



Sourcing seagrass seed for restoration

Seagrass restoration involves expanding existing meadows or starting new populations. To be able to grow seagrass (common eelgrass and dwarf eelgrass in the UK) we need either seeds, or small sections of live seagrass plants for transplanting.

How we collect seeds

Due to a genetic difference between west and east coast seagrass species in Scotland, we were required to collect seed from the east coast. As a result, Restoration Forth partners chose to collect seeds from the large and healthy meadows in Orkney.

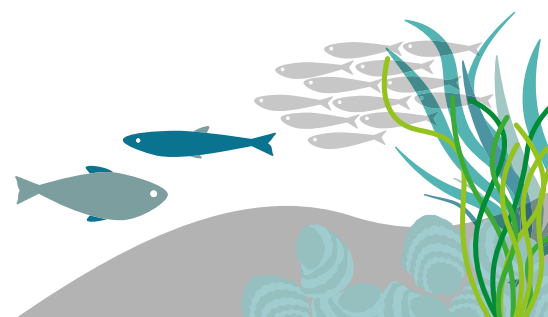
We visited Orkney in 2022 to choose the meadows that could provide seeds for restoration in the Firth of Forth. Three donor meadows were selected based on their accessibility, extent, condition and reproductive status. We undertook detailed surveys on the three chosen meadows, to:

- Assess their size and how many seeds they could provide
- Map the boundary by swimming around the meadow with a GPS tracker
- Capture the spatial extent from above with a drone
- Repeat these processes on visits each year to monitor any impacts on the donor meadows

NatureScot provided specific guidelines on how to avoid causing damage to the meadows. They also set limits on the numbers of seeds we could collect and guidance on how to collect them. We cleaned all equipment before entering Orcadian waters to ensure that we did not unintentionally transport any species that could damage the local marine environment.

Restoration projects depend on buy-in!

Official permissions from NatureScot and landowners were sought well in advance to collect seeds from Orkney, as these can take a long time to acquire. We also consulted with local communities and stakeholders living in Orkney to encourage local support.



Civic mediators from The Centre for Good Relations led introductory conversations about the project with residents. These discussions gave us an overview of how the project was being received, noting any concerns from residents. Feedback was positive and gave us a range of perspectives from local people.

To ensure community buy-in, we contributed to community events, such as family craft-based activities and information stalls. These offered opportunities to explain the overall aims of the project and gather informal feedback from local people; encouraging Orkney's residents to help with seed picking and join snorkel sessions.

Processing and storing seeds

Seagrass seeds are collected by snapping the reproductive shoot above the root from a seagrass plant. Once these reproductive shoots have been collected in Orkney and transported to the Firth of Forth, the seeds need to be separated from the excess plant material which is known as 'seed processing'.

The collected seagrass is placed in seawater tanks for up to 2 months, to allow the natural separation of seeds from the plant material.

Restoration Forth partner, Project Seagrass, developed a small scale 'seed processing unit' inside a caravan. To increase capacity, we also collaborated with the Firth of Forth Lobster Hatchery as they were already equipped with large, aerated tanks to process the seeds.

We needed volunteers from around the Firth of Forth to manually pick out any remaining seeds. These communal activities provide an accessible, indoor activity for local volunteers to get involved in the project.

Once seeds have been processed, they need to be stored over winter until they are ready to be planted.

