

R1/12

Not to be cited without prior reference to the FRS Marine Laboratory, Aberdeen

FRV *Scotia*

Cruise 1005S

REPORT

21 July – 12 August 2005

Personnel

K A Coull
M Mathewson
J Mills
S Davis (Part II)
I Penny (Part I)
A Tait
J Mair (Part II)
M Gault (Part I)
H Randhawa (Visitor)

Objectives

1. To undertake an internationally co-ordinated demersal trawling survey of the North Sea.
2. Obtain temperature and salinity profiles at each trawling station.
3. Obtain low nutrient water seawater samples from statistical rectangle 45F1 (or an adjacent rectangle).

Out-turn days per project: 23 days – RV0507

Narrative

Scotia sailed from Aberdeen at 1000 on 21 July. Work commenced on the station east of Aberdeen and with relatively strong winds from the north west, it was decided to continue on the inshore stations off Montrose and Firth of Forth for the first day. For the next three days, the vessel worked on in the area off the Scottish coast, covering five stations on each day. Having received a long term weather forecast on the morning of 25 July, it was decided that the most effective way to continue the survey was to work on the northern stations first. *Scotia* then completed stations in the Fladen and Forties area before moving into the Moray Firth on 27 July. The vessel then worked northwards covering the western edge of the survey area before moving to the east of Shetland on the afternoon of 29 July. The stations on the most northerly part of the survey area were completed before *Scotia* called into Stavanger on the morning of 1 August for the mid cruise break.

Scotia sailed at 0830 on 2 August and completed the two stations to the west of the Norwegian coast. The vessel then moved to the stations on the southern part of the Norwegian sector, completing these on the afternoon of 4 August. The stations off the Danish, German and Dutch sectors were completed successfully before returning to the UK sector on the afternoon of 8 August. Work continued uninterrupted until the morning of 11 August when, with the survey completed, *Scotia* proceeded towards Aberdeen. The

vessel docked in Aberdeen late on 11 August and unloading was completed during the morning of 12 August.

Results

All survey stations were sampled with a total of 87 valid hauls being completed.

The survey indices for "0" group haddock, whiting and cod are shown in Table 1. While catches of juvenile haddock were the second highest on record since the series commenced, catches of juvenile whiting were relatively low. Although the cod index shows the numbers for 2005 to be the highest on record, these figures are heavily influenced by the catches of three particular stations (42E7, 44E6 and 44E7). Unfortunately, these stations are not covered by other participating countries.

The numbers of 0-group haddock, whiting and cod caught per 30 minutes (standard haul duration) in each statistical rectangle are shown in Figures 1, 2 and 3 respectively.

Length, weight, sex and maturity data were collected from all species listed in the EU Data Collection Regulations (EC) No 1639/2001.

The ships Thermosalinigraph was run continuously throughout the cruise and a CTD and reverser bottle was deployed at each station to obtain temperature and salinity profiles.

The Scanmar system was used at each station but several problems with the logged serial data meant that the headline height, wingspread, doorspread and distance covered was not recorded accurately.

Samples of low nutrient sea water were collected in the region of statistical rectangle 45F1.

K A Coull
25 August 2005

Seen in Draft: Captain Peter Barratt, OIC, *Scotia*

Table 1

Number of 0+ fish per 10 hours fishing

Year	Hauls	Haddock	Whiting	Cod
1990	85	3163	1943	2.9
1991	90	3471	1379	1.4
1992	87	8270	2417	0.5
1993	87	859	247	3.6
1994	87	13762	648	25.8
1995	87	1566	1243	0.0
1996	85	1980	440	7.6
1997	87	972	317	0.2
1998 *	77	3280	12302	4.0
1999 +	87	54072	13409	11.8
2000	87	10375	19058	0.5
2001	87	68	10315	15.6
2002	85	1774	2190	0.2
2003	96	1780	5557	1.9
2004	97	1437	8990	16.7
2005	87	16099	1818	134.4

