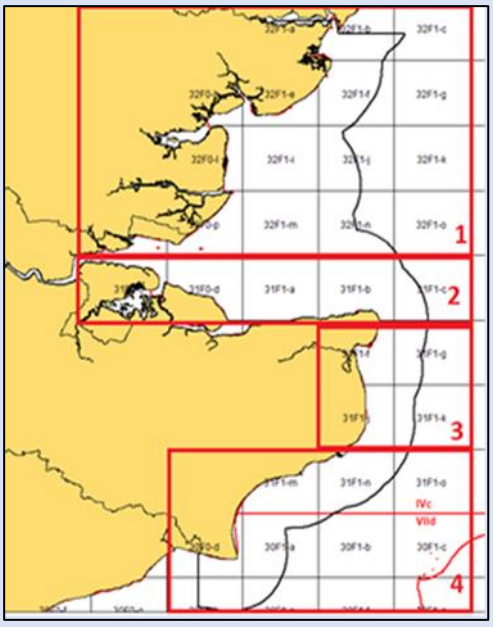
Stakeholder information document - WHELKS

- **Management** – in January 2017, KEIFCA Members approved recommendations to increase riddle bar spacing from 22mm to 25mm and to increase the number of escape holes in each whelk pot to 10. These changes came into force in April 2017.
- **Research** - Members also approved funding for an independent research project to look at differences in size at maturity and the growth rates of populations from the 4 whelk areas in the KEIFCA district.
- **Sustainability** - to ensure sustainability of our district's whelk they must be allowed to breed at least once before being fished. Whelks breed during November-January each year, but they do not all breed at the same size; breeding size varies from place to place.

Project overview

- **Why -** It is widely known that whelks vary in size considerably from area to area. In Shetland for example whelks reach maturity at 84mm compared with 58mm in Jersey. In order to get a better understanding of the size variance in whelks in our district, samples from each of the 4 KEIFCA areas were collected and measured.
- **What and when -** 250 whelks were collected by 4 whelk permit holders, during their regular fishing trips within a 2 week period in June 2017. A total of 1,000 whelks were collected and sent to Dr Phil Hollyman at Bangor University to be measured, dissected and analysed to establish gender and maturity.
- **Where and who –**



Project Participants

Area 1 Essex
David Cotterill,
Silverwood H132

Area 2 North Kent
Ben Cooper, Suvera HL1054

Area 3 East Kent
Lee Turner, Outcast 2 E56

Area 4 South Kent
Chris Gale, Peter Paul FE74

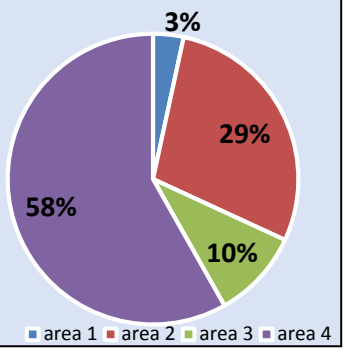
Dr Phil Hollyman is internationally respected as a leading whelk expert, having developed a method for ageing whelks.

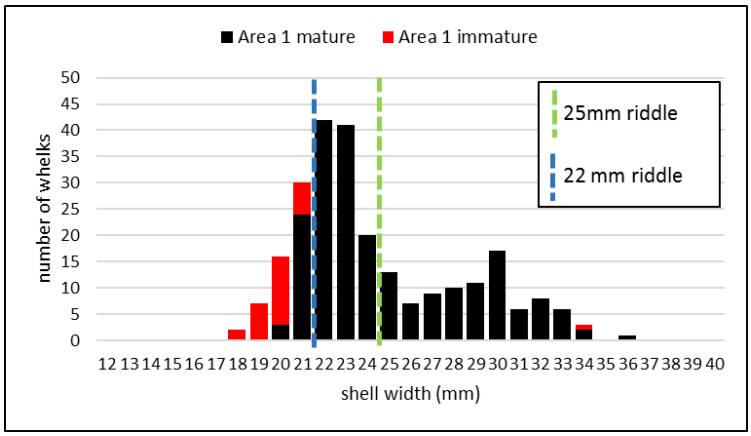
Phil presented at our Technical Panel held in January 2016 and we are delighted to have benefited from his expertise again on this project.

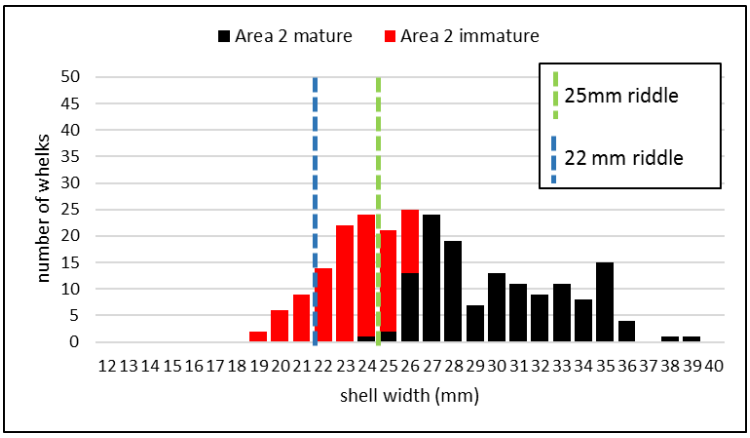
We are confident that the combination of a) the whelk samples being taken from our district by our permit holders and b) the scientific work being carried out by Phil, who is independent from KEIFCA, optimises the credibility of the project and results.

