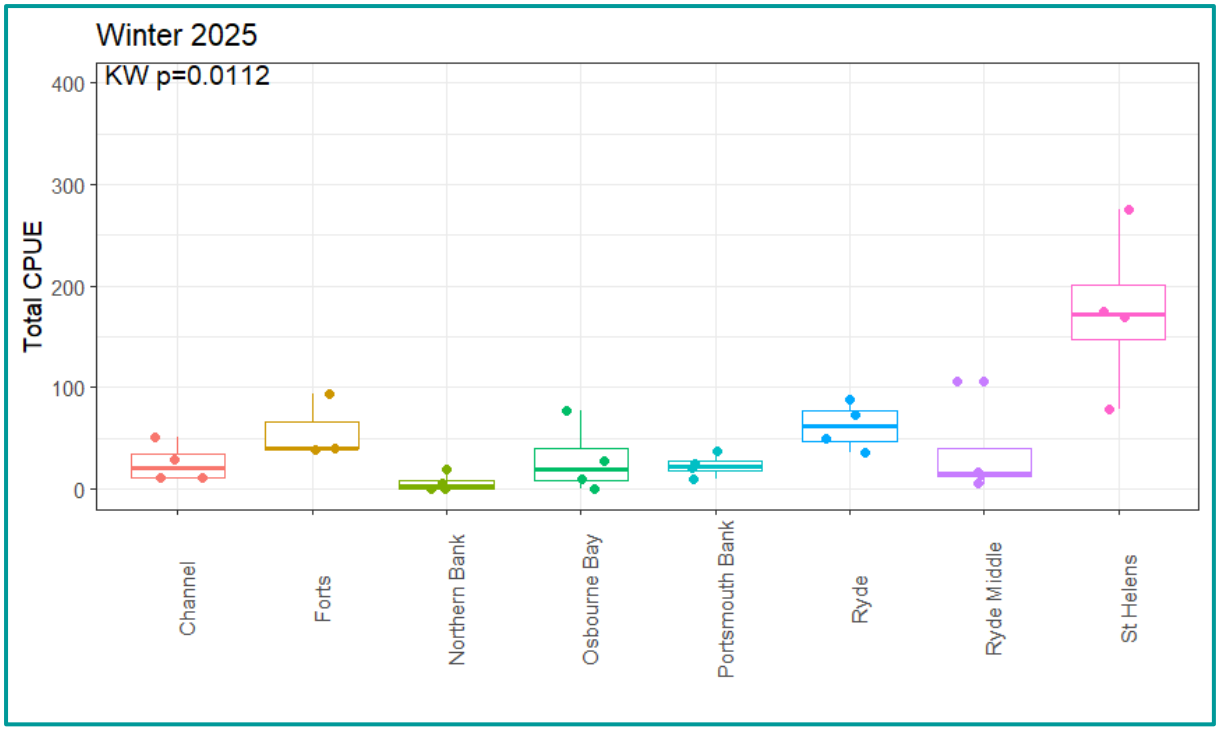

Figure 3: Catch per Unit Effort (kg/m/hr) of the Total population of sampled scallops for each site surveyed in Winter 2025.

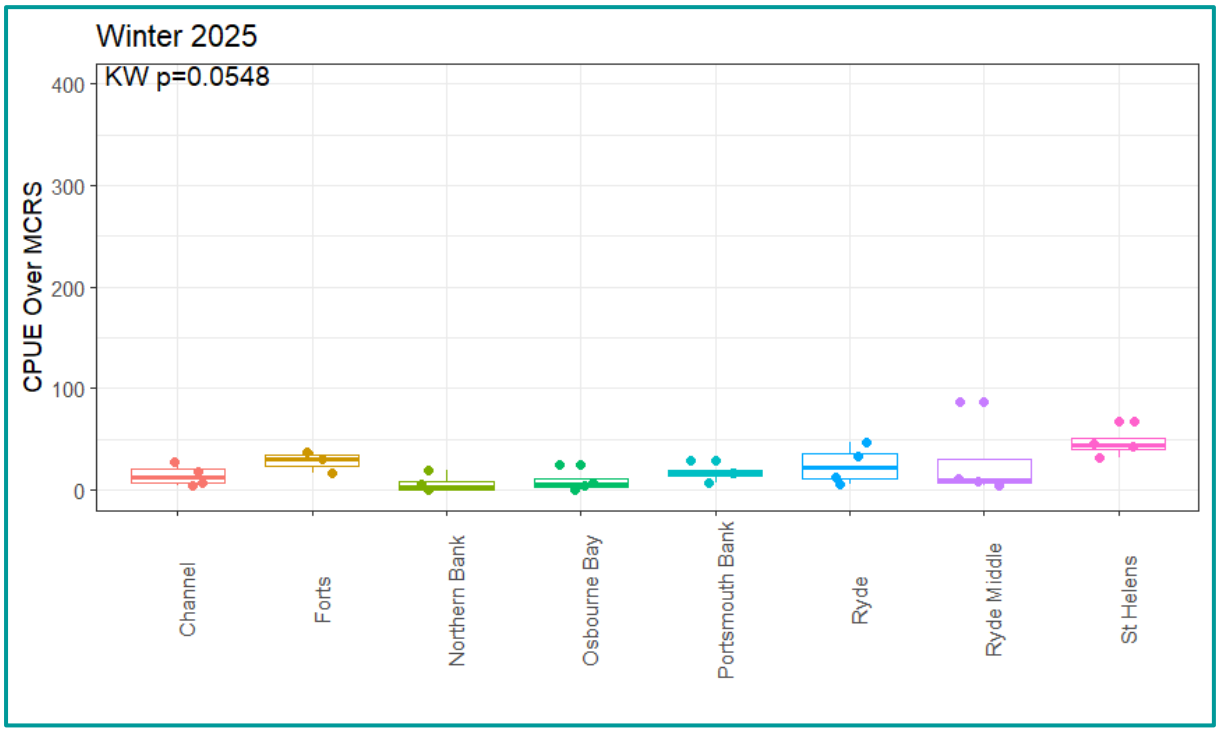

Figure 4: Catch per Unit Effort (kg/m/hr) for the sampled population of scallops Over the Minimum Conservation Reference Size for each site surveyed in Winter 2025.

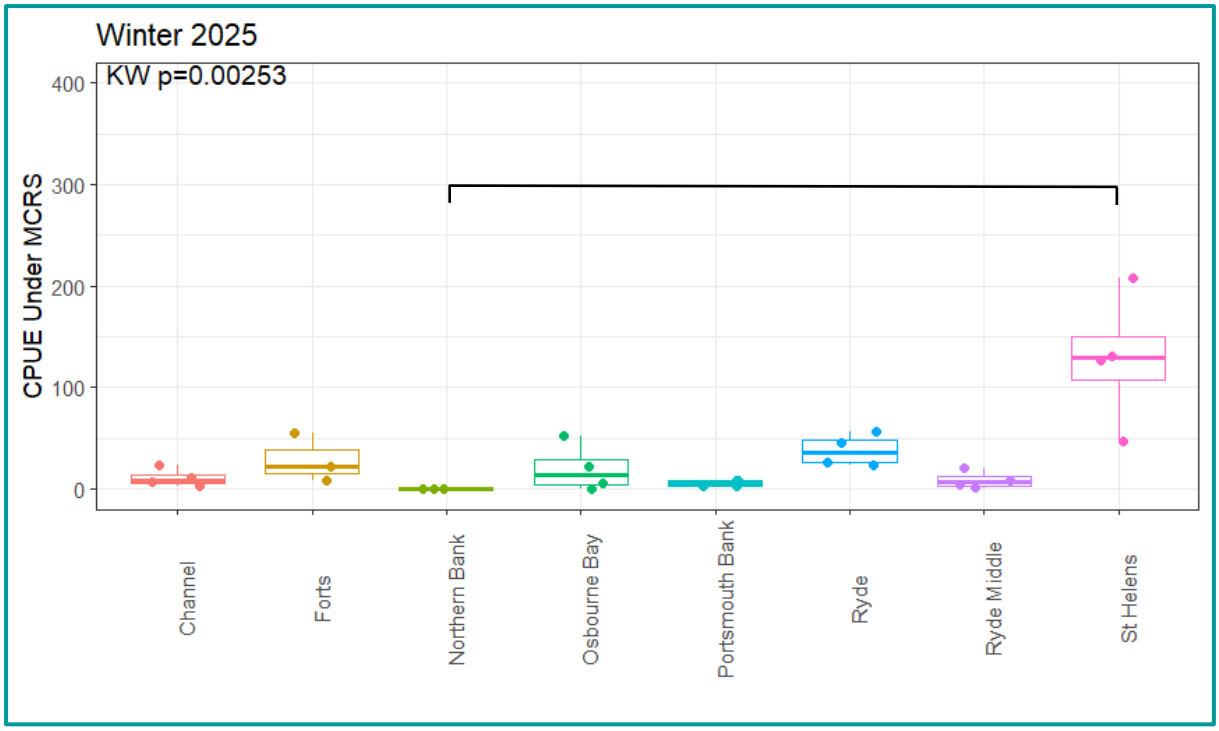

Figure 5: Catch per Unit Effort (kg/m/hr) for the sampled population of scallops Under the Minimum Conservation Reference Size for each site surveyed in Winter 2025. The bracket indicates the presence of a statistically significant difference between sites as determined by Dunn's post-hoc analysis ($p < 0.05$).

Spring 2025

- A Kruskal-Wallis test found statistically significant differences between sites for Total CPUE ($p < 0.05$), and CPUE Under MCRS ($p < 0.01$), however Dunns' post-hoc analyses found no statistically significant differences between the sites indicating that the variance in the data within sites is greater than the variance between sites. No significant difference was found between sites for CPUE Over MCRS.
- For Total population sampled, the site with the greatest median CPUE was Forts (94.2 kg/m/hr), while the site with the lowest median CPUE was Ryde Middle (2.20 kg/m/hr) (Figure 6).
- For Over MCRS population sampled, the site with the greatest median CPUE was Forts (26.3 kg/m/hr), while the site with the lowest median CPUE was Ryde Middle (2.20 kg/m/hr) (Figure 7).
- For Under MCRS population sampled, the site with the greatest median CPUE was Forts (67.9 kg/m/hr), while the site with the lowest median CPUE was Ryde Middle (0 kg/m/hr) (Figure 8).

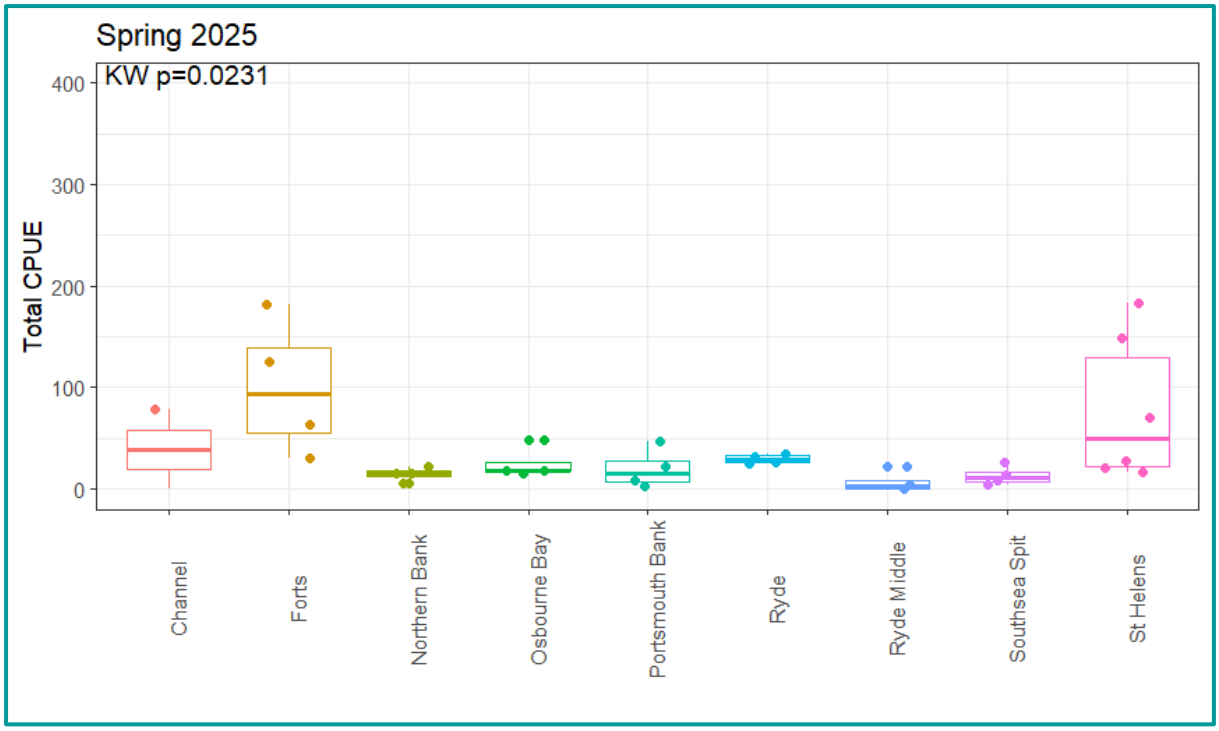

Figure 6: Catch per Unit Effort (kg/m/hr) of the Total population of sampled scallops for each site surveyed in Spring 2025.

