



United Kingdom
Hydrographic Office

Data management for Law of the Sea: issues and experiences

Helena Patton, UKHO

Outline

- **The data and where it comes from**
- **How the data is managed - UK example**
- **Some problems faced in data management**

SCHEDULE 1

Article 2 of this Order applies to the two areas each lying beyond the outer limit of the territorial sea adjacent to the United Kingdom and the Isle of Man and bounded by a series of lines as described in column 2 joining in the order given the co-ordinates specified in column 1.

Point No.	Column 1 Latitude	Longitude	Column 2 Line type
FIRST AREA			
1.	55°31'.223N	06°45'.000W	Meridian of Longitude
2.	55°28'.000N	06°45'.000W	Parallel of Latitude
3.	55°28'.000N	06°48'.000W	Meridian of Longitude
4.	55°30'.000N	06°48'.000W	Parallel of Latitude
5.	55°30'.000N	06°51'.000W	Meridian of Longitude
6.	55°35'.000N	06°51'.000W	Parallel of Latitude
7.	55°35'.000N	06°57'.000W	Meridian of Longitude
8.	55°40'.000N	06°57'.000W	Parallel of Latitude
9.	55°40'.000N	07°02'.000W	Meridian of Longitude
10.	55°45'.000N	07°02'.000W	Parallel of Latitude
11.	55°45'.000N	07°08'.000W	Meridian of Longitude
12.	55°50'.000N	07°08'.000W	Parallel of Latitude
13.	55°50'.000N	07°15'.000W	Meridian of Longitude
14.	55°55'.000N	07°15'.000W	Parallel of Latitude
15.	55°55'.000N	07°23'.000W	Meridian of Longitude
16.	56°00'.000N	07°23'.000W	Parallel of Latitude
17.	56°00'.000N	08°13'.000W	Meridian of Longitude

2

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Territorial Waters Order in Council 1964

...

2. (1) Except as otherwise provided in Articles 3 and 4 of this Order, the baseline from which the breadth of the territorial sea adjacent to the United Kingdom, the Channel Islands and the Isle of Man is measured shall be low-water line along the coast, including the coast of all islands comprised in those territories.

(2) For the purposes of this Article a low-tide elevation which lies wholly or partly within the breadth of sea which would be territorial sea if all low-tide elevations were disregarded for the purpose of the measurement of the breadth thereof and if Article 3 of this Order were omitted shall be treated as an island.

3. (1) The baseline from which the breadth of the territorial sea is measured between Cape Wrath and the Mull of Kintyre shall consist of the series of straight lines drawn so as to join successively, in the order in which they are there set out, the points identified by the co-ordinates of latitude and longitude in the first column of the Schedule to this Order, each being a point situated on low-water line and on or adjacent to the feature, if any, named in the second column of that Schedule opposite to the co-ordinates of latitude and longitude of the point in the first column.

(2) The provisions of paragraph (1) of this Article shall be without prejudice to the operation of Article 2 of this Order in relation to any island or low-tide elevation which for the purpose of that Article is treated as if it were an island, being an island or low-tide elevation which lies to seaward of the baseline specified in paragraph (1) of this Article.

4. In the case of the sea adjacent to a bay, the baseline from which the breadth of the territorial sea is measured shall, subject to the provisions of Article 3 of this Order -

(a) if the bay has only one mouth and the distance between the low-water lines of the natural entrance points of the bay does not exceed 24 miles, be a straight line joining the said low-water lines;

(b) if, because of the presence of islands, the bay has more than one mouth and the distances between the low-water lines of the natural entrance points of each mouth added together do not exceed 24 miles, be a series of straight lines across each of the mouths drawn so as to join the said low-water lines;

(c) if neither paragraph (a) nor (b) of this Article applies, be a straight line 24 miles in length drawn from low-water line to low-water line within the bay in such a manner as to enclose the maximum area of water that is possible with a line of that length.

