

9th CSPWG MEETING
Seoul, Republic of Korea, 13-16 November, 2012

USE OF TOPOGRAPHY AND OTHER ITEMS OF INTEREST

From time to time UKHO provide compilers with some sea-going experience, which enhances their understanding of how charts are actually used by our customers. Following the time afloat they may write a short report of their experience, to share with colleagues. The following are some extracts from a recent report, which may be of interest to CSPCWG members and so is offered for information only.

Extracts from report:

SUMMARY OF UKHO VISIT TO RFA WAVE KNIGHT
12TH – 15TH AUGUST 2012

RFA WAVE KNIGHT is a 30,000 tonne 197 x 29 m vessel with a draught of up to 11m. Its primary purpose is to provide fuel, cargo and supplies to RN vessels. It has recently been refitted as a full WECDIS vessel but still carries a small 'get me home' folio of paper charts. It uses an ECPINS WECDIS. [WECDIS is a military ECDIS]

During our visit, WAVE KNIGHT left Loch Long [West coast of Scotland] and conducted magnetic ranging manouevours at the southern end of Loch Long, at the entrance to the River Clyde. She anchored overnight in Lower Loch Fyne before conducting more ranging exercises in Upper Loch Fyne. She anchored again in Inchmarnock Water before mooring in Loch Striven where we departed.

The majority of our time on board was spent on the bridge observing and talking to the officers, while allowing them to carry on without us intruding.

There were a number of themes that we picked up, which are summarised below. The most overriding theme we gained was the use of topography on WECDIS.

