

# The Atlantic Salmon Trust

Putting #WildSalmonFirst

## West Coast Tracking Project



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# Year 2 (2022) -

- West Coast

9 Tagging sites

289 receivers deployed

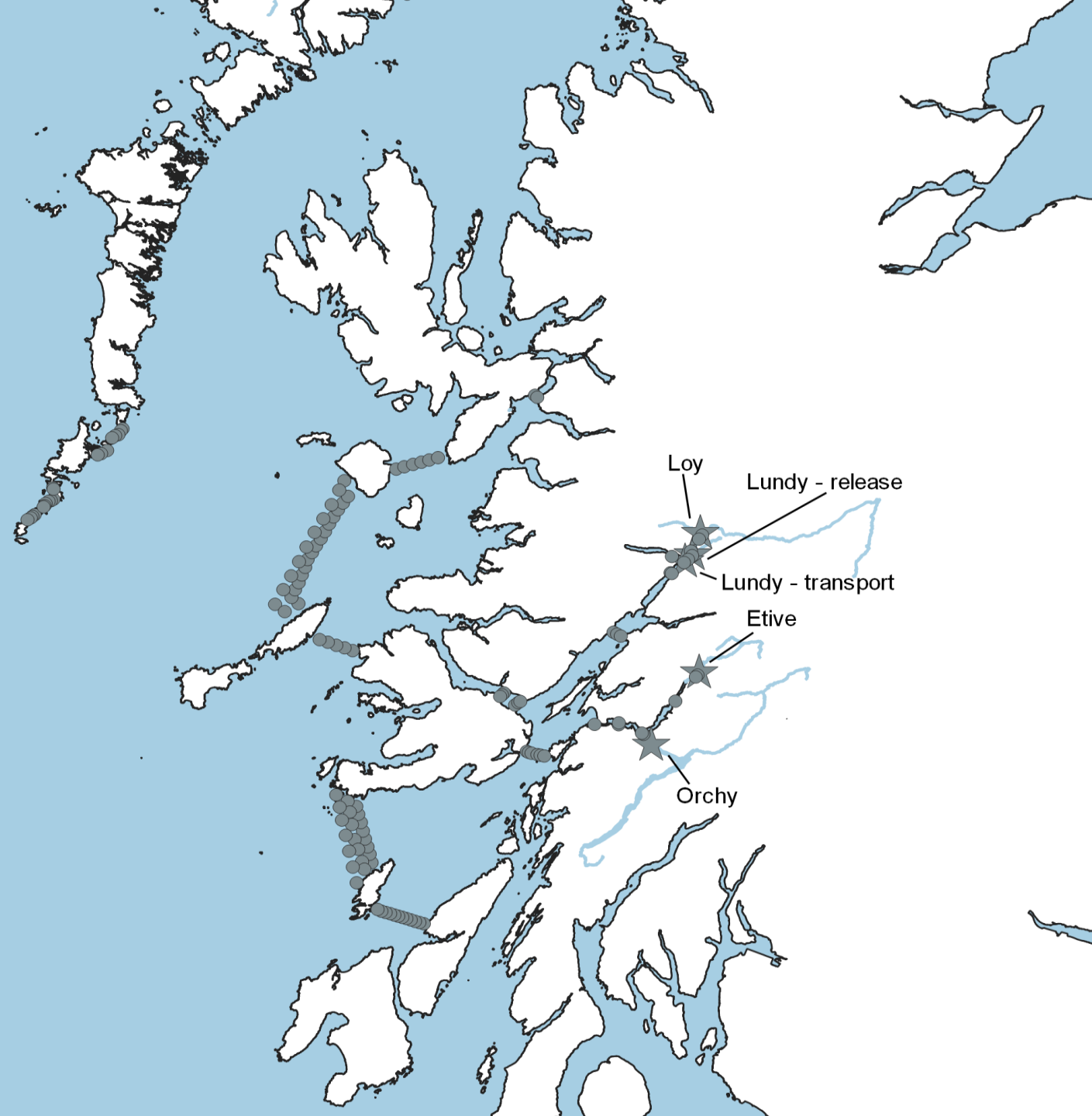
975 salmon smolts tagged

- Argyll

2 tagging sites

R. Etive 77 tagged smolts (13-26<sup>th</sup> April)

