**Group 8 Logbook**

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Falcon Spirit 1 – 3

Estuary Lab 3

MBA Sepia 3 –

Habitat Mapping Lab

RV Callista

Offshore Lab

**01/07/2024 – Falcon Spirit**

High water – 14:30 BST

Weather – 1020 millibars, fair/cloudy, 16-19°C

**Station 61I (50°02.175’N, 4°09.392’W)**

Time: 9:43 BST

Location Depth: 14.1m

CTD:

Niskin 1, 2, 3 – 14m

Niskin 4, 5, 6 – 0.5m

ADCP: SU2024 088

Time – 9:56 BST

Start – 50°20.155’N, 4°09.453’W

End – 50°20.502’N, 4°10.177’W

Zooplankton Trawl

Time – 10:07 BST

Flowmeter Start - 61388

Start - 50°20.502’N, 4°10.177’W

Flowmeter End - 61929

End – 50°20.801’N, 4°09.504’W

**Station 62H (50°21.775’N, 4°10.213’W)**

Time: 10:21 BST

Location Depth: 30.7m

CTD:

Niskin 1, 2 – 28m (at depth)

Niskin 3, 4 – 15m

Niskin 5, 6 – 0.5m

ADCP: SU2024 090

Time – 10:29 BST

Start – 50°21.785’N, 4°10.211’W

End – 50°21.701’N, 4°10.486’W

**Station 63G (50°22.148’N, 4°11.489’W)**

Time: 10:38 BST

Location Depth: 9.6m

CTD:

Niskin 1, 2, 3 – 9m

Niskin 4, 5, 6 – 0.5m

ADCP: SU2024 092

Time – 10:40 BST

Start – 50°22.188’N, 4°11.479’W

End – 50°22.311’N, 4°11.103’W

**Station 64E (50°23.331’N, 4°12.038’W)**

Time: 11:10 BST

Location Depth: 12.3m

CTD:

Niskin 1, 2, 3 – 12m

Niskin 4, 5, 6 – 0.5m

Simultaneous ADCP and Zooplankton trawl.

ADCP: SU2024 094 - Interrupted

Time – 11:03 BST

Start – 50°23.464’N, 4°11.804’W

End – 50°23.328’N, 4°12.049’W

ADCP: SU2024 096

Time – 11:19 BST

Start – 50°23.825’N, 4°12.355’W

End – 50°23.791’N, 4°12.760’W

Zooplankton Trawl

Time – 11:03 BST

Flowmeter Start - 61931

Start – 50°23.464’N, 4°11.804’W

Flowmeter End - 62663

End – 50°23.328’N, 4°12.049’W

**Station 65D (50°23.790’N, 4°12.742’W)**

Time: 11:24 BST

Depth: 14.2 m

CTD:

Niskin 1, 2, 3 – 14m

Niskin 4, 5, 6 – 0.5m

ADCP: SU2024 097

Time – 11:24 BST

Start and End locations missing reference from WinRiver.

**Station 66C (50°24.610’N, 4°12.261’W)**

Time: 11:36 BST

Location Depth: 9.7m

CTD:

Niskin 1, 2, 3 – 9m

Niskin 4, 5, 6 – 0.5m

ADCP: SU2024 099

Time – 11:41 BST

Start – 50°24.616’N, 4°12.246’W

End – 50°24.609’N, 4°12.078’W

**Station 67B (50°26.167’N, 4°11.870’W)**

Time: 11:57 BST

Location Depth: 7.2m

CTD:

Niskin 1, 2, 3 – 7m

Niskin 4, 5, 6 – 0.5m

ADCP: SU2024 101

Time – 12:02 BST

Start – 50°26.175’N, 4°11.891’W

End – 50°26.274’N, 4°11.754’W

**Station 68A8 (50°28.003’N, 4°12.899’W)**

Time: 12:25 BST

Location Depth: 6.7m

CTD:

Niskin 1, 2, 3 – 6.5m

Niskin 4, 5, 6 – 0.5m

ADCP: SU2024 102

No start time or location recorded, reference WinRiver.

**Station 69A6 (50°27.335’N, 4°13.829’W)**

Time: 12:44 BST

Location Depth: 5.2m

CTD:

Niskin 1, 2, 3 – 4m

1 or 3 did not fire at depth

Niskin 4, 5, 6 – 0.5m

ADCP: SU2024 103

Zooplankton Trawl

Time – 13:10 BST

Flowmeter Start - 62664

Start – 50°28.434’N, 4°13.237’W

Flowmeter End - 63368

End – 50°28.347’N, 4°13.461’W

**Station 70A3 (50°28.440’N, 4°13.226’W)**

Time: 13:06 BST

Location Depth: 4.9m

CTD:

Niskin 1, 2, 3 – 4m

1 or 3 did not fire at depth

Niskin 4, 5, 6 – 0.5m

ADCP: SU2024 104

**02/07/2024 Estuary lab**

Chlorophyll measurements – 10-AU fluorometer - Turner Designs

Nutrient analysis

* QuAAtro39 – SEAL analytical
* XY-2 autosampler – SEAL analytical

**03/07/2024 – MBA Sepia**

Based on a map of the geology of the Plymouth Sound (INSERT REFERENCE) we expected to see the following sediment types in the areas we sampled:

* Shell gravel
* Predominantly sand
* Muddy sand
* Mixed mud, sand, gravel
* Sand waves

5 transects were carried out, with each being 0.9 nautical miles.