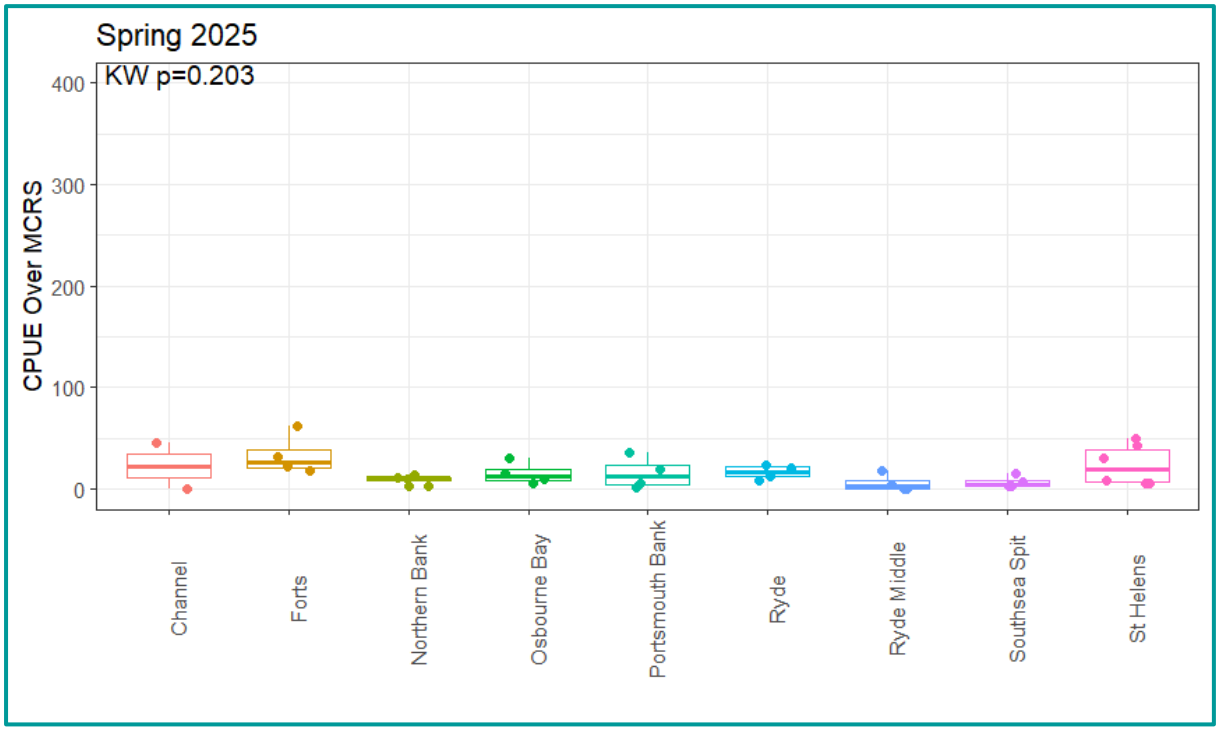

Figure 7: Catch per Unit Effort (kg/m/hr) for the sampled population of scallops Over the Minimum Conservation Reference Size for each site surveyed in Spring 2025.

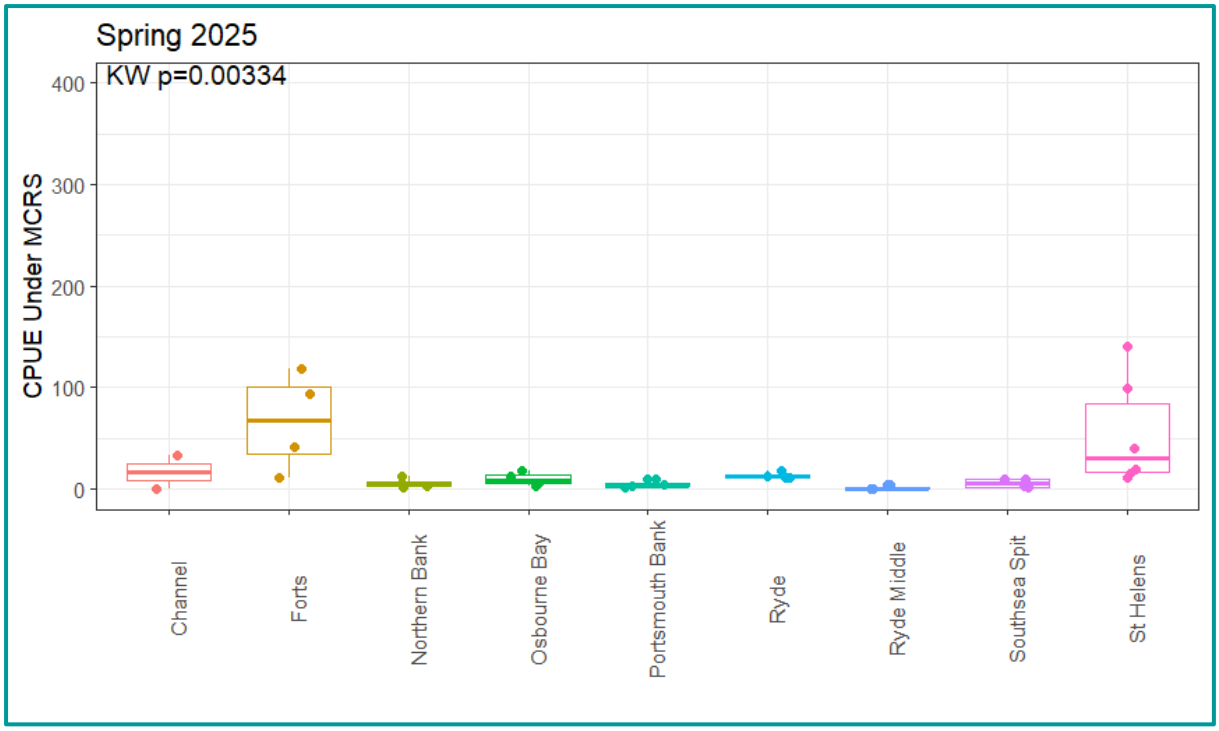

Figure 8: Catch per Unit Effort (kg/m/hr) for the sampled population of scallops Under the Minimum Conservation Reference Size for each site surveyed in Spring 2025.

Autumn 2025

- A Kruskal-Wallis test found statistically significant differences between sites for Total CPUE ($p < 0.01$), CPUE Over MCRS ($p < 0.05$), and CPUE Under MCRS ($p < 0.001$). A post-hoc Dunns test found a statistically significant difference ($p < 0.05$) between the median CPUE at Northern Bank and St Helens for each sampled section of the population.
- For Total population sampled, the site with the greatest median CPUE was St Helens (133 kg/m/hr), while the site with the lowest median CPUE was Northern Bank (0 kg/m/hr) (Figure 9).
- For Over MCRS population sampled, the site with the greatest median CPUE was St Helens (93.9 kg/m/hr), while the site with the lowest median CPUE was Northern Bank (0 kg/m/hr) (Figure 10).
- For Under MCRS population sampled, the site with the greatest median CPUE was St Helens (40.9 kg/m/hr), while the site with the lowest median CPUE was Northern Bank (0 kg/m/hr) (Figure 11).

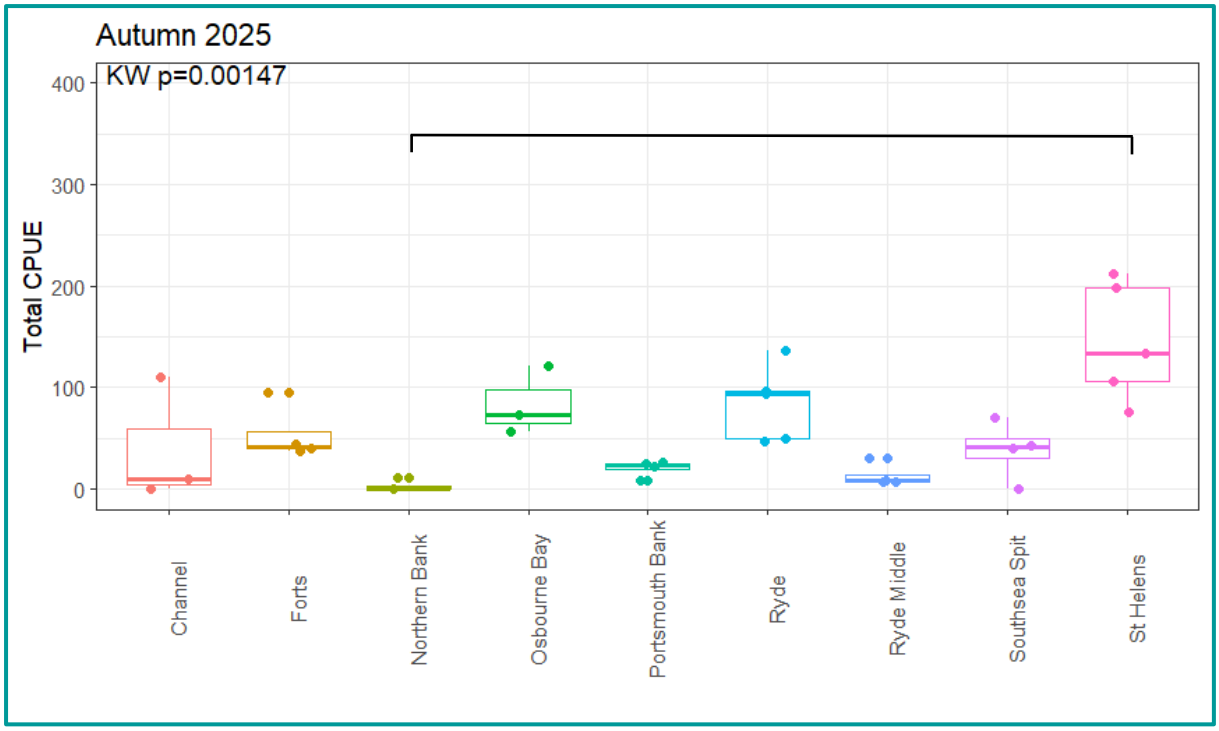

Figure 9: Catch per Unit Effort (kg/m/hr) of the Total population of sampled scallops for each site surveyed in Autumn 2025. The bracket indicates the presence of a statistically significant difference between sites as determined by Dunn's post-hoc analysis ($p < 0.05$).