R. Orchy 121 tagged smolts (14-27<sup>th</sup> April)



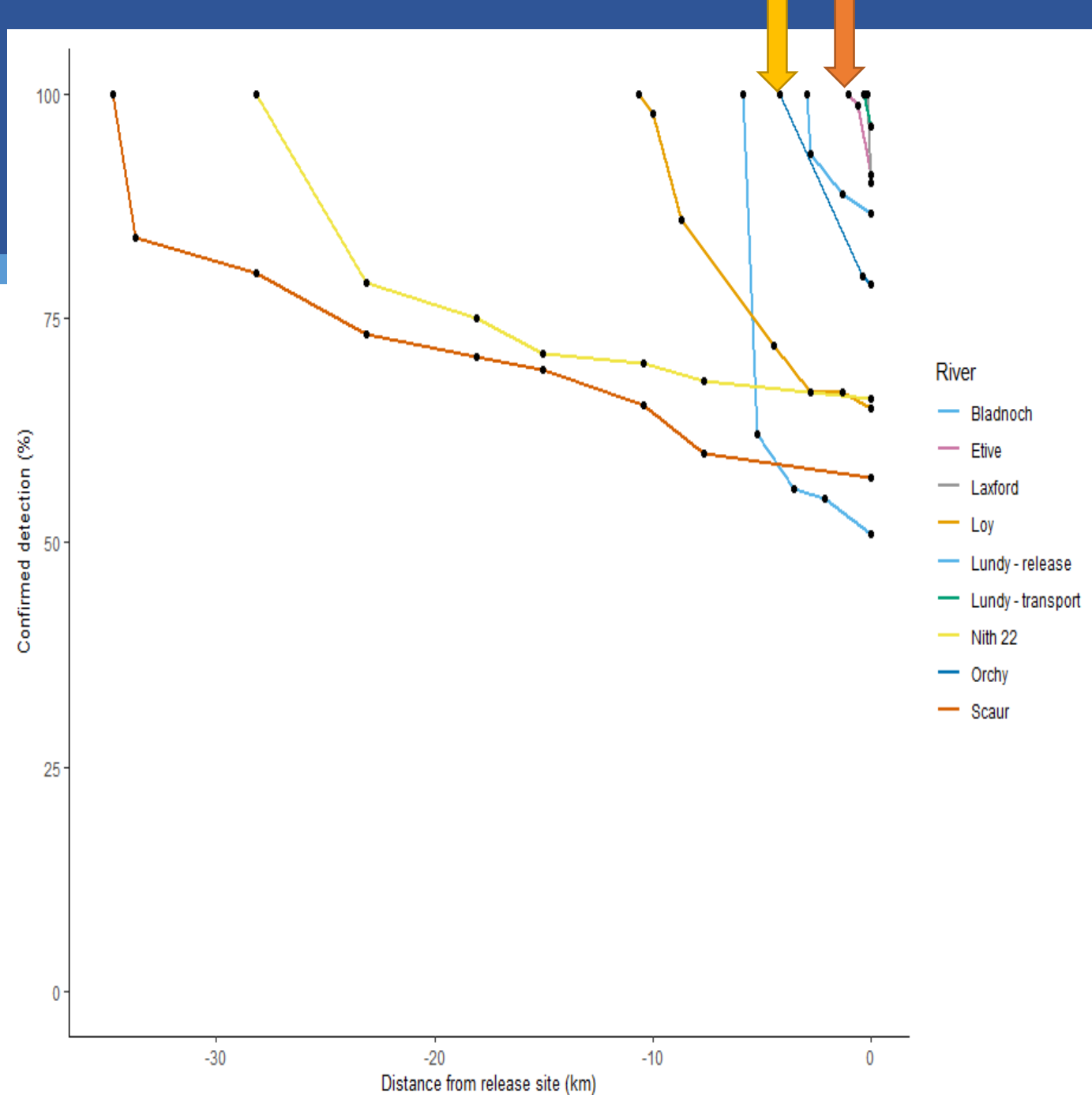


# Year 2 (2022) – Preliminary Results Rivers

% of tagged smolts detected leaving their home river

Etive **91 %** in 2022 (71 of 77 smolts)  
(76 % in 2021)

Orchy **79%** in 2022 (96 of 121 smolts)  
(93 % in 2021)