5. (1) In this Order -

the expression "bay" means an indentation of the coast such that its area is not less than that of the semi-circle whose diameter is a line drawn across the mouth of the indentation, and for the purposes of this definition the area of an indentation shall be taken to be the area bounded by low-water line around the shore of the indentation and the straight line joining the low-water lines of its natural entrance points, and where, because of the presence of islands, an indentation has more than one mouth the length of the diameter of the semi-circle referred to shall be the sum of the lengths of the straight lines drawn across each of the mouths, and in calculating the area of an indentation the area of any islands lying within it shall be treated as part of the area of the indentation;

National legislation - DOALOS/OLA - United Nations

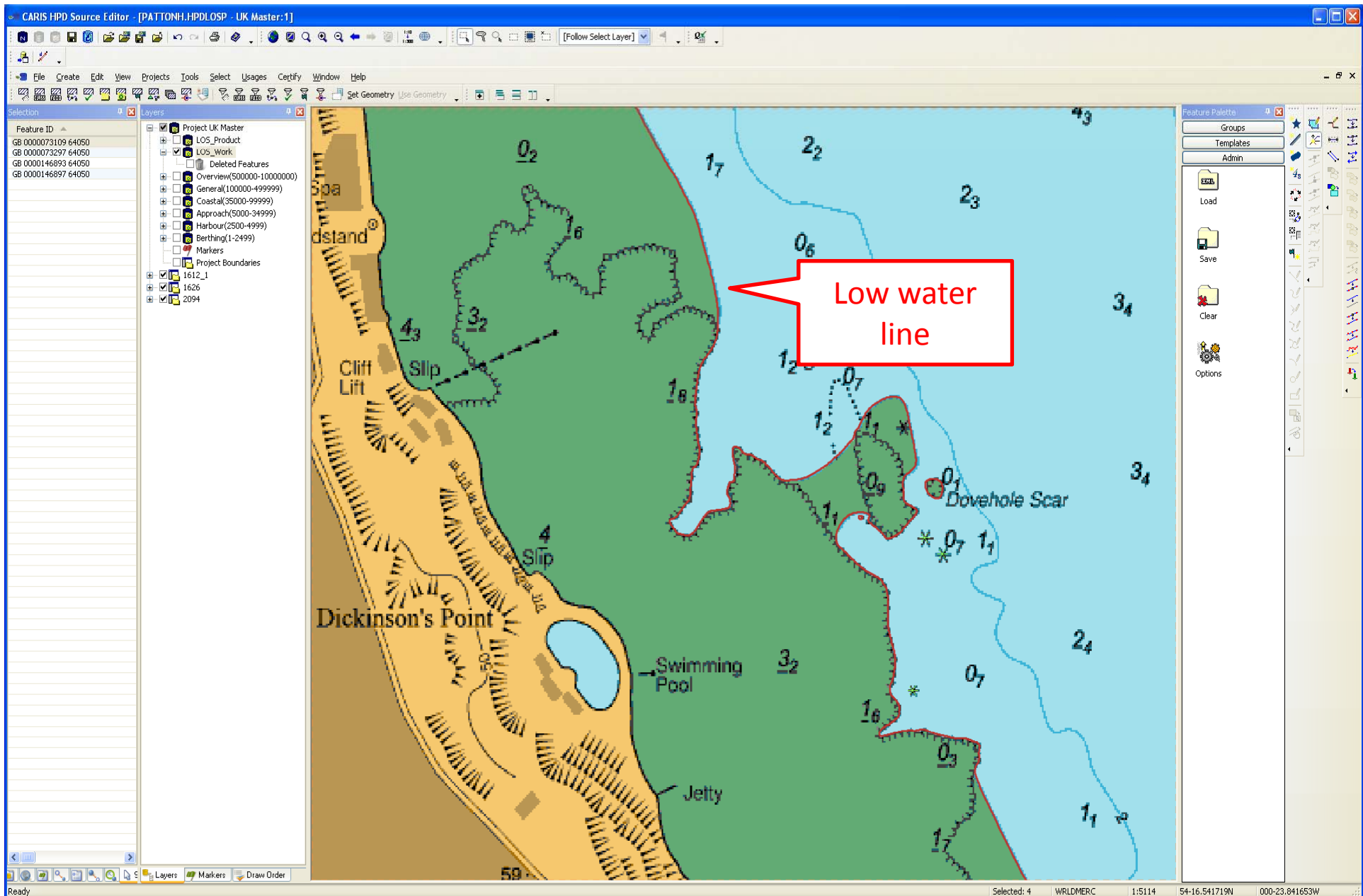
Data Management

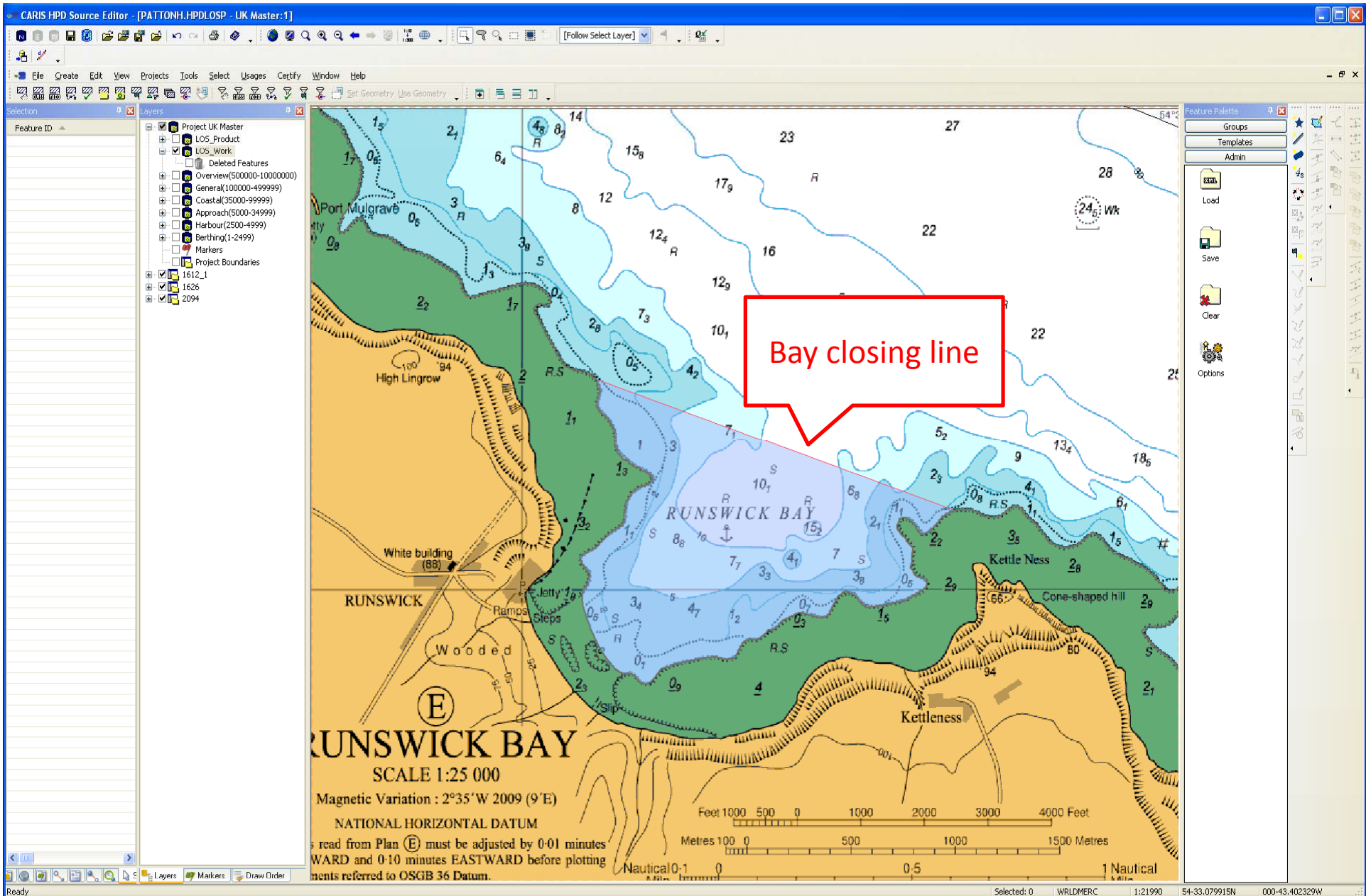
Geospatial Database

- **Create data: import co-ordinates, digitise features, calculate limits and boundaries**
- **Store data with attribution**
- **Manipulate data: edit and update data**
- **Export data**