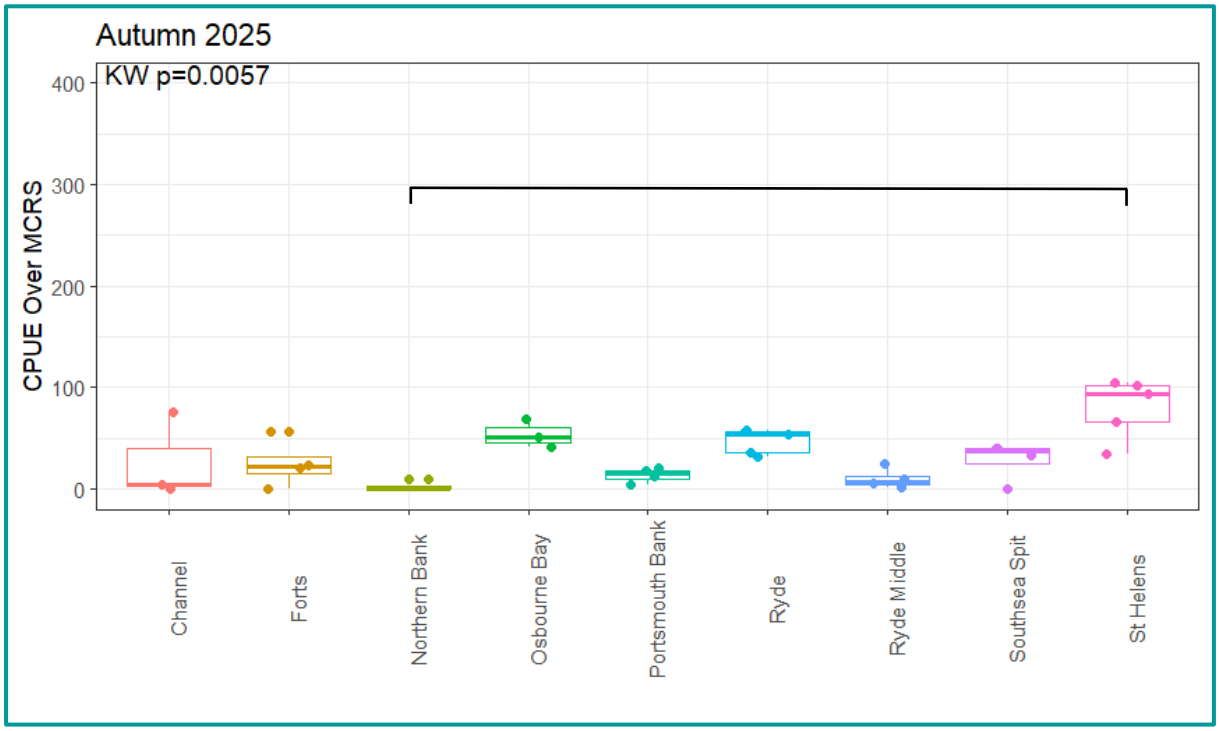

Figure 10: Catch per Unit Effort (kg/m/hr) for the sampled population of scallops Over the Minimum Conservation Reference Size for each site surveyed in Autumn 2025. The bracket indicates the presence of a statistically significant difference between sites as determined by Dunn's post-hoc analysis ($p < 0.05$).

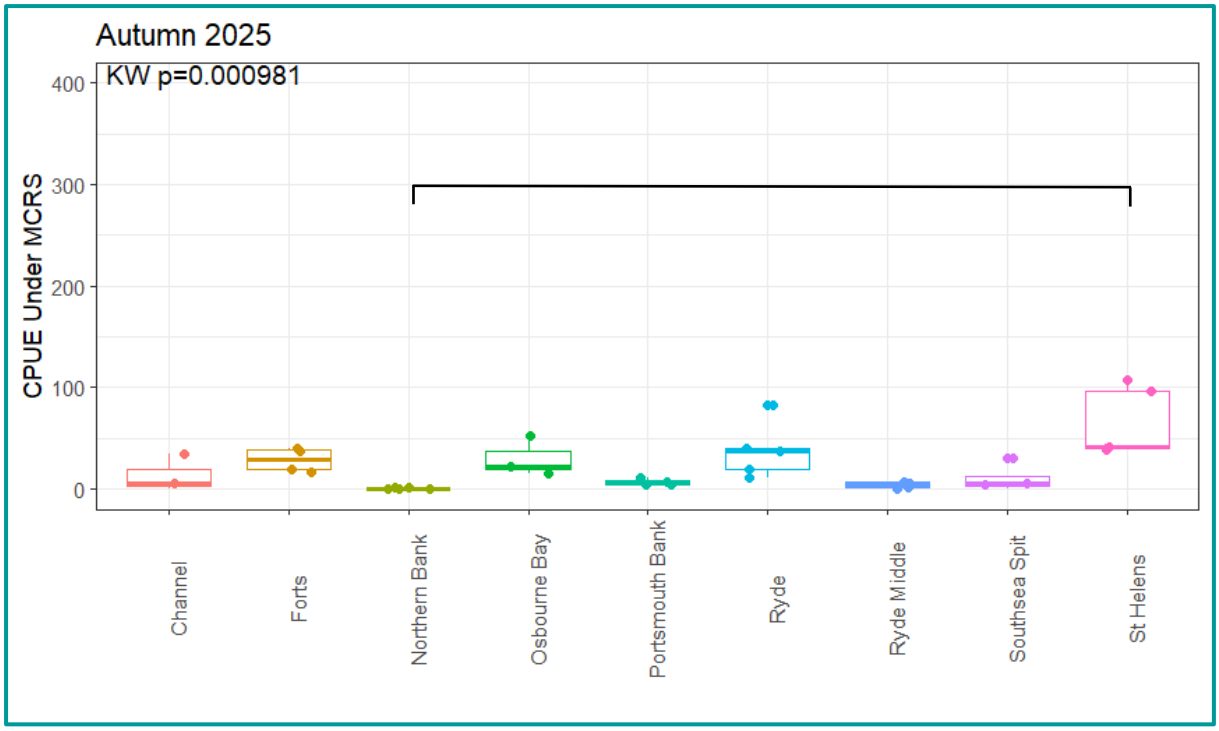

Figure 11: Catch per Unit Effort (kg/m/hr) for the sampled population of scallops Under the Minimum Conservation Reference Size for each site surveyed in Autumn 2025. The bracket indicates the presence of a statistically significant difference between sites as determined by Dunn's post-hoc analysis ($p < 0.05$).

3.1.2 Comparing CPUE Between Surveys

Combining data for all the sites in each of the surveys, comparisons were made between surveys for Total CPUE, CPUE Over MCRS, and CPUE Under MCRS using Kruskal-Wallis and post-hoc Dunn's test. Trends in CPUE are highlighted for key timeframes:

- When the fishing season was active (Autumn 24 to Spring 25 surveys),
- When the fishery was closed (Spring 25 to Autumn 25 surveys),
- Comparisons between the spring and autumn surveys between years.

Total CPUE (Figure 12)

- A statistically significant decrease in median CPUE was seen during the 24/25 fishing season (Autumn 2024 to Spring 2025 surveys) from 113 kg/m/hr to 22.3 kg/m/hr ($p < 0.0001$).
- The median CPUE increased from Spring 2025 (22.2 kg/m/hr) to Autumn 2025 (41.8 kg/m/hr) but was not significant ($p = 0.104$).
- The median CPUE decreased from Spring 2024 (22.9 kg/m/hr) to Spring 2025 (22.3 kg/m/hr) but was not significant ($p = 0.907$).
- A statistically significant decrease in median CPUE was seen from the Autumn 2024 survey (113 kg/m/hr) to the Autumn 2025 survey (41.8 kg/m/hr) ($p < 0.001$).

CPUE Over MCRS (Figure 13)

- A statistically significant decrease in median CPUE was seen during the 24/25 fishing season (Autumn 2024 to Spring 2025 surveys) from 64.5 kg/m/hr to 11.9 kg/m/hr ($p < 0.0001$).
- A statistically significant increase in median CPUE was seen from the Spring 2025 survey (11.9 kg/m/hr) to the Autumn 2025 survey (27.7 kg/m/hr) ($p < 0.05$).
- The median CPUE decreased from Spring 2024 (13.6 kg/m/hr) to Spring 2025 (11.9 kg/m/hr) but was not significant ($p = 0.719$).
- A statistically significant decrease in median CPUE was seen from the Autumn 2024 survey (64.5 kg/m/hr) to the Autumn 2025 survey (27.7 kg/m/hr) ($p < 0.01$).

CPUE Under MCRS (Figure 14)

- A statistically significant decrease in median CPUE was seen during the 24/25 fishing season (Autumn 2024 to Spring 2025 surveys) from 39.4 kg/m/hr to 10.4 kg/m/hr ($p < 0.0001$).
- The median CPUE increased from Spring 2025 (10.4 kg/m/hr) to Autumn 2025 (13.6 kg/m/hr) but was not significant ($p = 0.633$).
- The median CPUE increase from Spring 2024 (6.76 kg/m/hr) to Spring 2025 (10.4 kg/m/hr) but was not significant ($p = 0.510$).
- A statistically significant decrease in median CPUE was seen from the Autumn 2024 survey (39.4 kg/m/hr) to the Autumn 2025 survey (13.6 kg/m/hr) ($p < 0.001$).

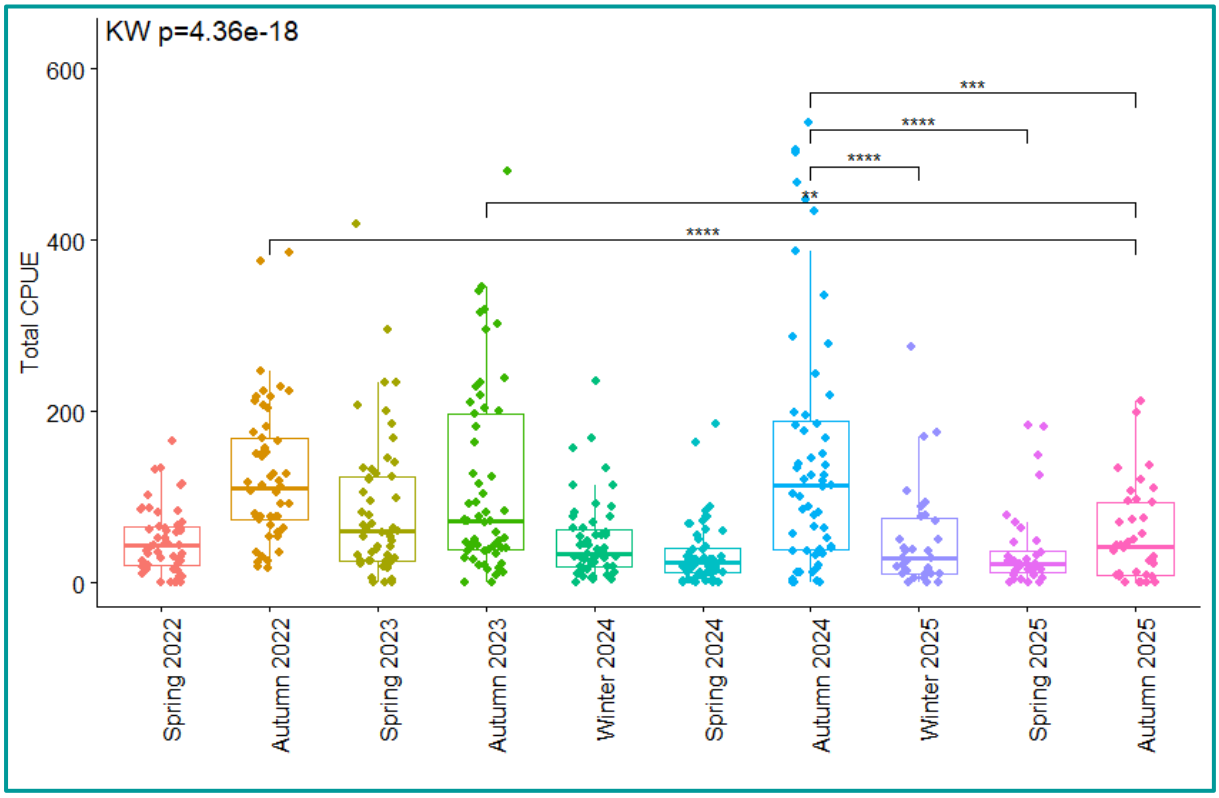

Figure 12: Catch per Unit Effort (kg/m/hr) for the total population of sampled scallops in all surveys undertaken since 2022. Brackets indicate the presence of statistically significant differences between surveys as determined by Dunn's post-hoc analysis (= $p < 0.01$, ***= $p < 0.001$, **** = $p < 0.0001$).**