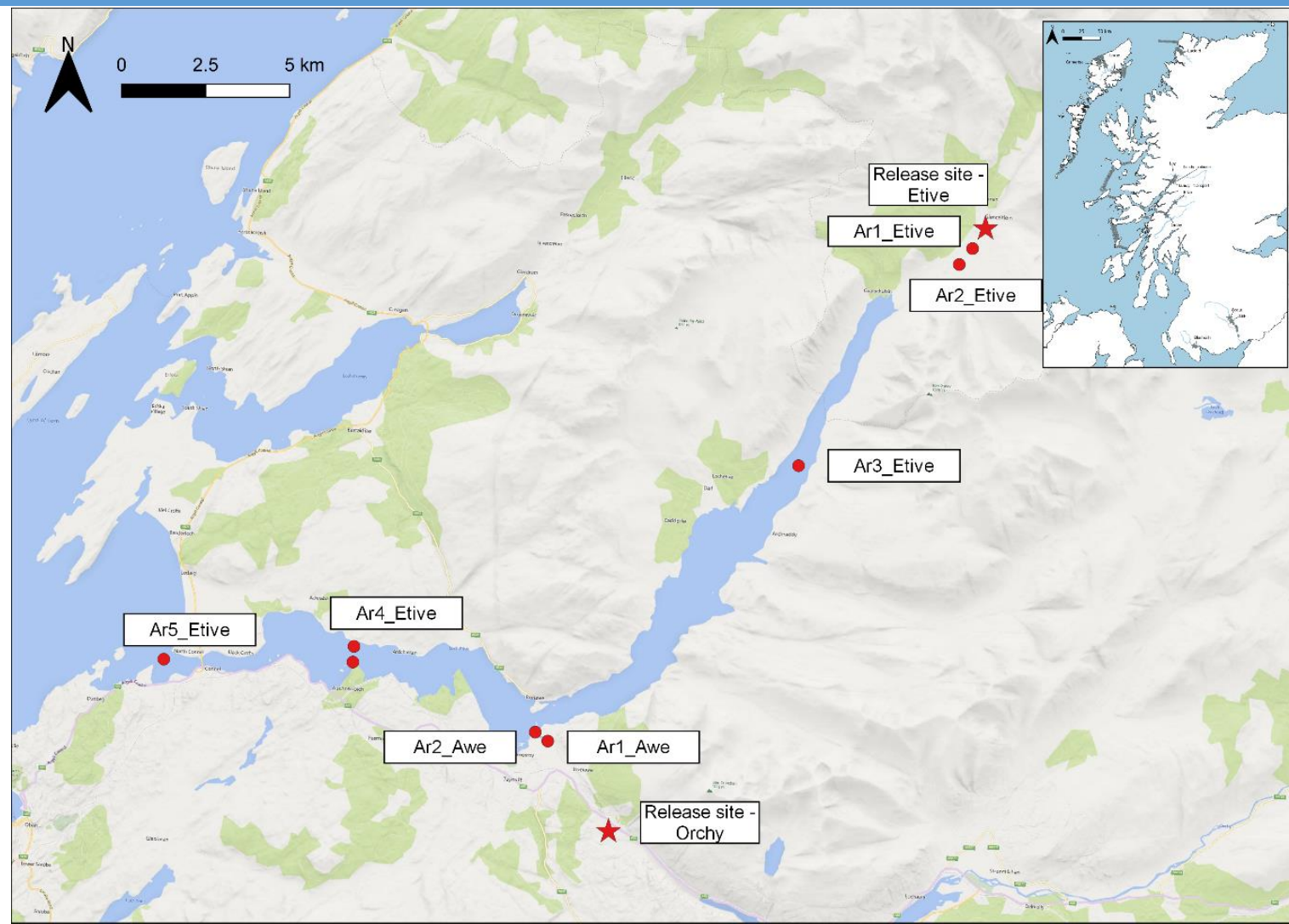


# Year 2 (2022) – Preliminary Results Sea Loch

% of tagged smolts detected  
leaving Loch Etive

Etive **90 %** in 2022 (64 of 71 smolts)  
(92 % in 2021)

Orchy **94 %** in 2022 (90 of 96 smolts)  
(84 % in 2021)