*New Scotia with GOV Trawl

+ Changes to survey area

Quarter 3 - Groundfish Survey 2005

Number 0+ haddock per 30 minutes

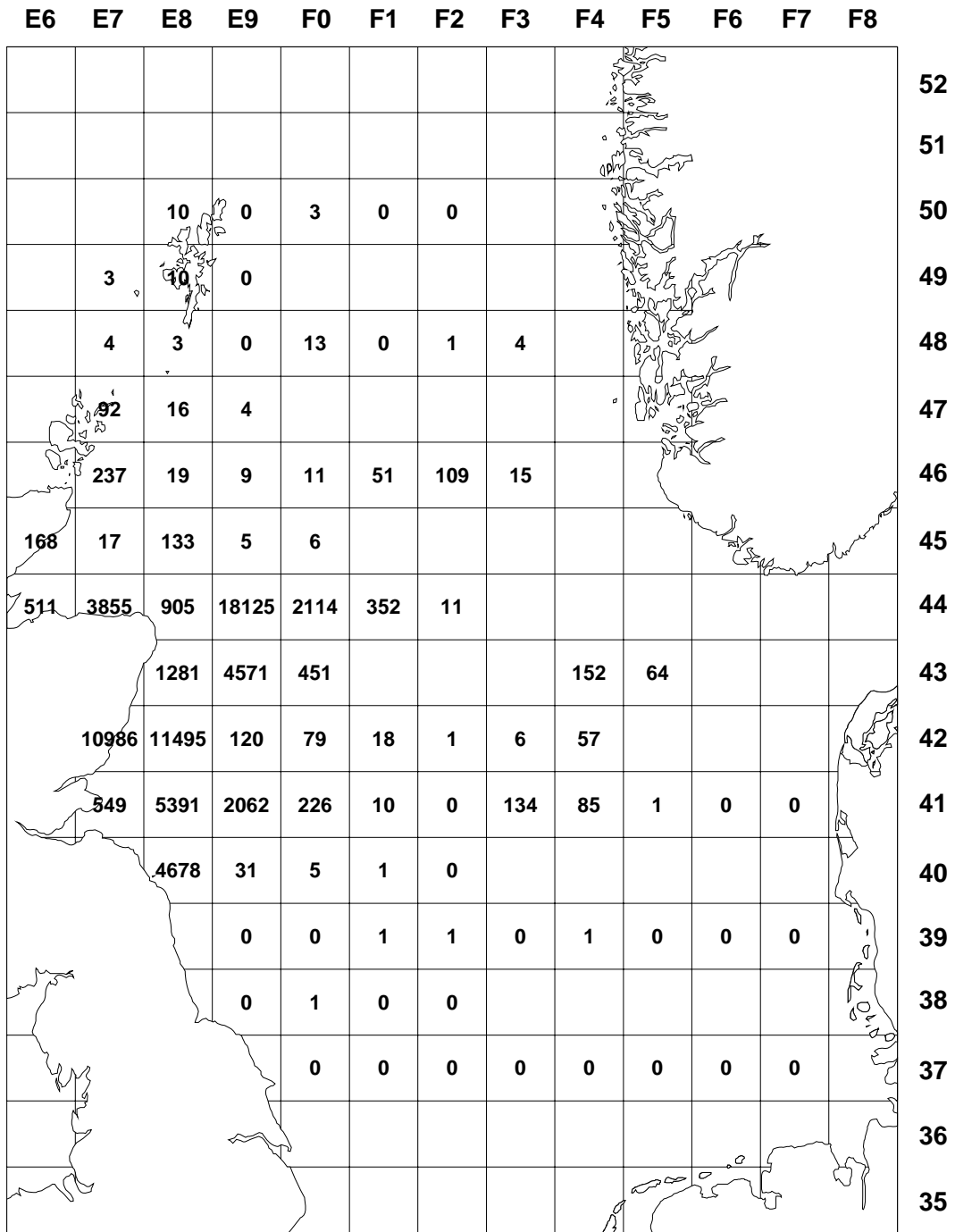