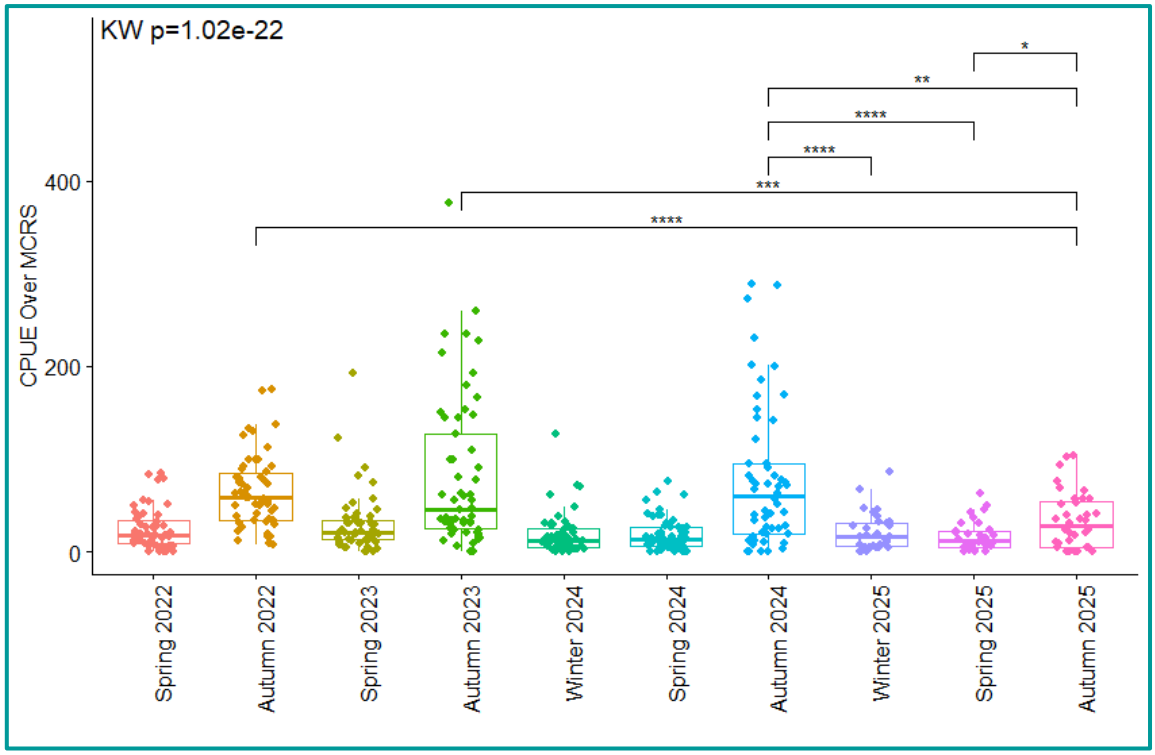

Figure 13: Catch per Unit Effort (kg/m/hr) for sampled scallops Over the Minimum Conservation Reference Size from all surveys undertaken since 2022. Brackets indicate the presence of statistically significant differences between surveys as determined by Dunn's post-hoc test (* = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$, **** = $p < 0.0001$).

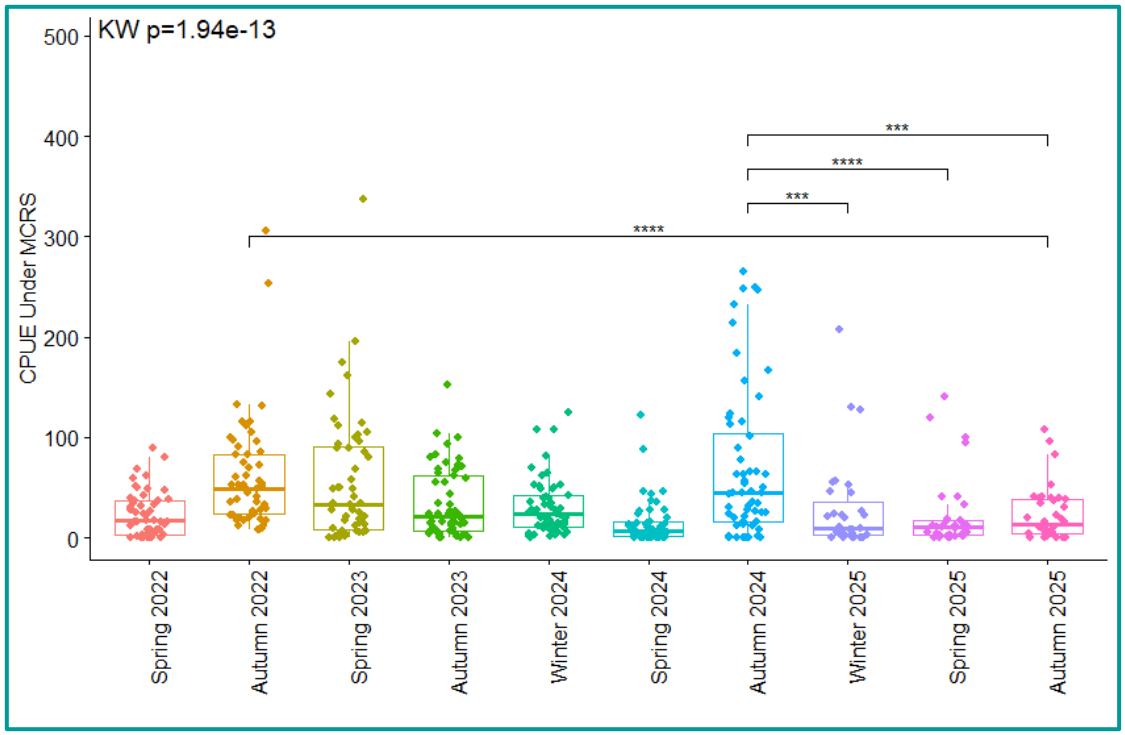

Figure 14: Catch per Unit Effort (kg/m/hr) for sampled scallops Under the Minimum Conservation Reference Size in all surveys undertaken since 2022. Brackets indicate the presence of statistically significant differences between surveys as determined by Dunn's post-hoc test (*= $p < 0.001$, **** = $p < 0.0001$).**

3.1.3 Comparing CPUE for Each Site Between Surveys

For the same key timeframes, comparisons were also made between the individual sampling sites for Total CPUE, CPUE Over MCRS and CPUE Under MCRS. A summary of the change to CPUE at sites between surveys undertaken in 2024 and 2025 for these key periods is provided in Table 1.

Table 1: A summary of the trends in CPUE change for individual sites between surveys for key timeframes; during the fishery closed period (2024 and 2025) during the fishing season (24/25) and between spring and autumn surveys for 2024-25. Where significant results were found a score of at least $p < 0.05$ was obtained.

		Total Sample	**Over MCRS**	**Under MCRS**
No. of sites where CPUE increased during the closed season (Spr – Aut of same year)	2024	8 sites 5 significant	8 sites 4 significant	8 sites 5 significant
	2025	6 sites	6 sites 2 significant	5 sites
No. of sites where CPUE decreased during the closed season (Spr – Aut of the same year)	2024	0 sites	0 sites	0 sites
	2025	3 sites	3 sites	4 sites
		Total Sample	**Over MCRS**	**Under MCRS**
No. of sites where CPUE increased during the 24/25 fishing season (Aut 24 – Spr 25)		0 site	0 site	0 site
No. of sites where CPUE decreased during the 24/25 fishing season (Aut 24 – Spr 25)		8 sites 4 significant	8 sites 4 significant	8 sites 3 significant
Spring 2024 – Spring 2025	Increase	4 sites	3 sites	7 sites
	Decrease	4 sites	5 sites	1 site
Autumn 2024 – Autumn 2025	Increase	1 site	1 site	1 site
	Decrease	7 sites 3 significant	7 sites 2 significant	7 sites 3 significant

3.2 Landings Data

As the Solent Dredge Permit renews in November of each year, landings are recorded in a season from November to October of the following year. The only year where October was open to fishing following a closed season was in 2022.

3.2.1 Landings Trends

The total kg of King scallop landed across all vessels during the 2024/25 season was 400,300 kg, a decrease from the 2023/24 season at 560,900 kg but an increase from both the 2022/23 and 2021/22 seasons (153,300 and 297,800 kg respectively) (Figure 15).

During the 2024/25 fishing season, the average weight of scallop caught each month was 7,900 kg, a decrease from the 2023/24 season (11,200 kg) but an increase from both the 2021/22 and 2022/23 seasons (4,900 and 3,100 kg respectively).

During the 2024/25 fishing season, the most vessels, 23, fished during November and the most scallop was landed during the first month (November, 7,500 kg per vessel, 43% of total season's landings) (Figure15). During each of the previous fishing seasons, the highest landed weight has also occurred in the first month following the closed period (11,700 kg per vessel 2023/24, 8,500 kg per vessel 2022/23, 4,300 kg per vessel 2021/22) (Figure 15).

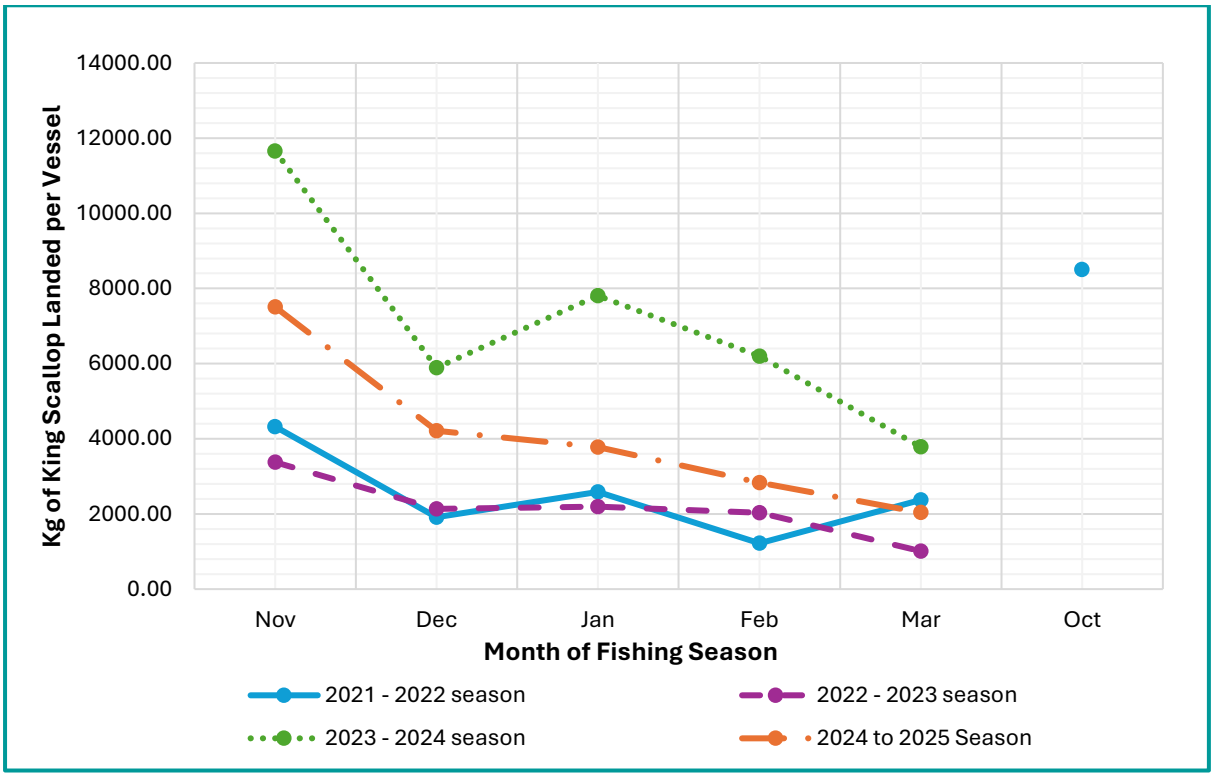

Figure 15: The average Kg of King Scallop caught per vessel during each month of the 2021/22, 2022/23, 2023/24 and 2024/25 fishing seasons. Please note that catch levels were not recorded during October 2021 as the SPDB was not yet in place, and were not reported in October 2023, 2024, or 2025 due to a closure of the fishery for that month.

3.2.2 Comparison between surveys and reporting zones

Landings Per Unit Effort (LPUE) (kg scallop/hour/vessel) values from data submitted by fishers on SDPB catch returns (required to be submitted monthly through the season) in the 2024/25 fishing season for scallops caught in areas that overlap with the Solent Scallop survey beds, is compared to LPUE values for the Over MCRS population sampled during the Autumn 2024, Spring 2025 and Autumn 2025 surveys (Figure 16). CPUE values from each survey were converted to LPUE values by removing the factor of dredge width (and therefore area covered) from CPUE calculations, as this cannot be guaranteed across the entire fishery.