# Year 2 (2022) – Preliminary Results Marine

Tags detected  
of 167 Argyll smolts + Lochy smolts

## Sound of Mull

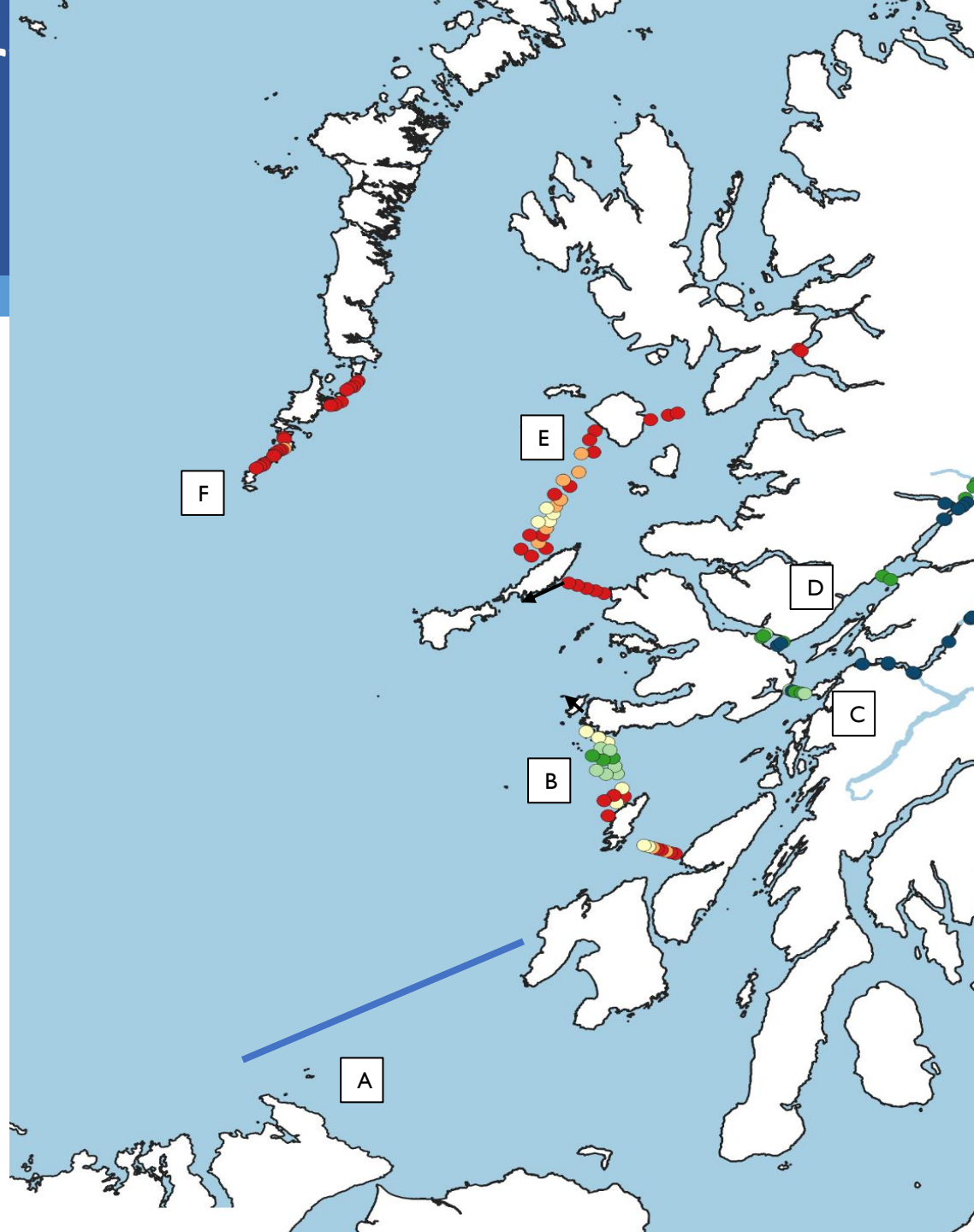
- 37 tags (D – Sound of Mull)
- 5 tags (E – Coll-Rum-Skye)

## Firth of Lorne

- 104 tags (C – Kerrera-Mull)
- 74 tags (B – Iona-Colonsay-Jura)

A – 1 tag (N. Ireland-Islay)

F – 1 tag (South Uist – Barra)