Figure 1

Quarter 3 - Groundfish Survey 2005

Number 0+ whiting per 30 minutes

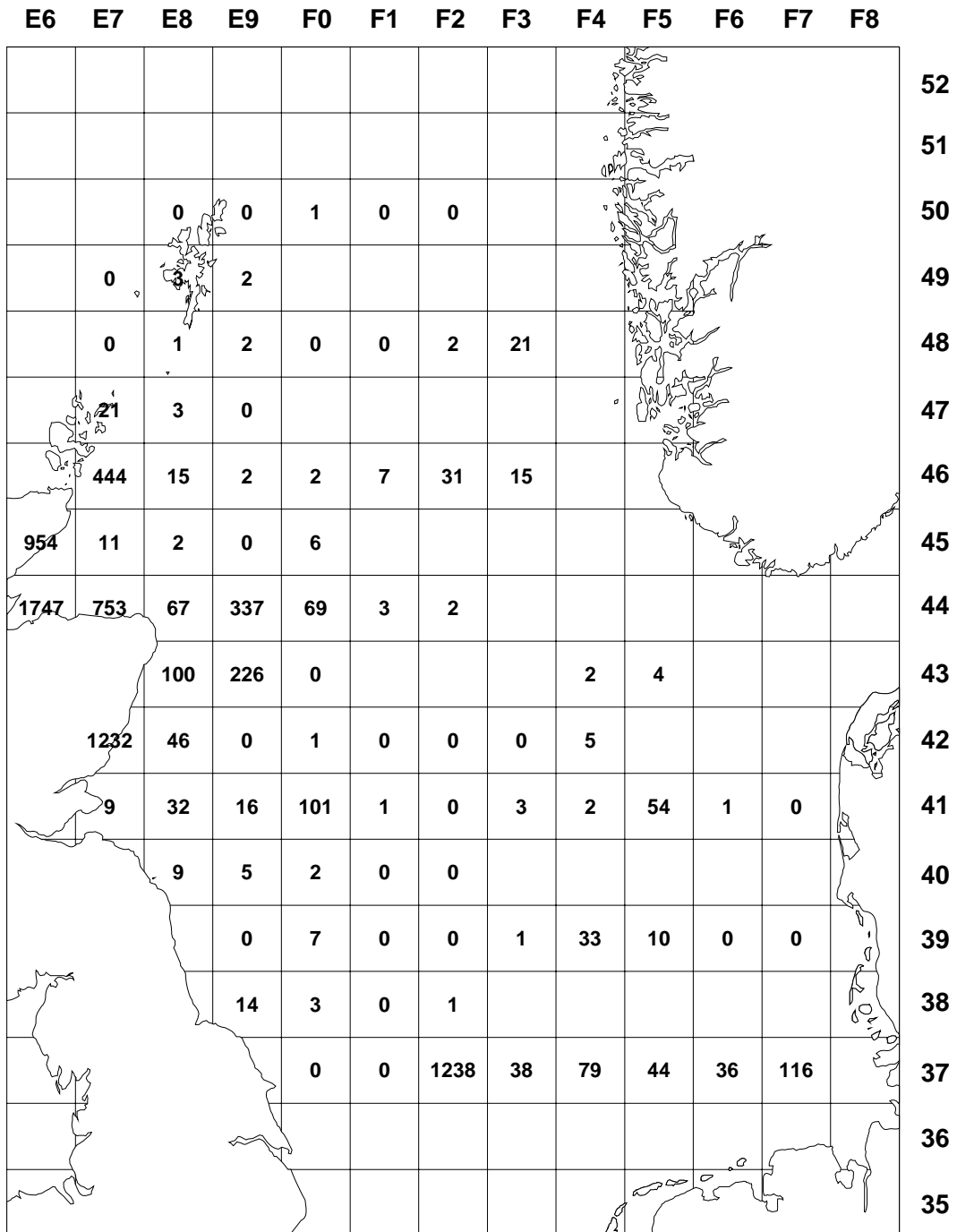


Figure 2