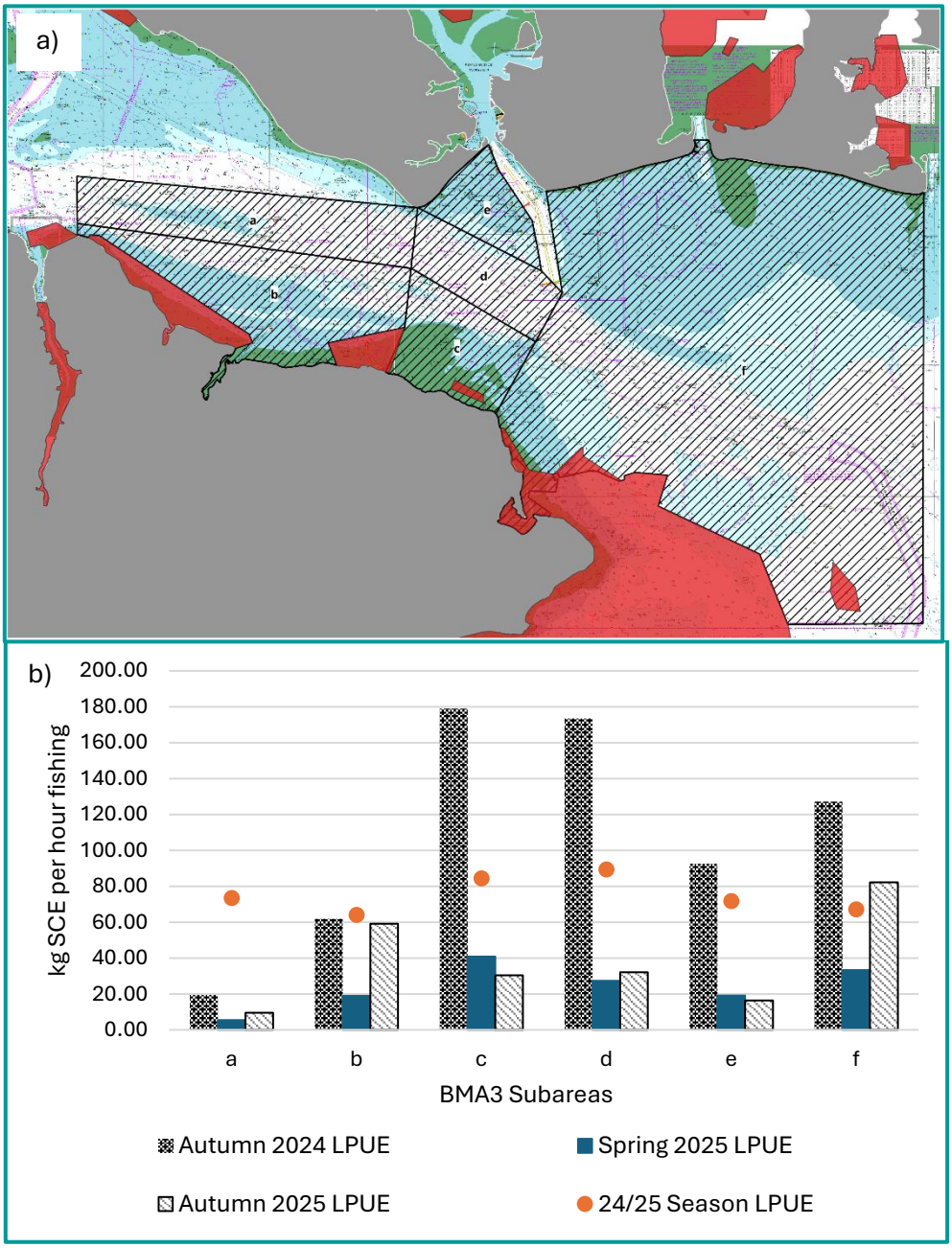

Figure 16: a) map displaying the reporting subzones within Bivalve Management Area 3 (BMA3) that fishers are required to detail within their SDPB catch returns; b) Mean Landings Per Unit Effort (LPUE) (kg/hr) values from the Autumn 2024, Spring 2025, and Autumn 2025 surveys compared to the mean LPUE values obtained from SDPB catch records in in the Solent scallop fishery during the 2024/25 season, by Bivalve Management Area 3 (BMA3) reporting subzones.

Catch levels appear to be consistent across each BMA3 subarea, with quantity of removals appearing to make no difference to recovery level within each subarea. Figure 16 also shows that the average largest landings were removed from the BMA3 subareas with the highest landings levels in the Autumn 2024 survey.

3.3 Size Frequency

An analysis of width data from scallops sampled with the N-Viro dredge for the three surveys undertaken in 2025 gave the following results (Figure 17):

- A visual analysis of the size frequency for scallops sampled in the 2025 surveys shows that Spring 2025 had a wider range of width measurements than either the Winter or Autumn survey.
- Comparing the median width of scallops (mm) between all the 2025 surveys using a Kruskal-Wallis test showed that there was a significant effect of survey on width ($p < 0.01$), with a statistically significant increase found for the Autumn 2025 survey (110mm) in comparison to the Spring 2025 survey (104mm) ($p < 0.01$).
- A non-significant decrease in median width of the population sampled with the N-Viro dredge can be seen between the Autumn 2024 (107mm) and Spring 2025 (104mm) surveys.
- The results show that the greatest width of an individual scallop sampled in 2025 using the N-Viro dredge was 146mm in the Autumn survey, and the smallest was 26mm in the Spring survey.

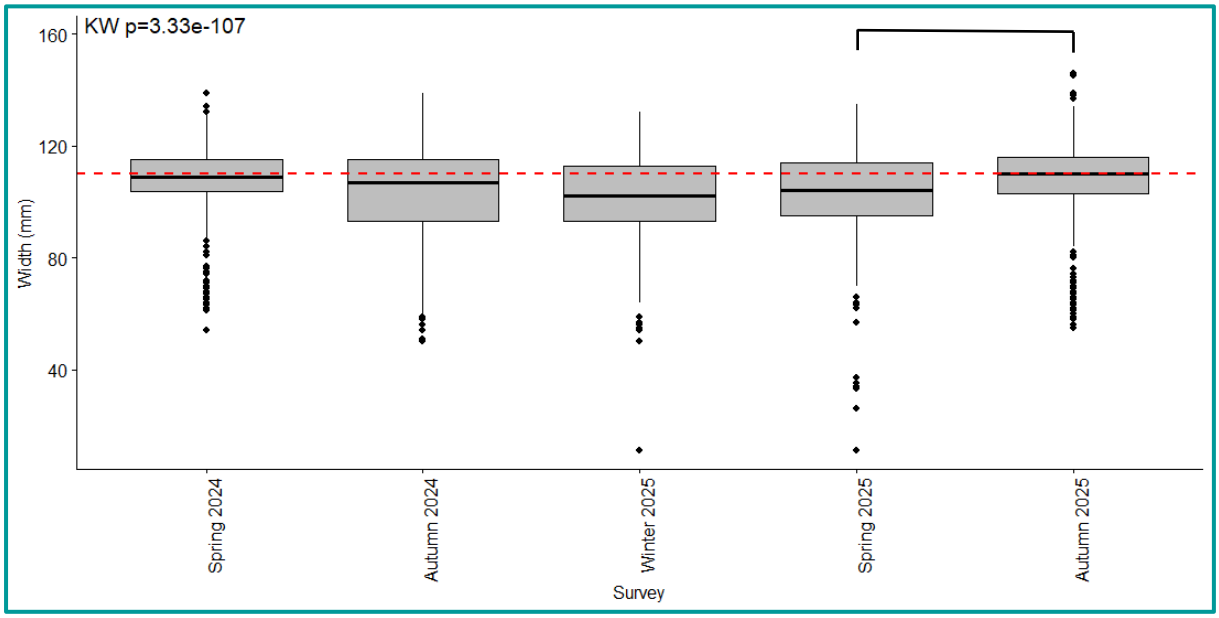

Figure 17: Comparisons of the widths of scallops (mm) measured during surveys undertaken between April 2024 and September 2025. The thick black line shows the median width (mm), the red dotted line represents the Minimum Conservation Reference Size of King scallops in ICEA area VIId (110mm). The bracket indicates the presence of a statistically significant increase between surveys as determined by Dunn's post-hoc test ($p < 0.01$).

3.3.1 Descriptive Analysis of Size Frequency

Winter 2025

Four of the eight sites sampled for the Winter 2025 survey (Figure 18) have peaks in their size frequency distribution for a class above the MCRS (>110mm). Of the remaining sites, 3 have distribution peaks in the 90 – 95mm size class.

Looking at specific site differences within Winter 2025, a Dunns post-hoc test found that median width was statistically significantly lower at (at least $p < 0.05$):

- Northern Bank (110mm) in comparison to Portsmouth Bank (111mm) and Ryde Middle (112.5mm),
- Osbourne Bay (99mm) in comparison to Portsmouth Bank (111mm), Ryde Middle (112.5mm), and Northern Bank (110mm),
- St Helens (97.5mm) in comparison to Northern Bank (110mm), Portsmouth Bank (111mm), and Ryde Middle (112.5mm),
- Forts (102mm) in comparison to Northern Bank (110mm),
- Ryde (96.5mm) in comparison to Portsmouth Bank (111mm), Ryde Middle (112.5mm), and Northern Bank (110mm).

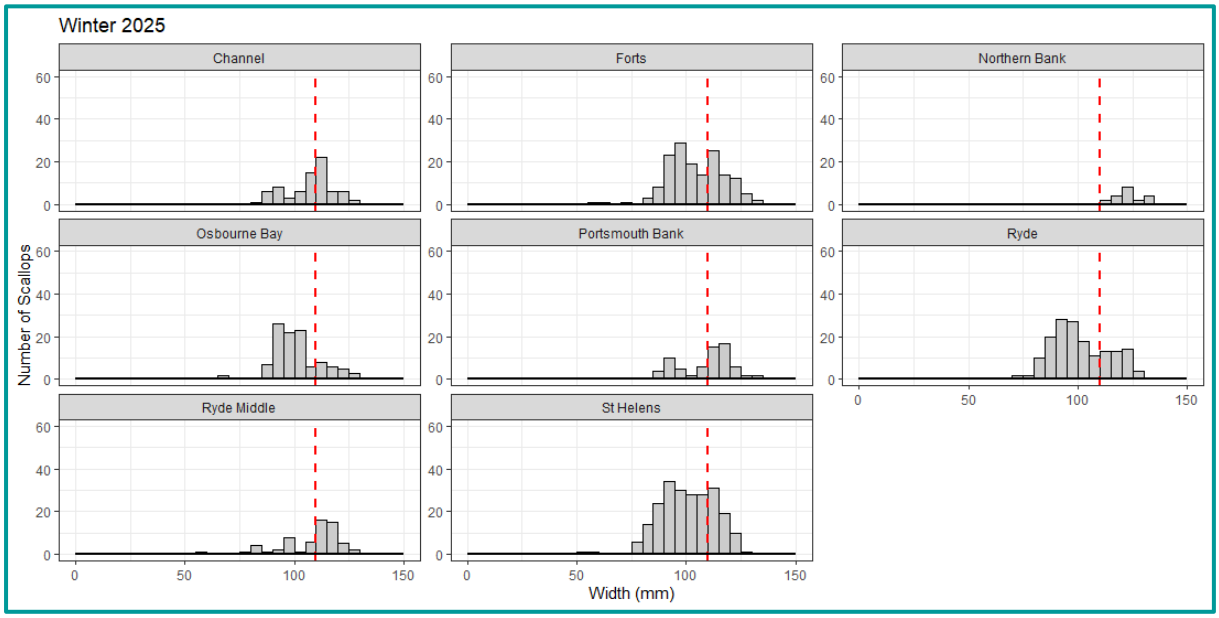

Figure 18: Width of scallops (mm) across all beds sampled in the Winter 2025 survey. The red dashed line represents the Minimum Conservation Reference Size of King Scallops in ICES area VIId (110mm).

Spring 2025

Three of the nine sights sampled for the Spring 2025 survey (Figure 19) have peaks in their size frequency distribution for a class above the MCRS (>110mm). All of the remaining sites have a distribution peak in a 5mm size class between 85 and 100mm.