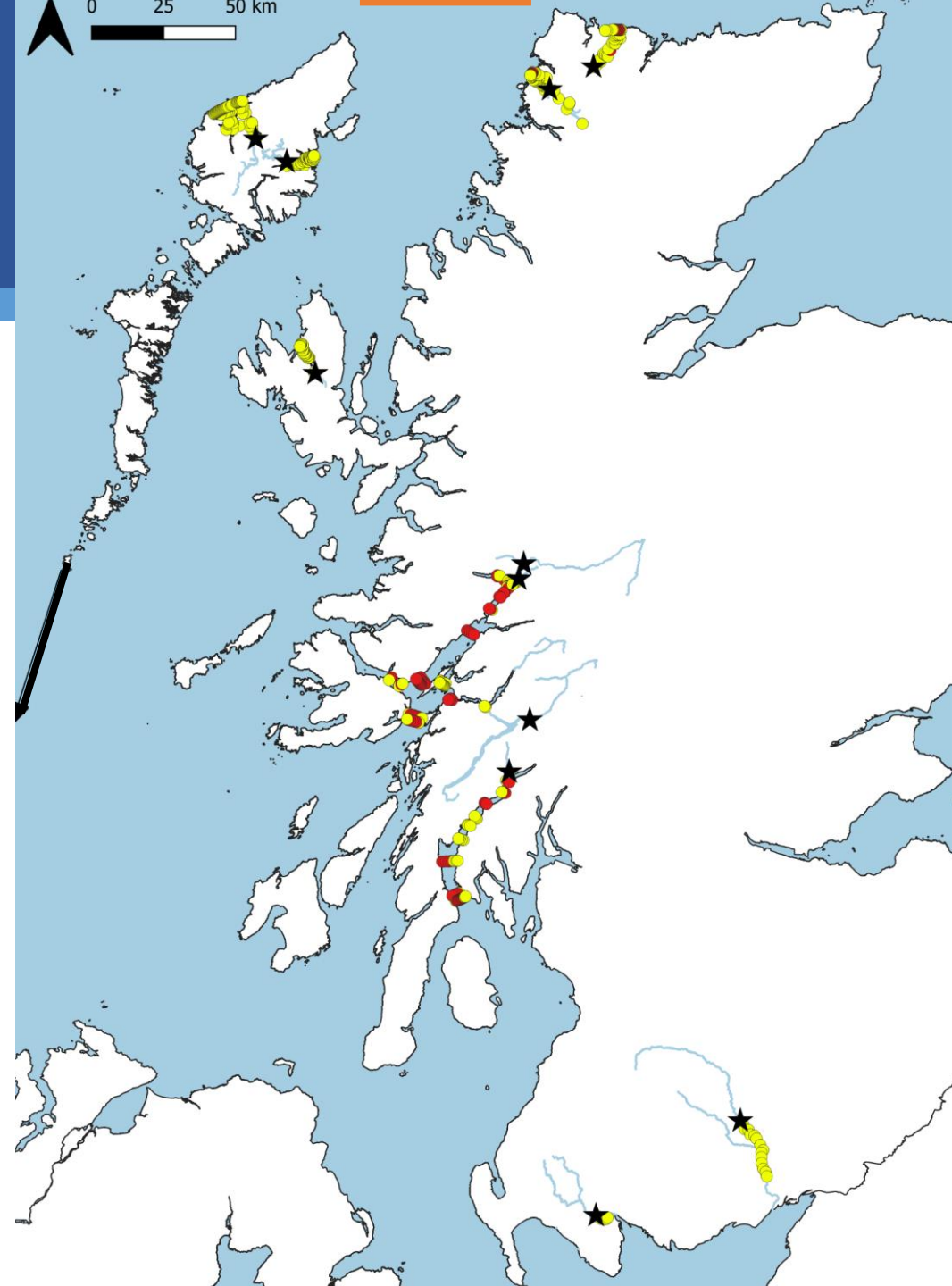




# Year 3 (2023)

## Overall design

- Concentration on sea loch movements to tie in with SEPA's wild salmonid protection zones (sea lice framework).
- Two study sites in Argyll – Orchy & Loch Fyne
- River Orchy: 100 tags (WCSTP) + 50 Awe barrage study
- Loch Fyne: 100 tags (Rivers Aray & Fyne)
- Use of temperature and depth tags
- Marine Scotland conducting study in Loch Fyne