Quarter 3 - Groundfish Survey 2005

Number 0+ cod per 30 minutes

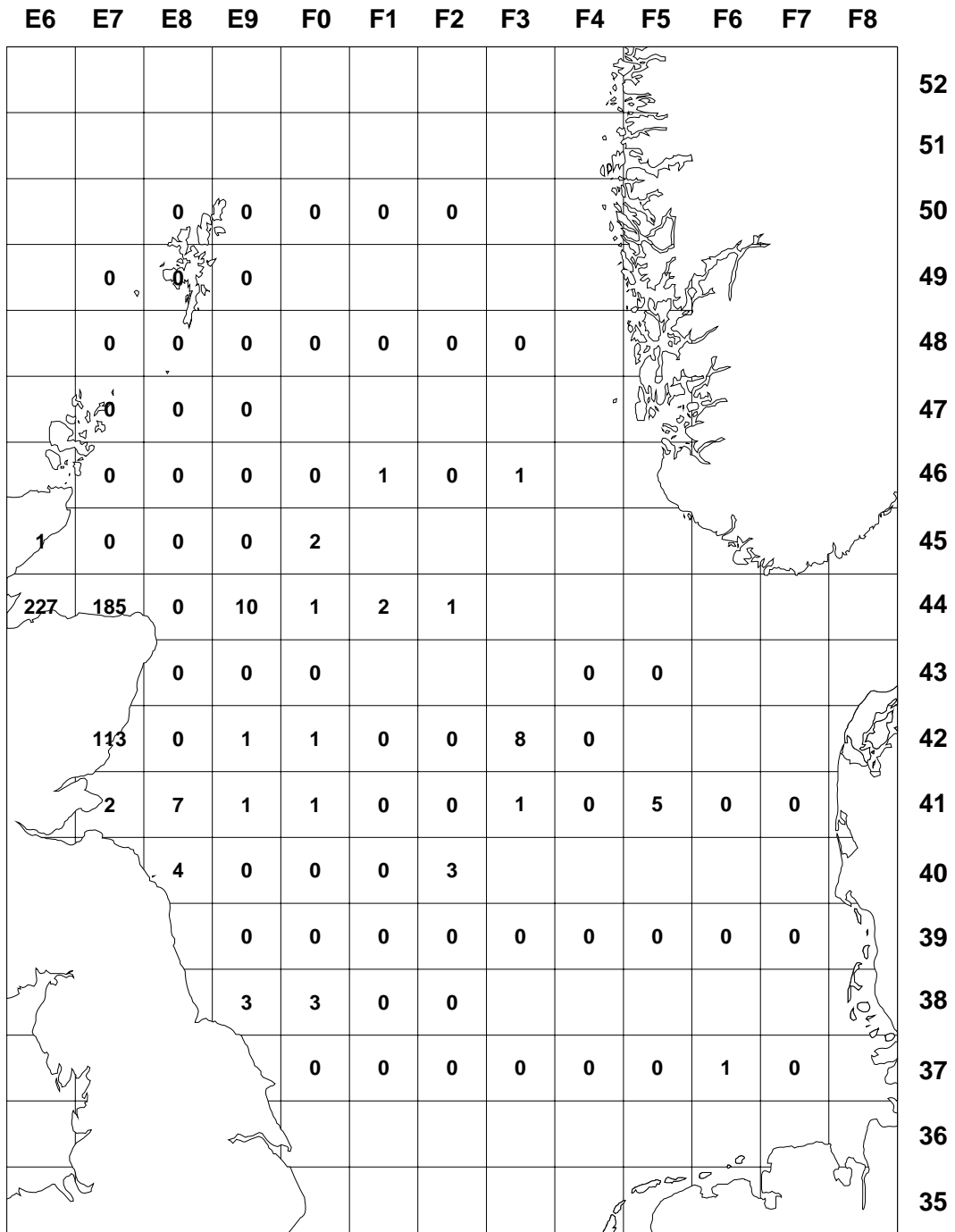
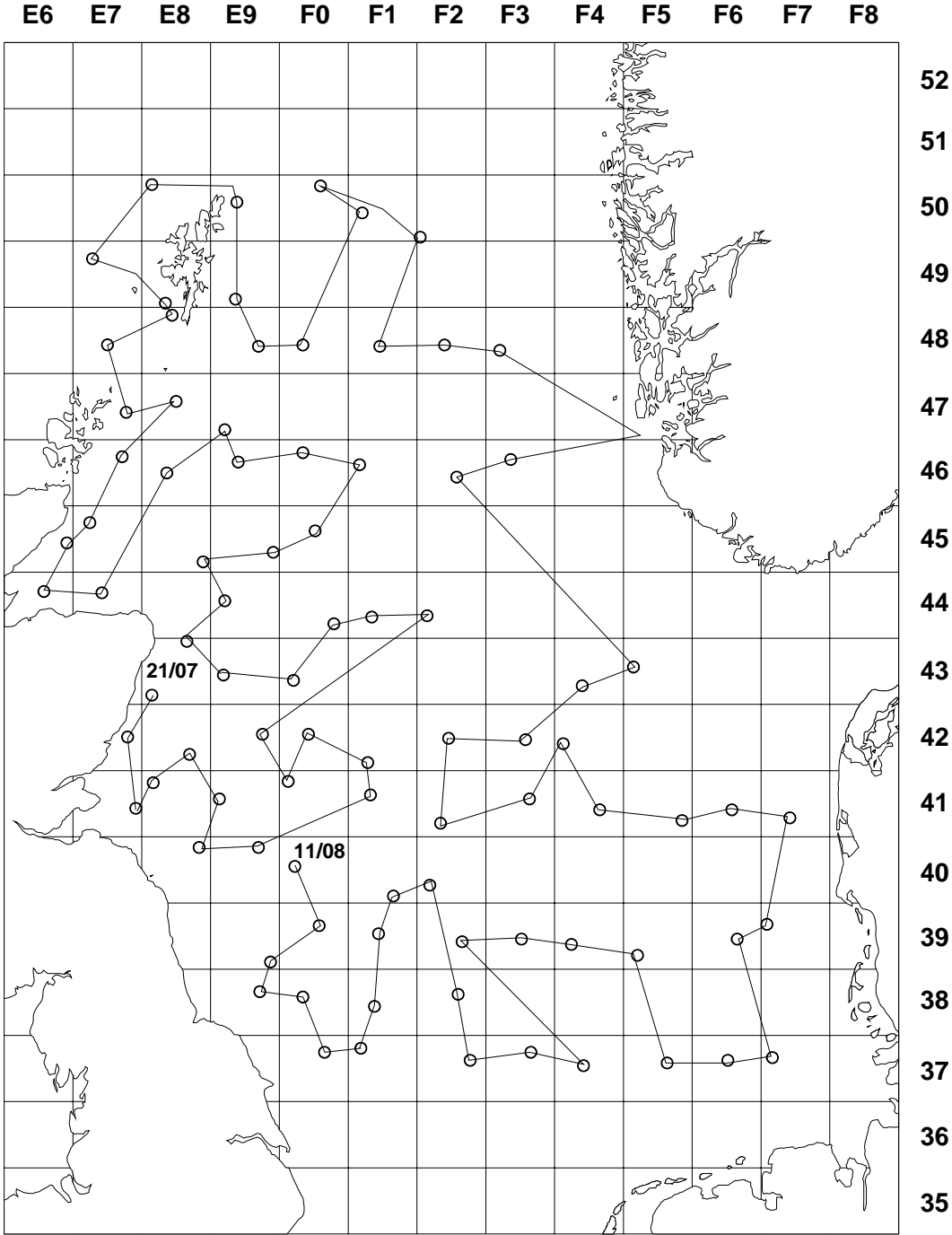