Looking at specific site differences within Spring 2025, a Dunns post-hoc test found that median width was statistically significantly lower at (at least $p < 0.05$):

- Forts (97.5mm) in comparison to Ryde Middle (114mm), Osbourne Bay (113mm), and Portsmouth Bank (114mm),

- St Helens (101mm) in comparison to Osbourne Bay (113mm) and Portsmouth Bank (114mm).

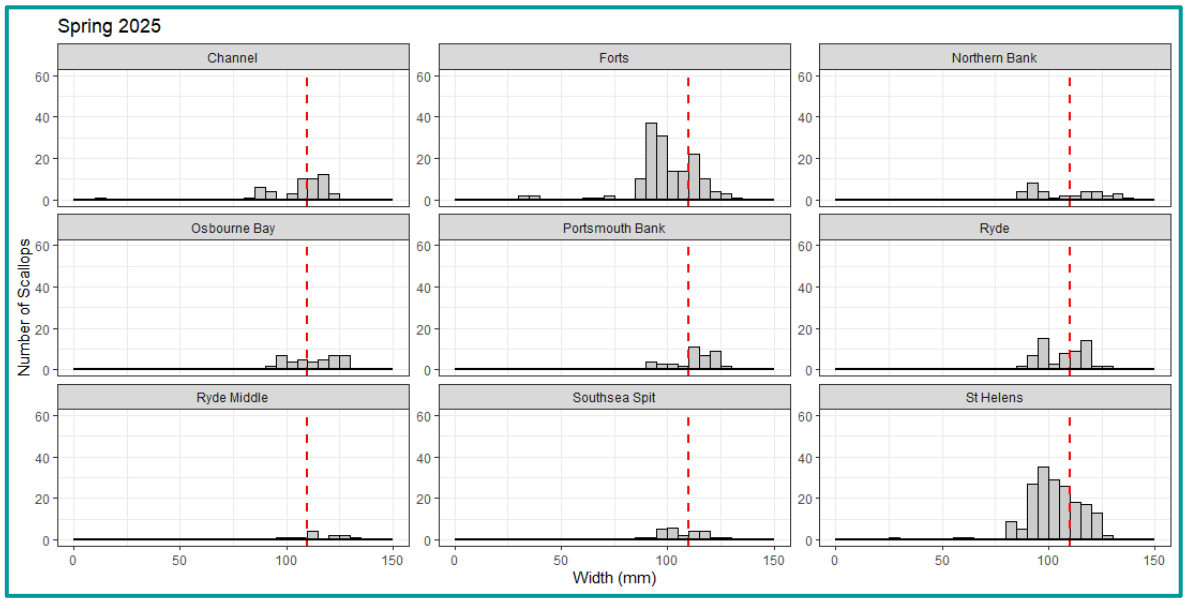

Figure 19: Width of scallops (mm) across all beds sampled in the Spring 2025 survey. The red dashed line represents the Minimum Conservation Reference Size of King Scallops in ICES area VIId (110mm).

Autumn 2025

Six out of the nine sites sampled for the Autumn 2025 survey (Figure 20) have peaks in their size frequency distribution for a class above the MCRS (>110mm). All of the remaining sites have distribution peaks in the size class below the MCRS (105 to 110mm).

Looking at specific site differences within Autumn 2025, a Dunns post-hoc test found that median width was statistically significantly lower at (at least $p < 0.05$):

- Forts (106mm) in comparison to Portsmouth Bank (113mm), Ryde Middle (118mm), and Southsea Spit (116mm),
- St Helens (108mm) and Ryde (109mm) in comparison to Southsea Spit (116mm).

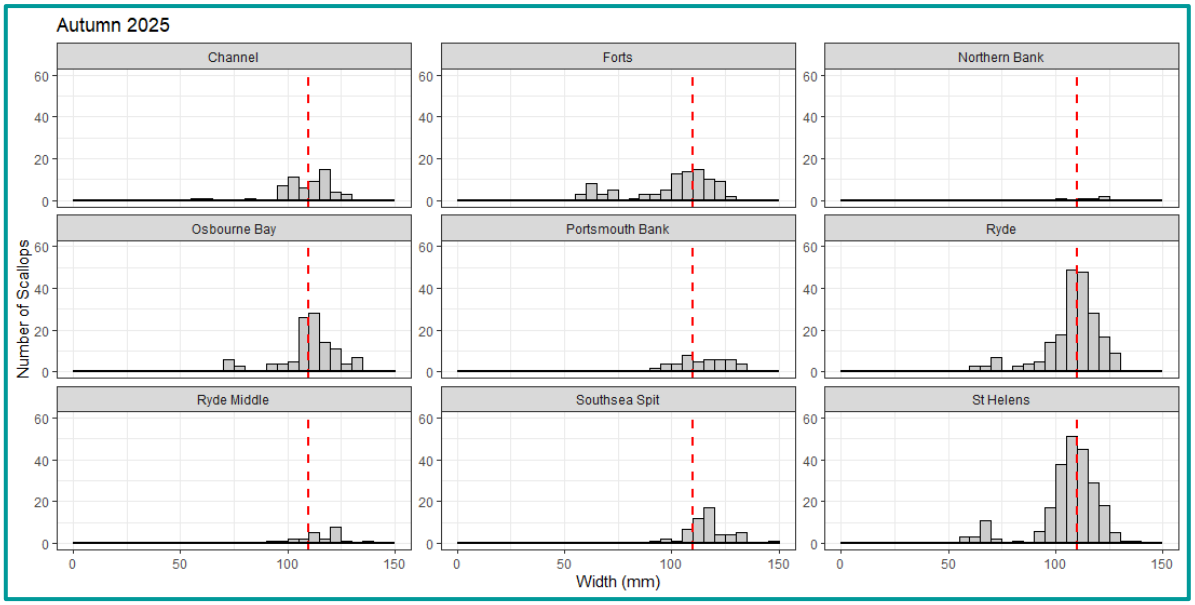

Figure 20: Width of scallops (mm) across all beds sampled in the Autumn 2025 survey. The red dashed line represents the Minimum Conservation Reference Size of King Scallops in ICES area VIId (110mm).

3.4 Catch Per Unit Effort (CPUE) – Queenie Dredge

Spring 2025 was the first time Southern IFCA deployed a modified Queenie dredge, with 70mm belly rings, in its survey, with the intention of sampling a higher proportion of the undersized scallop population (which industry standard N-Viro dredges are set up to minimise the retention of) and so gaining a greater understanding of recruitment within the fishery. Here, results from analyses of the impact of dredge type and survey are analysed. At this time the Queenie dredge dataset has not been running long enough to be able to draw trends in either CPUE or width, but it is intended to continue to deploy this methodology to build up a dataset that allows increased understanding of population trends within the Solent Scallop fishery.

3.4.1 Influence of Dredge Type on Catch

Kruskal-Wallis tests were run on the CPUE values obtained when the N-Viro dredge and the Queenie dredge were run alongside each other for both the Spring 2025 and Autumn 2025 surveys (the Queenie dredge was not deployed in Winter 2025). For Spring 2025, no statistically significant difference in median CPUE was found for the total sampled population ($p = 0.115$) or the under MCRS sampled population ($p = 0.616$) but was found between the median CPUE value of the two dredges for the over MCRS sampled population ($p < 0.01$) (Figure 21). For Autumn 2025, no statistically significant difference in median CPUE was found for the total sampled population ($p = 0.169$), over MCRS sampled population ($p = 0.0703$) or under MCRS sampled population ($p = 0.542$).

At a site level, Kruskal-Wallis tests found the median CPUE value of catch sampled in the Queenie dredge to be statistically significantly lower than that in the N-Viro dredge for:

- Ryde, in Spring 2025 and Autunm 2025, for both the Total population sampled and the population Over MCRS sampled ($p < 0.05$),
- Osbourne Bay, in Spring 2025 and Autumn 2025, for both the Total population sampled and the population Over MCRS sampled ($p < 0.05$),

- Forts, in Spring 2025, for the population Over MCRS sampled ($p < 0.05$).

A Kruskal-Wallis test run on the width values of all scallop sampled when the N-Viro dredge and the Queenie dredge were run alongside each other, found a statistically significant difference between median values for both the Spring 2025 ($p < 0.001$) and Autumn 2025 ($p < 0.001$) surveys (Figure 22). At a site level, Kruskal-Wallis tests found median width value of catch sampled in the Queenie dredge to be statistically significantly lower than that in the N-Viro dredge for:

- Channel, in Spring 2025 ($p < 0.05$) and Autumn 2025 ($p < 0.001$),
- Forts, in Spring 2025 ($p < 0.001$),
- Osbourne Bay, in Autumn 2025 ($p < 0.001$),
- Portsmouth Bank, in Spring 2025 and Autumn 2025 ($p < 0.001$),
- Ryde, in Spring 2025 ($p < 0.05$) and Autumn 2025 ($p < 0.001$),
- Ryde Middle, in Spring 2025 ($p < 0.05$),
- St Helens, in Spring 2025 and Autumn 2025 ($p < 0.001$), and
- Southsea Spit, in Autumn 2025 ($p < 0.001$).

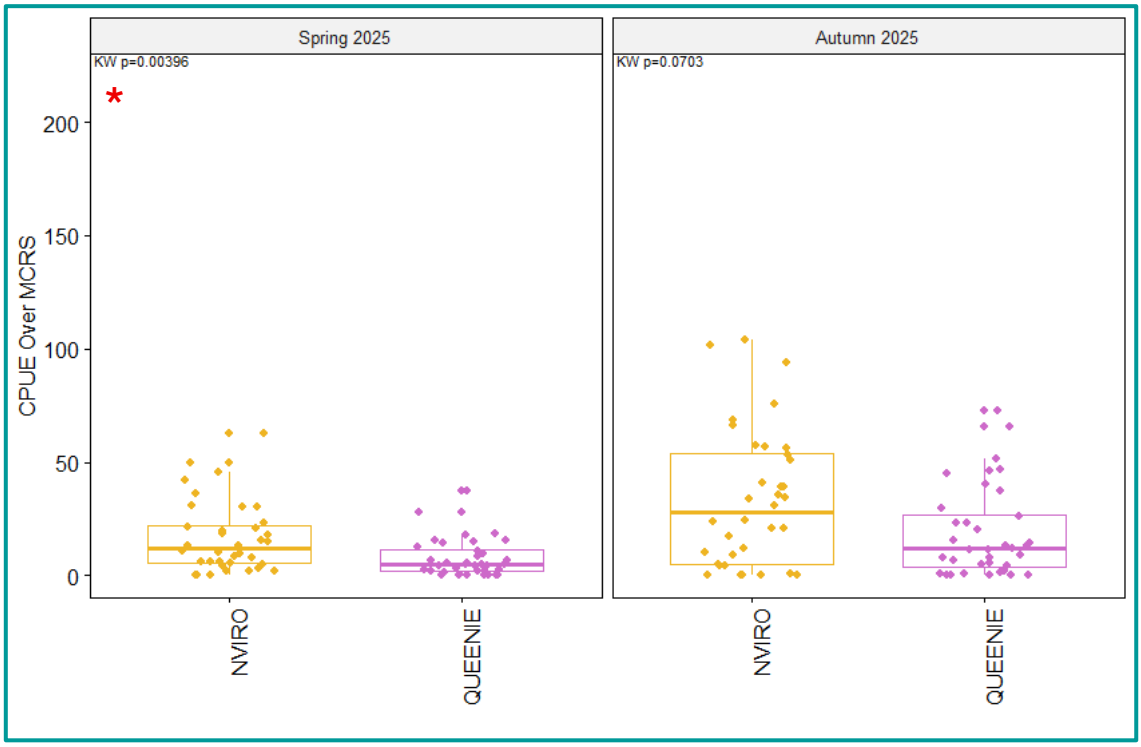

Figure 21: Catch per Unit Effort (kg/m/hr) of all sampled scallops over the Minimum Conservation Reference Size caught in each of the two dredges used during the 2025 survey programme. The red asterix indicates a statistically significant difference between the median CPUE values of the dredges.