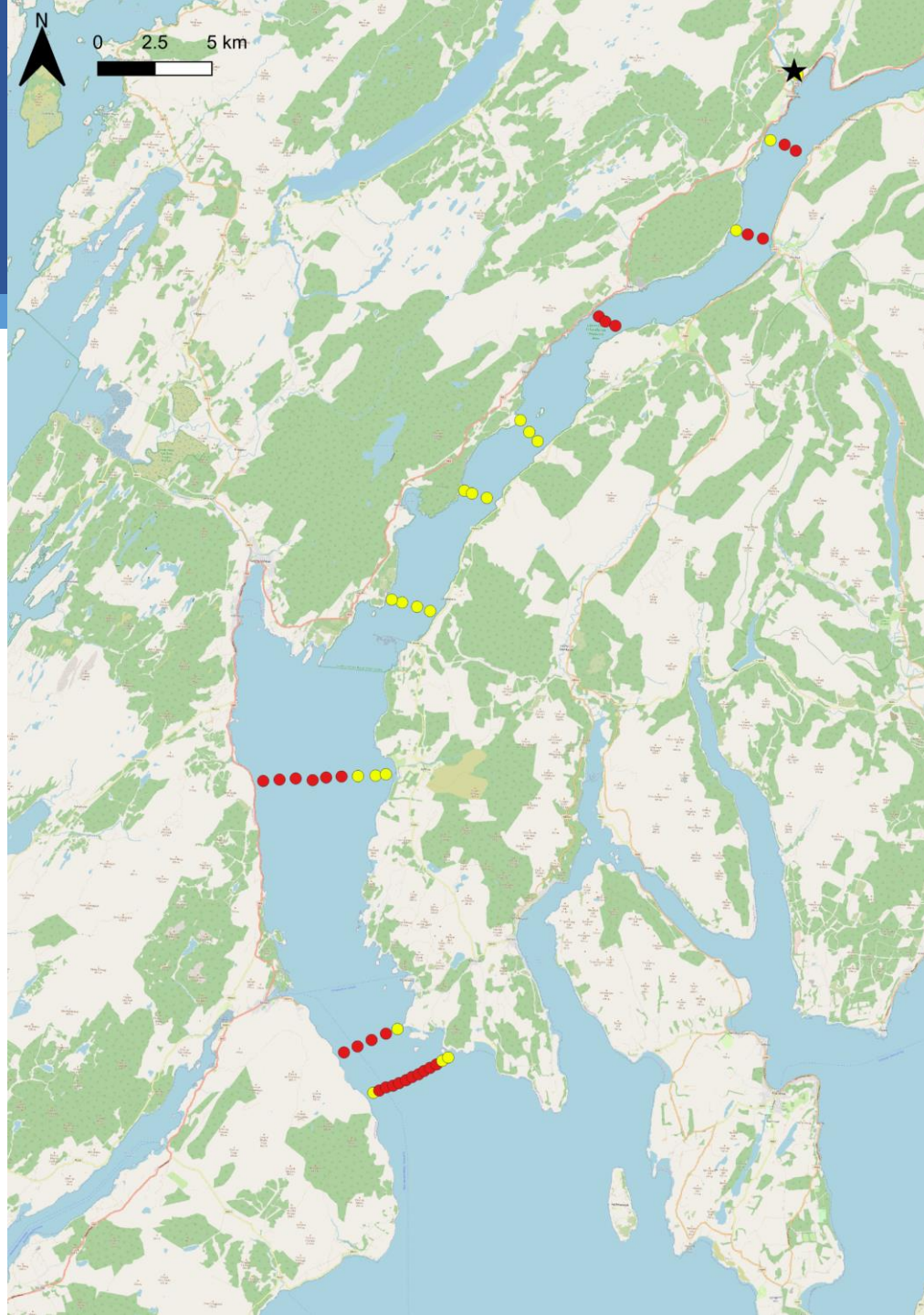


## Linnhe / Sound of Mull & Firth of Lorn Receivers





## Loch Fyne Receivers





# Acoustic tracking of smolts - Pilot Study 2022

## Results Summary

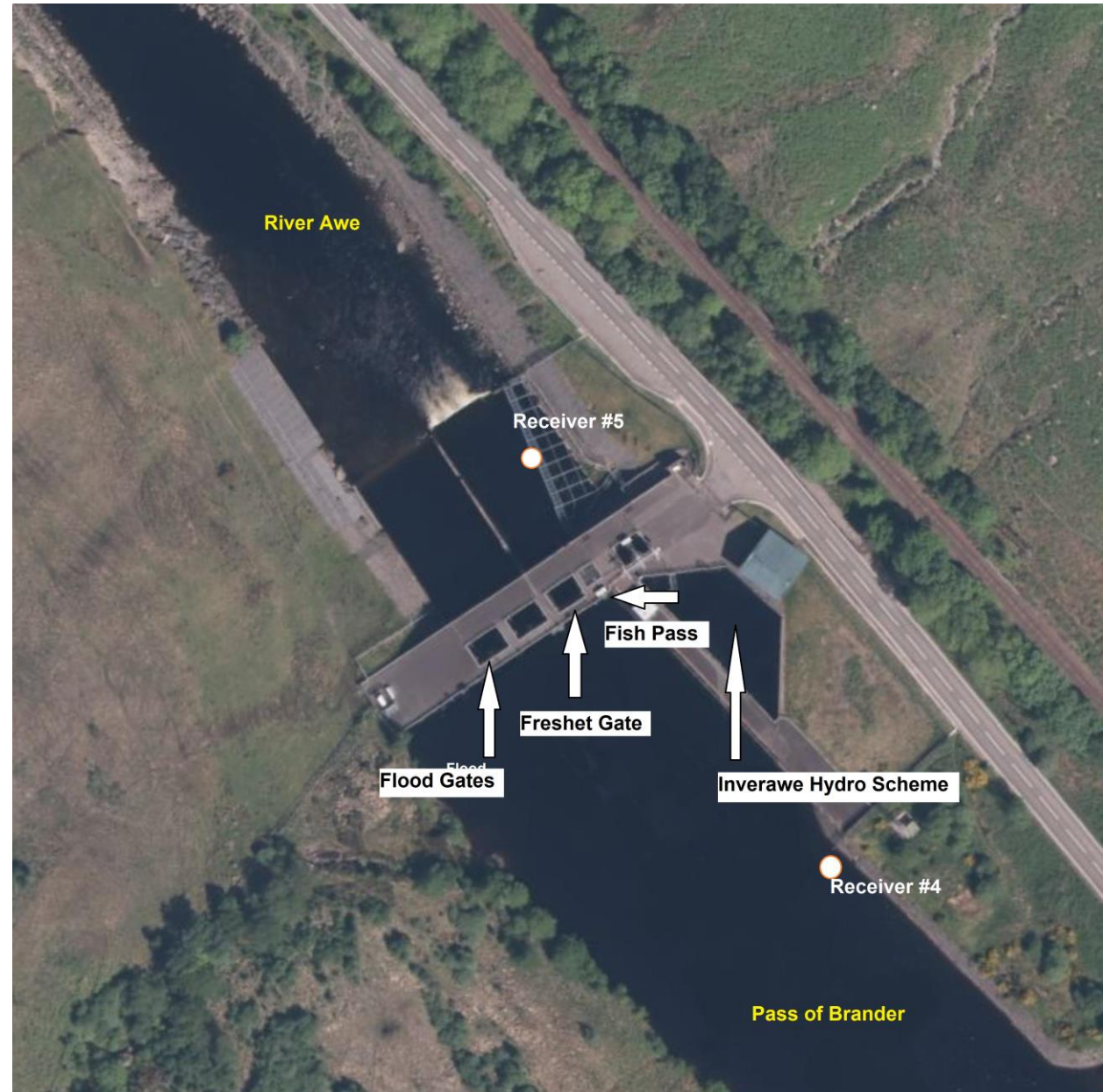
- 25 of 26 (96 %) tagged smolts detected
- 12 of the 25 tags (48%) were not detected downstream of the Awe barrage
- Min. 4 smolts (16 %) were found to have utilised the fish pass, one of which was subsequently detected in the estuary.
- 9 smolts (36 %) were last detected at the estuary of the River Awe.