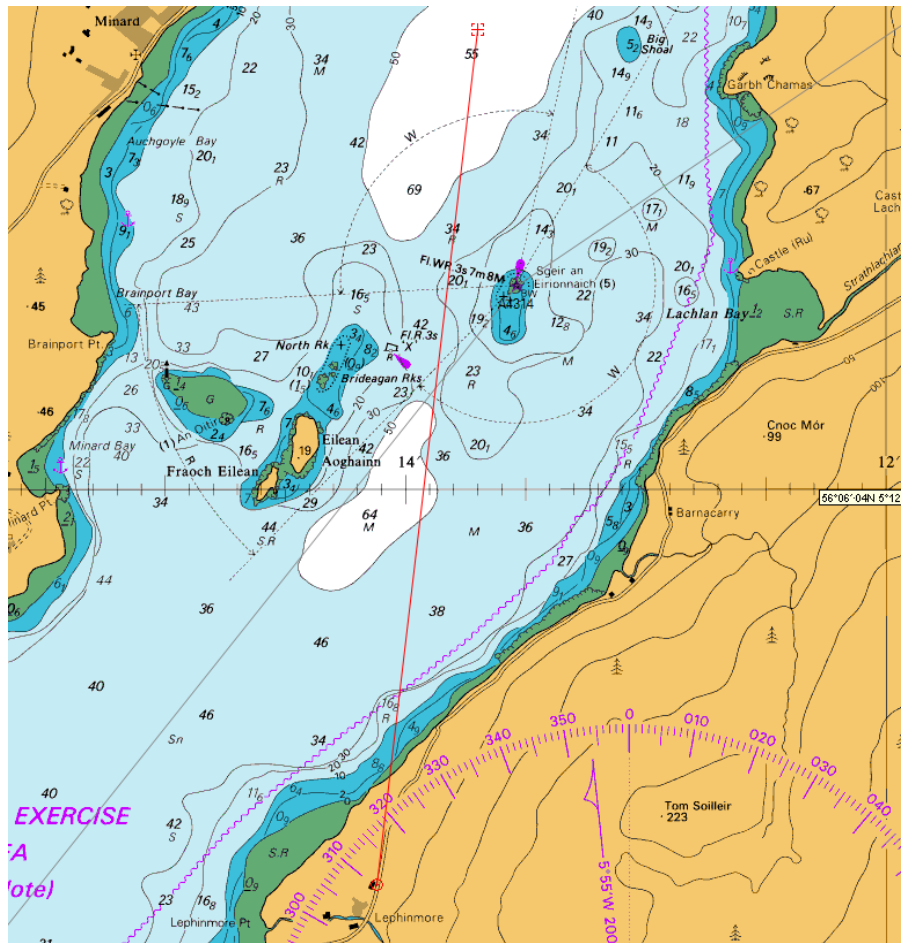
TOPOGRAPHY

We were surprised to see how reliant they are on visual landmarks on a ship of this size, even though they have WECDIS, GPS and radar. All planning was done in advance, and visual landmarks were identified on an ARCS chart and then added to the ENC ECDIS. As a rule of thumb, every 10 minutes under pilotage takes an hour of planning.

Everyone on board said that the main problem with the ENC / WECDIS is that they cannot **identify** landmarks easily. They do like taking ranges and bearings from the WECDIS as it is easier and more 'real time' than paper plotting, however, only after they have been identified on ARCS or paper.

The land objects used are shown on the ENC as all GB cells are captured from GB charts but, with different modes on such as pilotage, these are not as clear or not shown at all.

These marks are used as head and stern marks and included the end of land, piers and jetties, aids to navigation, single buildings, etc. An example below shows how a single building was used as a headmark to get through a narrow passage.



Roads are also used, an example given was entering Plymouth at night, as the street lights, traffic lights and car lights can be useful, either as a marker, or to avoid confusion with a navigational light.

The WECDIS screen size is an issue; it showed them very clearly where they are, but not where they are going. Although we have no control over this, it has a knock on effect; when zooming out so that the object used as a headmark can be seen on screen, due to SCAMIN, it was lost. An example is a single building on a 1:25,000 chart with SCAMIN of 29999.

Getting people to look out of the window was important to the navigator and captain, and not rely on heads down navigation.

All ENC's had traditional symbols used.

The navigator used his own notes based on his planning, with printed screen shots of ARCS charts when needed. He relies on information from WEDCIS operators, and gyro compass operators. The captain keeps a paper chart out and keeps an eye on the the course due to familiarity, ease of use and speed of identifying features. At one point there was a navigation error and the paper chart was used to correct the course and avoid dangerous water.

The captain admitted that the older generation of mariner prefer paper charts due to familiarity, and that the younger generation will rely on ENC. However, the third officer in her mid twenties with 4 years of RFA experience said that she too preferred paper charts, especially for planning.

SOURCE DIAGRAMS

The use of source diagrams on paper or ARCS was deemed essential. The captain chose his anchoring position based on the Source Diagram. However, he seemed unsure of CATZOC when questioned. We anchored on Monday at 55°57'.1N, 5°22'.75W in Lower Loch Fyne.

The executive officer knew about CATZOC but preferred a source diagram as the dates of surveys seemed more important to him than positional accuracy.

ACCURACY

An example of how they trust our accuracy was when a bearing was taken from the end of a jetty to a conspicuous mast, the gyro compass showed a 2 degree difference from the paper chart. It was assumed that the gyro was wrong, based on the chart.

NMs

The location and vicinity is not used, nor the list of features. It was agreed that eg 'France - North coast' is sufficient. Our NM website is used when away from port, as paper weeklies will be delayed. When viewing an NM for a chart on our website, the full list of features is shown; however, all features may not affect the chart if the NM affects multiple charts. Digitally updating ENC's and ARCS is preferred over updating paper charts.

SDs / PUBLICATIONS

SDs are used heavily outside of UK waters and Foreign Government products are also used. They are used digitally but find that the two columns per page are unhelpful.

Total Tide is relied upon, and its ease of use was commented on.

The Lights List is not used often, only when really needed.

The Nautical Almanac was on the bridge, but not used. It was said that they would rather use that than a magnetic compass.

ALRS is weekly updated and cross checked by the radio officer, and used a lot. Not seen used, but only due to our location.

NP5011 [UK's INT1 version] is used, and they have recently received NP5012.