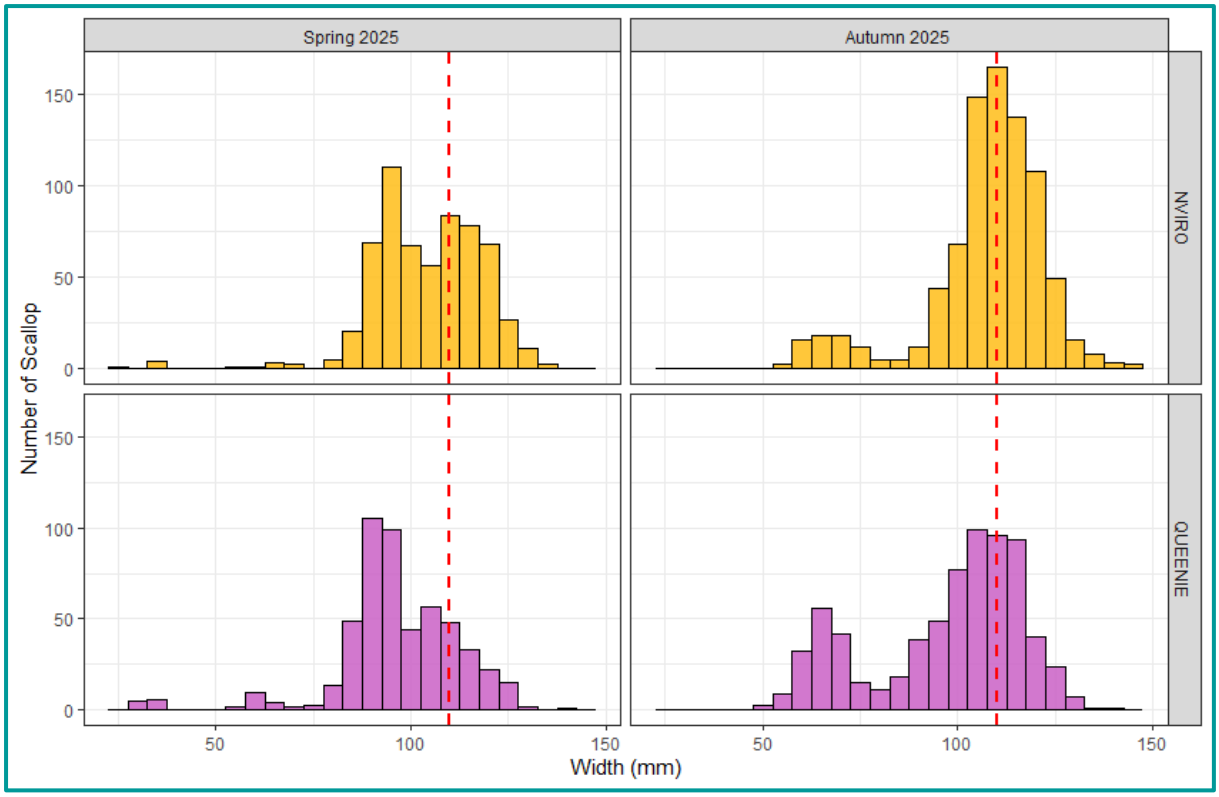

Figure 22: Histograms displaying the width (mm) of all scallops sampled by both dredges used in the 2025 survey programme.

3.4.2 CPUE trends between Surveys for Queenie Dredge

A Kruskal-Wallis test run on CPUE values obtained from just the Queenie dredge during its deployment in the Spring and Autumn 2025 surveys found a statistically significant increase in median CPUE for Autumn 2025 for the portion of the population Over MCRS ($p < 0.05$) (Figure 23), but not for either the Total sampled population or the population Under MCRS.

A post-hoc Dunns test run on the sampled population Over MCRS found a statistically significant increase between the median CPUE values in Spring 2025 and Autumn 2025 for the sites Forts ($p < 0.05$) and St Helens ($p < 0.01$) (Figure 25).

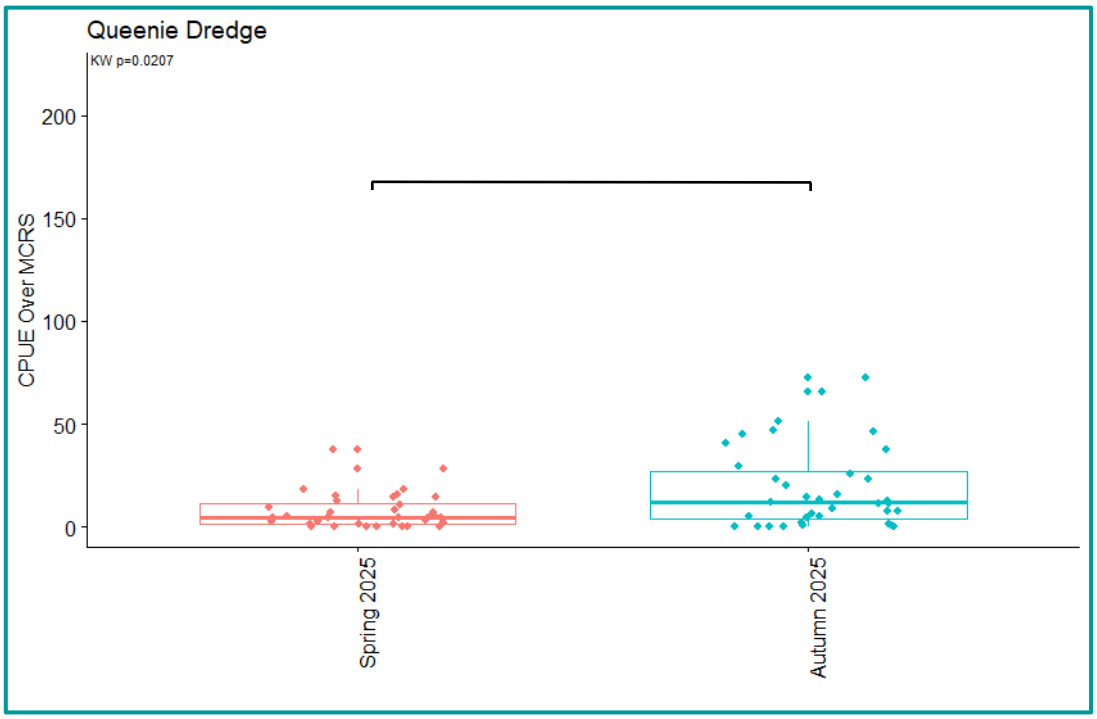

Figure 23: Catch per Unit Effort (kg/m/hr) of scallop over the Minimum Conservation Reference size sampled in the Queenie dredge for the surveys during which it was deployed in 2025. The bracket indicates a statistically significant increase in median CPUE seen from Spring 2025 to Autumn 2025 ($p < 0.05$).

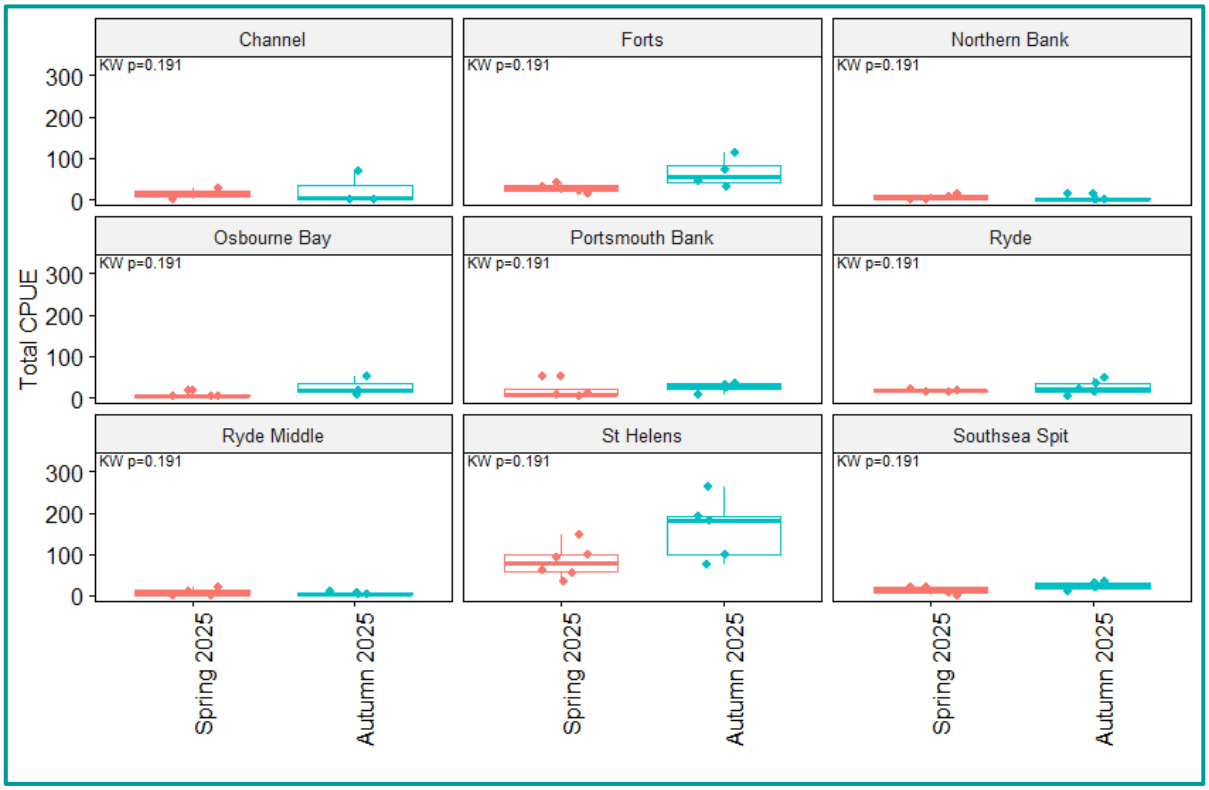

Figure 24: Catch per Unit Effort (kg/m/hr) of the Total population scallops sampled in the Queenie dredge for the surveys during which it was deployed in 2025.

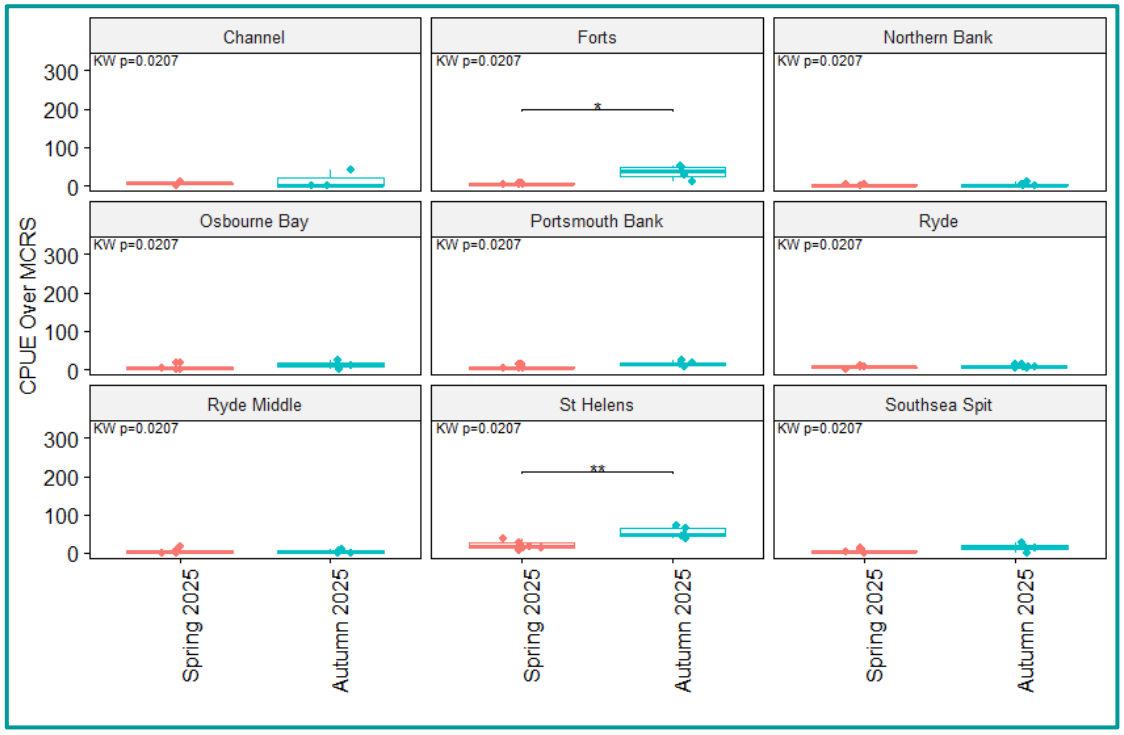

Figure 25: Catch per Unit Effort (kg/m/hr) of the over Minimum Conservation Reference Size (MCRS) scallops sampled in the Queenie dredge for the surveys during which it was deployed in 2025. The brackets indicate a statistically significant increase in median CPUE seen from Spring 2025 to Autumn 2025 (* = $p < 0.05$, ** = $p < 0.01$).