River Awe downstream fish migration  
- 2023 Study

Four potential migration paths

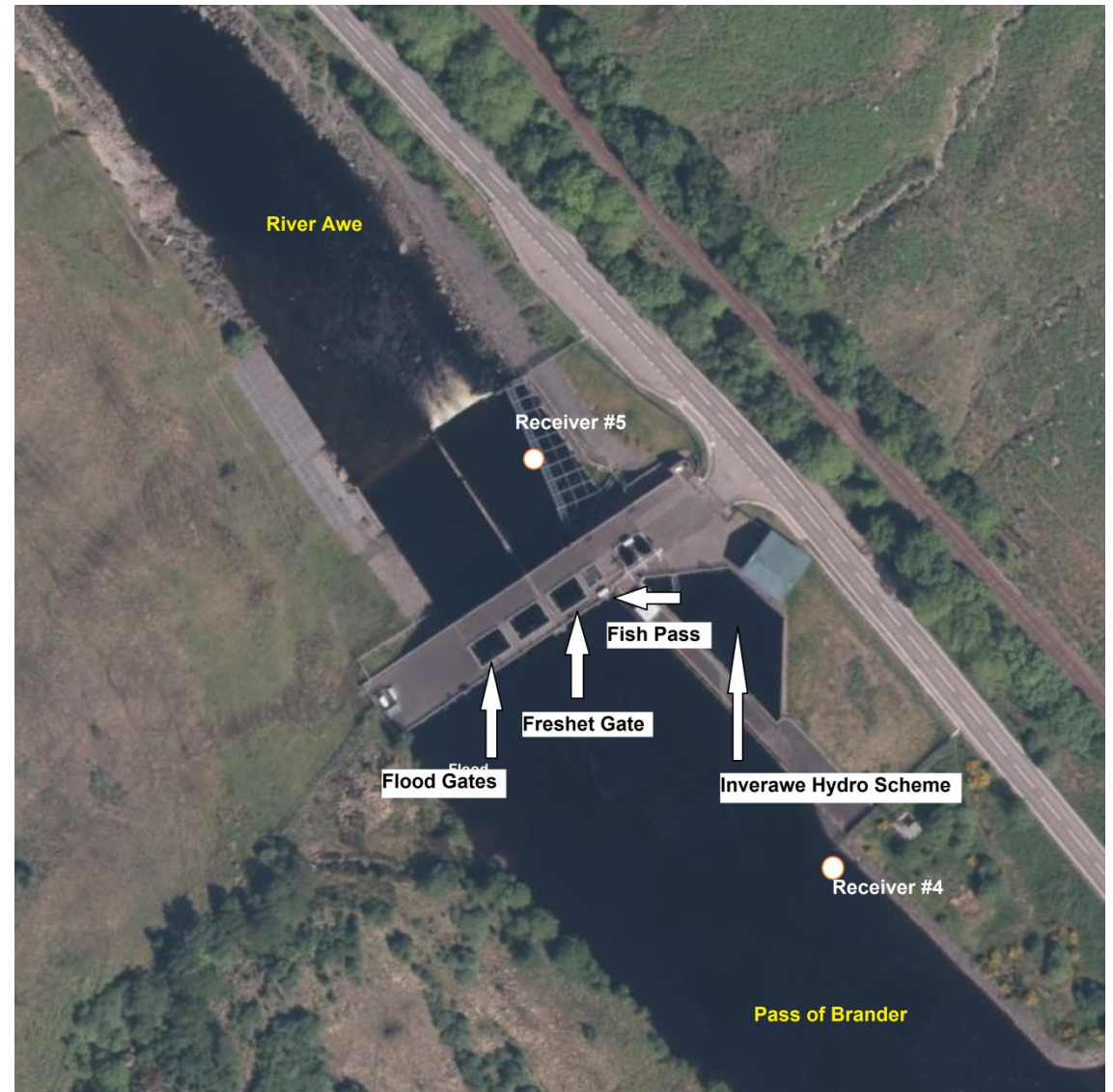
- Inverawe hydro tunnel (when generating)
- Fish pass (constant)
- Freshet Gate (when lowered)
- Flood Gates (Spilling conditions)
- Bulb turbines deliver compensation flow (not accessible to smolts)