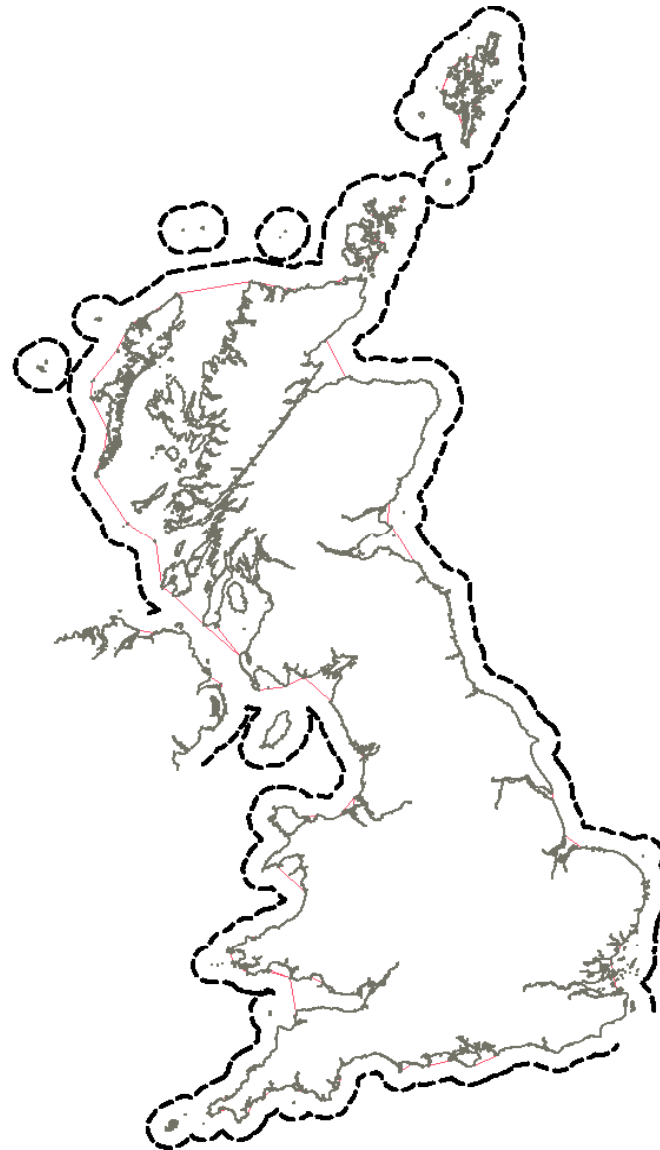
UK

- **UK claims a 12M territorial sea, a 200M Continental Shelf and various environmental, fishery and economic zones.**
- **Predominantly a normal baseline but with a partial straight baseline in Scotland.**
- **Several agreed boundaries with neighbouring states.**





UK Baseline



Updates

Notices
4505-4509/15

ADMIRALTY



ADMIRALTY NOTICES TO MARINERS

Weekly Edition 43

24 October 2013

(Published on the UKHO Website 14 October 2013)

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- I Explanatory Notes. Publications List
- II Admiralty Notices to Mariners. Updates to Standard Nautical Charts
- III Reprints of NAVAREA I Navigational Warnings
- IV Updates to Admiralty Sailing Directions
- V Updates to Admiralty List of Lights and Fog Signals
- VI Updates to Admiralty List of Radio Signals
- VII Updates to Miscellaneous Admiralty Nautical Publications
- VIII Updates to Admiralty Digital Products and Services

Mariners are requested to inform the UK Hydrographic Office, Admiralty Way, Taunton, Somerset TA1 2DN immediately of the discovery of new or suspected dangers to navigation, observed changes to navigational aids and of shortcomings in both paper and digital Admiralty Charts or Publications.

The Hydrographic Note Form (H102) is to be used to forward this information and to report any ENC display issues.

Form H102A is to be used for reporting changes to Port Information

Form H102B is to be used for reporting GPS/Chart Datum observations.

Copies of these forms can be found at the back of the Admiralty Notices to Mariners and on the UKHO website

The following communication facilities are available:

Notices to Mariners Website:	Web: www.ukho.gov.uk/msi
Searchable Notices to Mariners:	Web: www.ukho.gov.uk/nmwebsearch
Urgent navigational information:	e-mail: navwarnings@btconnect.com Phone: +44(0)1823 353448 Fax: +44(0)1823 322352
H102 forms (see back pages of this Weekly Edition)	e-mail: gdr@ukho.gov.uk
All other enquiries/information	e-mail: customerservices@ukho.gov.uk Phone: +44(0)1823 337900 (24/7)

