

Black marks for the House

Dominic Harris

WESTMINSTER must decide whether it is a museum or a functioning parliament, according to Mhairi Black of the SNP, the youngest member of parliament.

The 20-year-old student who defeated Douglas Alexander in Paisley and Renfrewshire South in May's general election received praise for her maiden speech this month, which was viewed online more than 11m times.

However, she says she is still getting used to some of the intricacies of the House of Commons, and that some of its foibles frustrate her.

In an interview with The Times magazine she said the rule of no clapping in the House is senseless, saying: "So you're not allowed to clap like an ordinary person, but you're allowed to bray like a donkey? I mean, see PMQs, especially the Conservative side, they've got this weird noise they do. It actually sounds like a drunken mob."

Westminster must choose, she said, whether it is a museum or a functional parliament, saying: "It's constantly swinging between the two and, quite often, they are at odds."

She said the moments she hates most at Westminster are those in the chamber, where "you just hear folk talking so much guff".

She added that she thinks the Union is doomed, but that Scotland has given parliament once last chance with its referendum result last September.

"I'd have another referendum tomorrow, but it's not up to me. It's up to the people of Scotland."



Shh! Our cod are trying to spawn

Julia Horton

JUST when they thought it was safe to go back in the water, beleaguered cod face another threat to their survival.

After decades of trawlermen decimating stocks to feed the public's appetite for the ubiquitous fish supper, populations of Atlantic cod have started to recover as restrictions on catches began to restore numbers.

But now a new Scottish study suggests that the fish is also at risk from disturbance caused by its noisy neighbours' demand for offshore wind farms and shipping.

Scientists have found evidence that man-made noise causes stress in cod, which significantly reduces their breeding success over time.

Although the research involved laboratory fish, experts state that the sound levels were similar to those from marine wind turbines and traffic – raising fears that

reproductive rates in wild stocks could fall too.

And while captive fish cannot swim away to avoid stressors, wild cod can, which could further deplete valuable fishing grounds.

Andrew Davie, co-author of the Stirling University study, said: "The sound levels that we exposed the fish to would be at a volume and frequency which is comparable to something you would experience around an offshore wind turbine, certainly during construction."

"The noise from fishing boats would depend on factors including how close they were, but if there were lots of them that could potentially create sound levels like this too. It's not in our remit to look into how this could affect wild fish but I certainly suspect it has an impact in the wild as well and I hope someone will look into it."

The research, published this month in the journal *Aquacultural Engineering*, investigated the impact on laboratory ani-

mals of typical man-made noise at fish farms, such as the sound of someone walking around, which fell between a frequency range of 100–1000 Hz. Levels of the stress hormone cortisol were found to be higher in cod that were exposed to noise of that type.

Captive cod subjected to a similar intensity and frequency noise range every day during the spawning period showed a "significant" drop in total egg production and fertilisation rates, more than halving the number of viable embryos produced.

Authors stated that while laboratory results could not be extrapolated directly without further study, "the implication that noise could ultimately impact reproductive performance in Atlantic cod should not be overlooked".

Given the "notable increase

in offshore engineering" in cod spawning grounds more research was needed to determine any impact of wind farms on wild stocks, they said.

The Scottish Fishermen's Federation dismissed fears over noise from trawlers as "a red herring".

Its spokesman Bertie Armstrong said: "Noise from boats has not manifested itself as a problem in the past and the fishing fleet has never been smaller so I don't think with all the other marine traffic that trawlers are a significant inrunner."

But with plans for several big offshore wind farms in Scottish waters he said: "We would like to know what the effect of these might be."

The Marine Conservation Society also backed calls for more research and stressed that despite the recent recovery some cod stocks remained in danger.

A spokeswoman said the study suggested that noise

could be one of a "number of factors influencing this recovery".

Green energy industry body Scottish Renewables said a UK-wide underwater noise registry currently being established to help meet European Union directives would help improve knowledge of the impact of sound.

A spokeswoman added that by combating climate change, wind farms would protect the sea from "the greatest threat" to the health of marine environments.

The Scottish government said the renewables industry already took mitigation measures to reduce the potential impact of construction on cod by timing wind farm building work to avoid spawning periods.

A spokeswoman added that wind turbines also appeared to produce positive effects, acting as an artificial reef which attracted cod and other wildlife.

Atlantic cod breeding could be affected by issues such as noise from trawlers