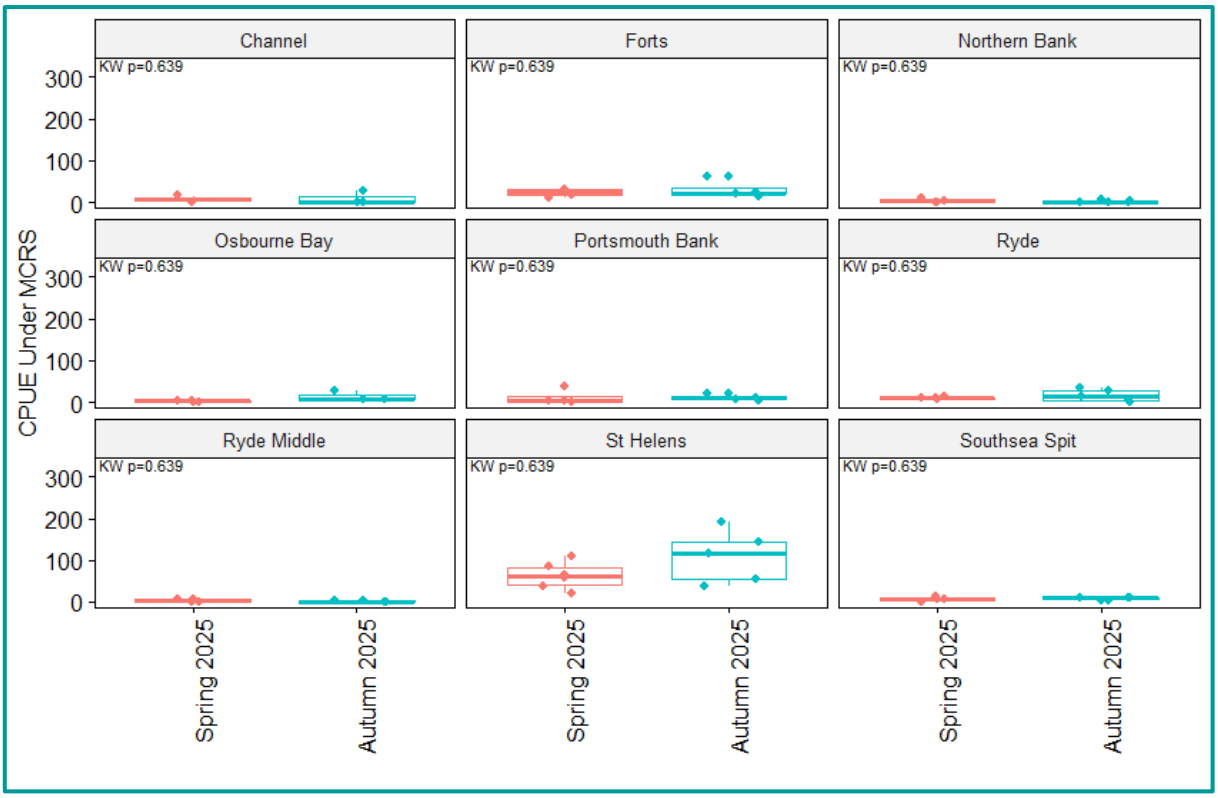

Figure 26: Catch per Unit Effort (kg/m/hr) of the under Minimum Conservation Reference Size (MCRS) scallops sampled in the Queenie dredge for the surveys during which it was deployed in 2025.

A Kruskal-Wallis test run on width values obtained from the Queenie dredge during the Spring 2025 and Autumn 2025 surveys found a statistically significant increase in the median width value for Autumn 2025 (103mm) in comparison to Spring 2025 (95mm) ($p < 0.001$) (Figure 27).

Looking at specific sites, a Dunns post-hoc test found that the median width of sampled scallops using the Queenie dredge was statistically significantly different for Spring 2025 between (at least $p < 0.05$):

- Forts (92mm) and Southsea spit (102mm),
- Osbourne Bay (112mm) and Northern Bank (93.5mm), Portsmouth Bank (95mm), St Helens (95mm), and Forts (92mm).

The Dunns po-hoc also found that the median width of sampled scallops using the Queenie dredge was statistically significantly different between Portsmouth Bank (107mm) and Ryde (98mm) ($p < 0.01$) for Autumn 2025.

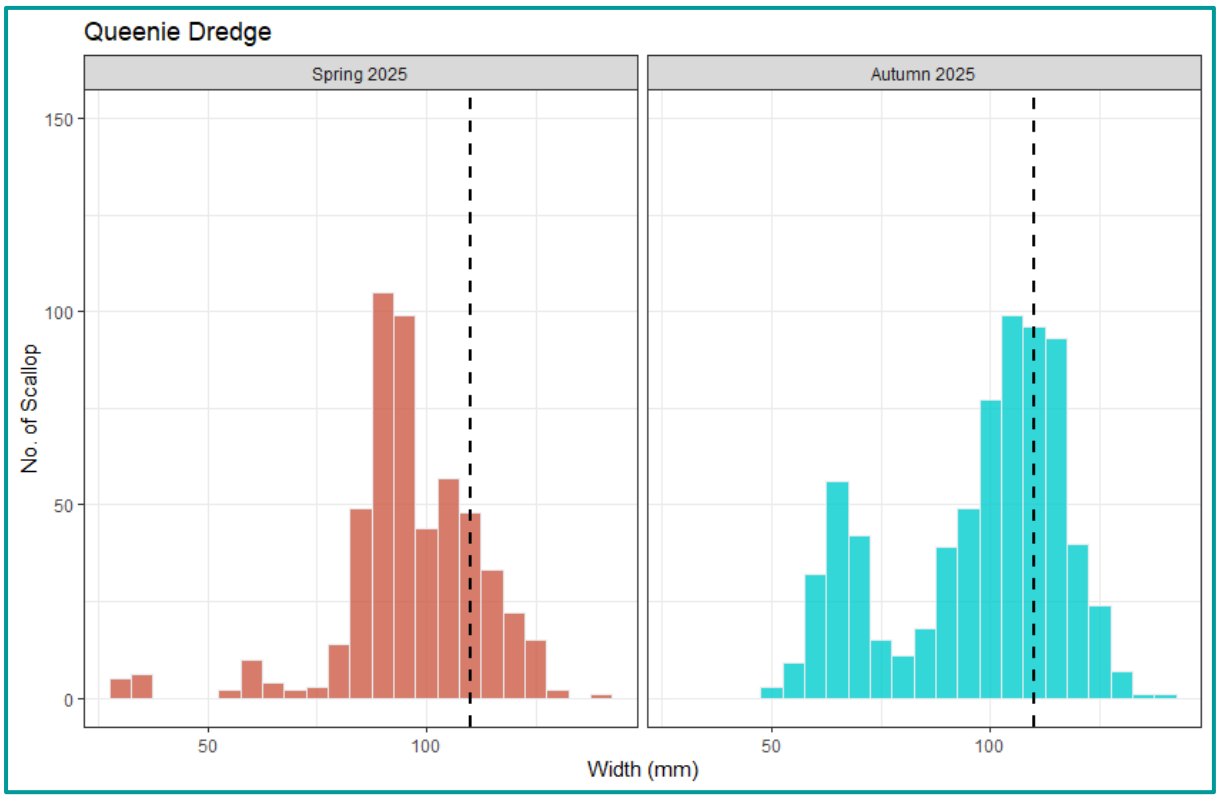

Figure 27: Width frequency measurements for scallop sampled in the Queenie dredge for the surveys during which it was deployed in 2025.

4. Summary

- When comparing **median CPUE** values collected by the **N-Viro dredge**:
    - Statistically significant **decreases** between **Autumn 2024 and Spring 2025** were found across **all three** sections of the sampled population (Figures 12, 13 & 14).
    - A statistically significant **increase** was found for the **Over MCRS** portion of the sampled population between **Spring 2025 and Autumn 2025** (Figure 13).
    - Statistically significant **decreases** between **Autumn 2024 and Autumn 2025** were found across **all three** sections of the sampled population (Figures 12, 13, & 14).
    - At a **site** level:
        - a **decline** was seen for **all three** sections of the sampled population at **all sampled sites** between **Autumn 2024 and Spring 2025** (Table 1).
        - For **all three** sections of the sampled population, the **majority** of sampled sites saw an **increase** between **Spring 2025 and Autumn 2025** (Table 1).
        - For **all three** sections of the sampled populations the **majority** of sampled sites saw a **decrease** between **Autumn 2024 and Autumn 2025** (Table 1).

- The **total quantity** of King scallop removed from the Solent fishery during the 2024/25 season was **400,300 kg**, which was lower than the 2023/24 season but higher than either the 2021/22 or 2022/23 seasons (Figure 15).
- During the 2024/25 season, the **highest proportion of landings** was removed during **November**, the **first month** the fishery was open. Highest removal during the first month is a consistent trend through the Solent Scallop Fishery timeseries (Figure 15).
- An analysis of data submitted by SDBP fishers on quantity of scallop landed throughout the season revealed no strong trends, though a correlation between reporting subzones that saw the highest landings of catch and the subzones that had the highest landings values in the Autumn 2024 surveys can be seen.

- Looking at comparisons of **width** values collected by the **N-Viro dredge**, a statistically significant **increase** in median width of sampled scallops was seen between **Spring 2025 and Autumn 2025** (Figure 17).

- When comparing the performance of the N-Viro and Queenie dredges as they **run alongside each other**, to detect for **influence of dredge type**, a statistically significant **difference** was found for the sampled population **Over MCRS** only, with the median CPUE **lower** in the **Queenie** dredge (Figure 21).
- When comparing **median CPUE** values collected by the **Queenie dredge**, a statistically significant **increase** between **Spring 2025 and Autumn 2025** was seen for the **Over MCRS** portion of the population (Figure 23).

5. Survey Outputs – Management of the Solent SCE Fishery

Data collected through the Solent Scallop Survey helps inform management of the Solent SCE Fishery under the Solent Dredge Permit Byelaw (SDPB) to ensure that fishing activity remains sustainable. The Management Intentions Document which supports the SDPB states that "unsustainable will be determined by the Authority based on a number of considerations which

may include the Catch Per Unit Effort (CPUE)…and any other evidence the Authority deems to be relevant".

CPUE is a recognised measure for the long-term monitoring of a fishery, providing a measure of target species abundance. A decreasing CPUE would suggest that the target species are unable to support the current level of harvesting.

From the 2025 survey data, key points were noted:

- That the Autumn 2025 survey data is statistically significantly lower than the Autumn surveys in 2022, 2023 and 2024 for Total CPUE and CPUE over MCRS and for 2 out of 3 previous surveys for under CPUE under MCRS.
- The number of sites which saw a decline between successive Autumn surveys was highest in 2024/25 compared to 2023/24 and 2022/23.
- While numerical increases were seen between Spring 2025 to Autumn 2025 (fishery closed period), they were smaller than changes over the previous two closed seasons, and only one was significant (over MCRS).
- Landings of SCE were lower in 2024/25 than 2023/24, though this is caveated with knowledge that lower prices for SCE reduced effort within the fishery during the 2024/25 season.

It is important to note that the evidence base used to inform decisions on management in the Solent dredge fisheries, considers, in addition to other variables, a time series of data. Whilst it is recognised that the data set is limited in duration (due to the emergence of the fishery in recent years) it does provide an evidence base which can be used concurrently, alongside proportionate precaution when considering possible management intervention.

On the basis of best available evidence, the Authority resolved to conduct a review of permit conditions under the SDPB to consider the need for additional management intervention in the Solent SCE fishery to support sustainable harvesting. The outcome of this review was that the daily fishing hours for the 2025/26 season for SCE fishery under a Category A Permit were reduced from 08:00-16:00 to 08:00-14:00.

More information on the review can be found on the Southern IFCA website under the agenda for the Extraordinary Meeting of the Technical Advisory Sub-Committee on 20th October 2025 and the associated meeting minutes, available via this page: The Authority : Southern IFCA.