Figure 3

Quarter 3 - Groundfish Survey 2005



Circulation List: Cruise Programmes and Reports

SCOTIA, CLUPEA AND CHARTER VESSEL

Programmes - Mr J A Morrison for approval. Reports - Mr J A Morrison for approval.

Issue two copies of Record of Haul and Station Numbers pro-forma with Scientist-in-Charge's copy of *Scotia* and *Clupea* programmes.

Two xerox copies of track chart for reports to be sent to Dr L Rickards.

PROGRAMMES ONLY

Lab staff

Mr J T M Hunter
Mr P J Copland
Mr J Dunn
Mr A Beaton
Security
Mr J A Morrison – **Hard Copy**
Capt R Denholm
Mr C Hall
Dr R M Stagg
Dr C Moffat
Mr M R Heath
Mr A Macdonald
D Lichtman
Mrs E Morrison
CO/OIC of Vessel - (to be faxed)
File

Non-lab staff

~~Island Cmdr Faroes (Faroes only)~~
G Lees
David Doman
Library, Danmarks Fisk (reports only) – **Hard Copy**
Mr J Mortensen (Faroes only)
~~Dr S Ehrich (Entering German Waters) (reports only)~~
W J McCurdy, Belfast
Technical Director, SFIA (Dr P Williams) – **Hard Copy**
Ole Misund
Dr S Ehrich
Monsieur le Chef du dépt, Nantes
Dr J D M Gordon
G Kane
R de Clerck
Mr B Stewart
Dr P Balls
Capt J Cannan
S Spivey
Controller Coastal Ops - A Stewart
N S Lyman
Mr C Byrne
Prof R J A Atkinson
Mr H i Jákupsstovu
Mr C Bullimore (To be faxed: 01923 846392)

Laboratory Personnel on Vessel

K Coull
M Mathewson
J Mills
S Davis
I Penny
A Tait

J Mair
M Gault
H Randhawa – K Coull

Fishery Officers at

Aberdeen