Line 1

* Start – 50°20.4817’N, 4°09.6790’W
* End – 50°21.0368’N, 4°08.6323’W
* Designated anchorage, previously dredged

Line 2 – try 1

* Start – 50°21.0303’N, 4°8.5206’W
* End – line ended due to interruption from large vessel

Line 2 – 2nd attempt

* Start - 50°21.0233’N, 4°8.5275’W
* End – 50°20.4043’N, 4°9.6230’W
* Designated anchorage, previously dredged

Line 3

* Start – 50°20.3663’N, 4°95712’W
* End – 50°21.0196’N, 4°9.6230’W
* Buoy on path, slightly diverged from intended path

Line 4

* Start – 50°20.9784’N, 4°8.3617’W
* End – 50°20.3228’N, 4°9.5382’W
* Trenches in Anchorage areas

Line 5

* Start – 50°20.2734’N, 4°9.4584’W
* End – 50°20.9051’N, 4°8.3191’W
* Trenches in Anchorage areas
* Few rocks, mainly sandy

Video camera

Initially started by bunny hopping, then progressed to drifting due to the rope not being long enough. Drifted roughly 1-2m above the sea bed for 10 minutes.

Transects

Station 1

* Start – 50°20.7447’N, 4°8.8659’W
* End – 50°20.8360’N, 4°8.6749’W
* 12:06 – 12:16 BST
* 10 minutes

Station 2

* Start – 50°20.8300’N, 4°8.5133’W
* End – 50°20. 9604’N, 4°8.3380’w
* 12:52 – 13:04 BST

Station 3

* Start – 50°20.9655’N, 4°8.6410’W
* Stop – 50°20.7964’N, 4°8.9544’W
* 13:40 – 13:50 BST

Sediment Grabs

3 sediment grabs were carried out for each station that were found to have soft sediment (Station 1, 2).

Grab 1

50°20.7639’N, 4°8.8381’W

12:29 – BST

Grab 2

50°20.8747’N, 4°8.7254’W

12:33 – BST

Grab 3

50°20.9655’N, 4°8.6410’W

12:39 – BST

Grab 4

50°20.8370’N, 4°8.4967’W

13:11 – BST

Grab 5

50°20.8597’N, 4°8.4626’W

13:13 – BST

Grab 6

50°20.9603’N, 4°8.3518’W

13:21 – BST

Callista – 05/07/2024

Air pressure – 1003 -> 1008 milli bars

Air temp – 14°C

Weather – foggy, rocky, windy

High water – 0500 UTC

Low water – 1120 UTC

High Water – 1720 UTC

2 days before spring tide

Zooplankton trawl - Horizontal

Diameter– 580mm

Mesh size – 200 micron

Zooplankton trawl – Vertical

Diameter – 500mm

Mesh size – 200 micron

Depth (m), temperature (°C), salinity, fluorescence (mgm-3)

Station 46

0841 UTC

Bottle 1 – 11.4, 14.60, 35.01, 0.07

Bottle 3 – 2.8, 14.88, 34.92, 0.06

Zooplankton – horizontal

* Start – 18801
* End – 19560
* Start – 50°19.7790’N, 04°11.3250’W
* End – 50°19.6560’N, 04°11.1110’W

Zooplankton – Vertical

50°19.708’N, 4°11.149’W

0-9 m

ADCP 1

Start – 50°20.191’N, 04°09.783’W

End – 50°20.785’N, 04°07.931’W

Station 47

0954 UTC

50°20.232’N, 04°09.232’W

Bottle 1 – 10.9, 15.10, 34.83, 0.08

Bottle 2 – 2.7, 15.34, 34.68, 0.08

ADCP 2

* Start – 50°20.785’N, 04°07.931’W
* End – 50°15.625’N, 04°12.948’W
* Went across two stations.

Station 48

1018 UTC

50°20.785’N, 04°07.931’W

Bottle 1 – 8.9, 15.08, 34.83, 0.08

Bottle 3 – 2.9, 15.64, 34.39, 0.08

ADCP 2 ended at this station

Station 49

1116 UTC

50°15.645’N, 04°12.954’W

Bottle 1 – 45.9, 13.50, 35.10, 0.05

Bottle 3 – 2.6 14.72, 35.00, 0.07

Zooplankton – vertical

40-0 m

1128 UTC

ADCP 3

* Start – 50°15.625’N, 04°12.948’W
* End – 50°19.717’N, 04°1.217’W

Station 50

1223 UTC

50°19.733’N, 04°11.217’W

Bottle 1 – 10.5, 14.92, 34.96, 0.08

Bottle 3 – 3.6, 15.11, 34.80, 0.09

ADCP 4

* Start – 50°19.717’N, 04°11.217’W
* End – 50°19.914’N, 04°11.497’W

ADCP 5

* Start – 50°20.171’N, 04°09.259’W
* End – no end recorded

Station 51

13:29 UTC

50°19.914’N, 04°11.497’W

Bottle 1 – 11.9, 15.24, 34.81, 0.09

Bottle 2 – 3.0, 15.48, 34.55, 0.11

Station 52

13:49 UTC

50°20.956’N, 04°07.924’W

No bottles fired.