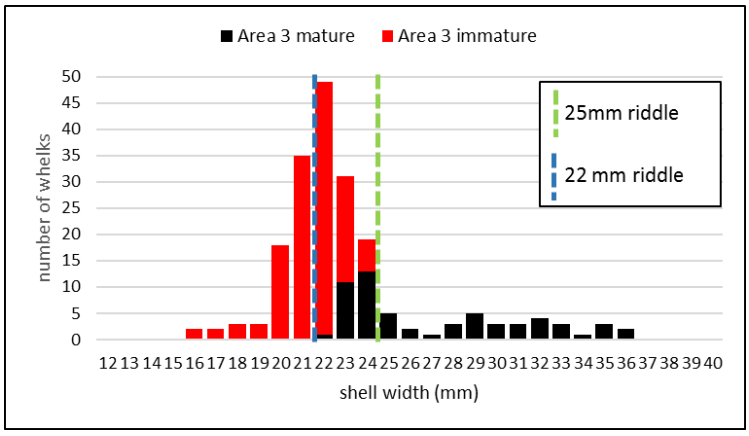
- **Minimum Landing Size (MLS)** - the widespread method used within fisheries management to set MLS is to find the point where the chance of an animal being mature is even (50/50). The EU minimum landing size for whelks is 45mm in LENGTH. However, when riddling whelks it is the WIDTH that is the relevant measurement, so whelks collected for this project were measured in length and width.

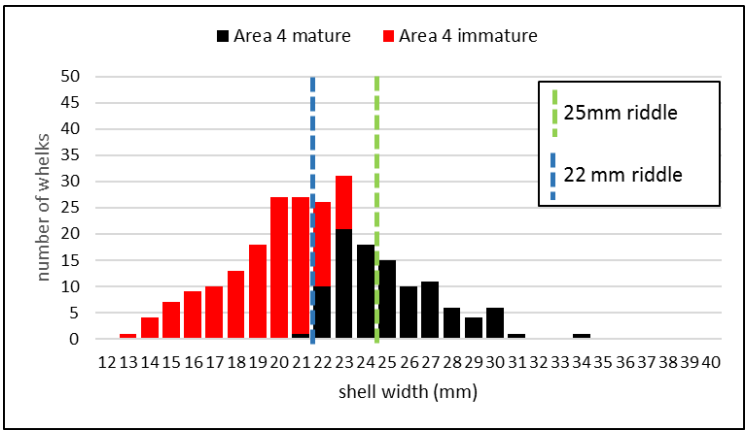
Results – the graphs below show the total number of whelks collected from each of the 4 areas and their size distribution in 1mm increments. The mature whelks are represented by black bars and the immature ones by red bars. However, more research is required to determine a breeding size, not just a maturity size. Due to their limited breeding season, **just because a whelk has reached maturity size does not mean that it has bred.** In the bar charts below, everything to the right of the green dotted line would be retained by a 25mm riddle. The section between the blue and green dotted lines would be retained by a 22mm riddle but rejected by a 25mm riddle. These results indicate that in areas 2, 3 and 4 significant numbers of immature whelks are being protected from fishing mortality by the increase in riddle size. In area 1, where we know that whelks are smaller, the change in riddle size does not affect immature stocks. However, area 1 accounts for just 3% of the whelk fishing effort from April-September 2017, as shown in the pie chart.



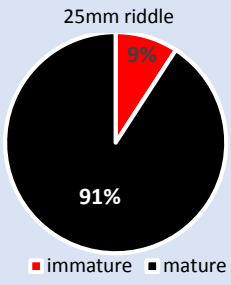


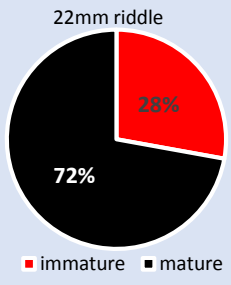






Summary – based on these sample results 91% of the whelks that a 25mm would retain would be mature, compared to 72% if a 22mm riddle were used. A better design of riddle, used correctly, would ensure that only the larger, mature whelks which had bred at least once would be landed, thus ensuring a sustainable whelk fishery in our district.





What next – whelk management, project results and riddle improvements will be reviewed at the next Authority meeting which will be held on 30th November 2017.

If you wish to comment on this document, please email info@kentandessex-ifca.gov.uk by 10th Nov 2017.