## River Awe downstream fish migration – 2023 Priorities

### Consultation – annual review of freshets

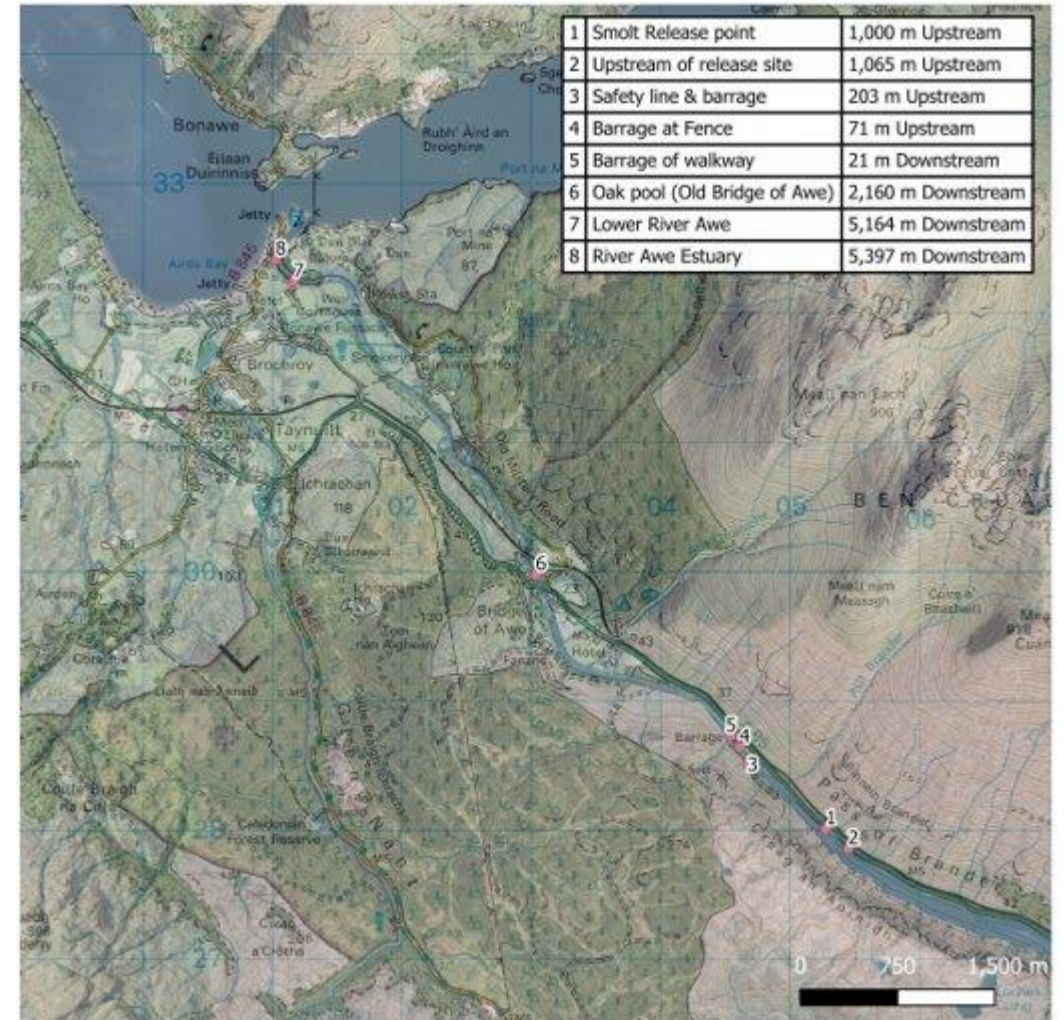
- Current arrangements rely on observation of smolts upstream of the barrage to lower the freshet gate (when Inverawe scheme is not running)
- AFT requested a change; open the freshet gate during the smolt migration (mid-April to mid-June) when Inverawe scheme is not running.
- Arrangements to be discussed at ADRIA / SSE meeting (14/03/23).



# Acoustic tracking of smolts at the Awe barrage - 2023

## Summary

- Increase sample size from 26 (2022) to 50 (2023) tagged smolts
- 10 tags are 'predator' tags to identify if and when a tagged smolt is eaten by a predator
- Increase no. of receivers in the River Awe and detection rates.
- 4 ferox trout tagged in 2022 + 8 aimed for 2023 to identify potential Autumn migration and possible predation of smolts in spring.



# Other work- 2023

## Juvenile fish surveys

- **Core sites** - R. Awe and Orchy Sites
- **Grilse decline** - Loch Awe tributaries
- **NEPS 2023?**

## Other Project development

- **Marine Survival** – MS PIT tagging study to continue in 2023
- **Nutrient / fish productivity studies** - AFT in discussion with Glasgow Uni. on potential research project
- **Riverwoods** – AFT undertaking scoping studies with ACT via Envirocentre to scope potential riparian woodland projects in Argyll (supported by CLLD & ADSFB)
- **ASSES** project results not yet published