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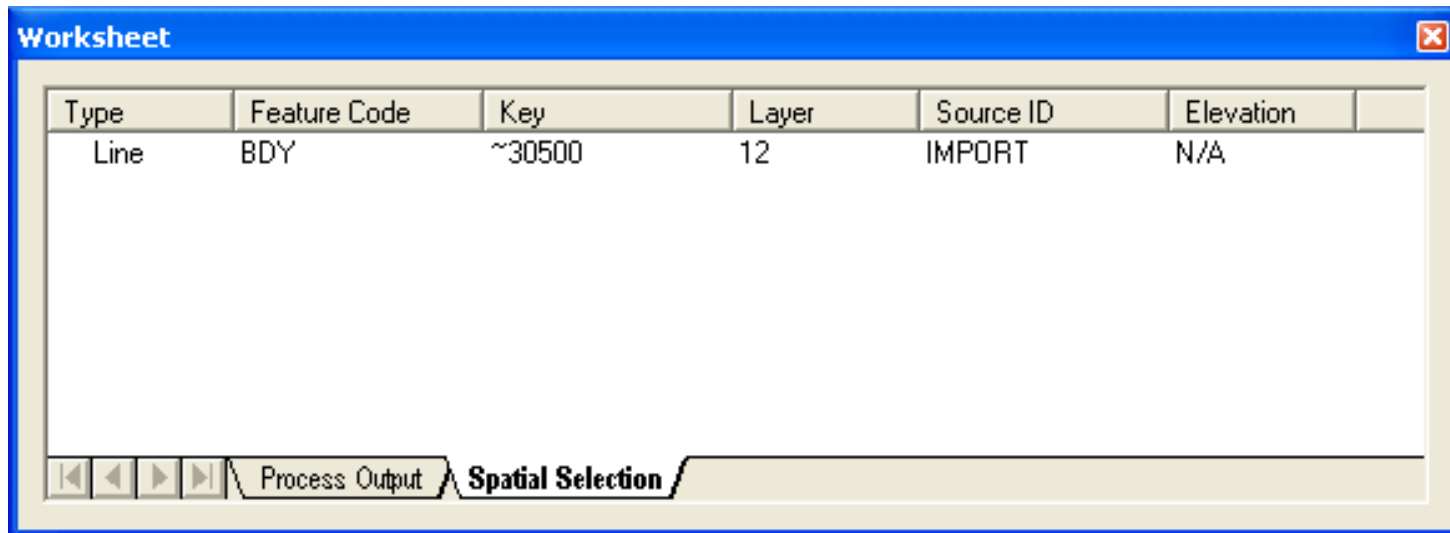
Boundaries

- **International Maritime boundary or median line.**
- **Agreed boundary: generally fixed set of co-ordinates or give a point and direction.**
- **Median line: produced from baselines. For delimitation negotiations and dispute resolution.**

Attribution of features

- **Attribution is a very important part of data management. It enables data to be identified, organised and filtered.**
- **Manual attribution : information including the source, link to document, feature type.**
- **Automatic attribution : information including date and time of last edit, creation and by whom.**

Attribution – previous system



Worksheet

Type	Feature Code	Key	Layer	Source ID	Elevation
Line	BDY	~30500	12	IMPORT	N/A

Process Output Spatial Selection

Attribution - Current system

Acronym	Name	Value
bdyjur	Boundary Jurisdiction	International
sorbdy	Boundary data source	
feacod	CARIS Feature Code	
sourid	CARIS Source ID	
usern	CARIS layer number	
carkey	CARISKey	
catbdy	Category of maritime boundary	Loxodrome
sordig	Digital data source	
HORDAT	Horizontal datum	WGS 84
INFORM	Information	G:\aaaUK\UK_DATA\Boundaries\International_Boundaries\uk_CS_Boundaries.xls
NINFOM	Information in national language	
legaut	International legal authority	
report	LOS marker point limit report	
lbatol	Law of the Sea Limits and Boundaries tool	
legsou	Legal Source of Boundary	http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/FRA-GBR1988TS.PDF
legdat	Legal boundary/limit publishing	
lestat	Legal status of the maritime boundary	Agreed (ratified)
neighb	Nationality of neighbouring countries	France - UK
OBJNAM	Object name	Territorial Sea boundary
NOBJNM	Object name in national language	
pbldat	Publishing date	Signed 2 November 1988, entry into force 6 April 1989.
RECDAT	Recording date	
RECIND	Recording indication	
SCAMAX	Scale maximum	
SCAMIN	Scale minimum	
SORDAT	Source date	
SORIND	Source indication	
TXTDSC	Textual description	
NTXTDS	Textual description in national language	

Issues

- **Consistency of attribution**
- **Volume of data**
- **Single database and work layer**

Concluding remarks

- **Creation and maintenance of data can be very time consuming – over 400 charts and panels cover the UK**
- **Increased amount of data requires greater management and can result in slower processing speeds.**
- **Current GIS has allowed much greater attribution of features.**
- **Currently no Standards for Law of the Sea data exchange. Is S10x the future ?**



United Kingdom
Hydrographic Office

Helena Patton

Law of the Sea Data Manager
United Kingdom Hydrographic Office
Admiralty Way
TAUNTON
Somerset
TA1 2DN

+44 (0)1823 723398

Helena.patton@ukho.gov.uk