

**U.K. HYDROGRAPHIC OFFICE
CONDUCTS SEARCHING REVIEW
OF SAILING DIRECTIONS**

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In the fall of 1968 the Hydrographer of the Navy in the United Kingdom initiated a detailed review of the Sailing Directions published by his service. Known around the world as "Admiralty Pilots", these 76 volumes providing global coverage of every navigable coast were first published in 1828. But for the last 100 years of their existence, the Hydrographer noted that they had changed very little in style and format, although they were subject to regular revision and the addition of new information through published supplements.

It was obvious that the publications must fulfil a need, since sales figures for these volumes continued to increase, reaching a total of over 70 000 copies sold during 1967. But there was a legitimate doubt as to whether the need for the information contained in the Pilots was being supplied in the best way possible to meet modern conditions. Accordingly, the Hydrographer formed a Committee within the Hydrographic Department, chaired by Captain J.S.N. PRYOR, R.N., (Ret.) charged with conducting a detailed review and submitting findings and recommendations by the middle of 1969.

After conducting 20 meetings, the Committee prepared and submitted its final report in July 1969, and a copy was provided to the IHB. Here the Directing Committee were immediately unanimous in the view that the results of this study, and many of its details, would be of great interest to all other hydrographic offices involved in the preparation and maintenance of Sailing Directions, and for those countries, as well, who have yet to undertake such work, since they could all profit from the facts and findings exposed and could consider the recommendations made in the light of their own requirements.

To begin with, this Committee chose not to consider such radical changes as amalgamating both Light Lists and Tide Tables with Sailing Directions, or re-arranging the geographical limits covered by the volumes to conform with the coverage of specific chart portfolios, or creating additional volumes to provide coverage for ships following offshore routes through major sea areas (as opposed to coastal navigation). The study was

confined in the main to making proposals for improving the existing volumes within the framework of their present concept and within the limits of the present organization available for their revision.

A rather obvious first step for the Committee was to determine what users felt about the volumes, and, to prompt replies, a three-prong approach was made. A questionnaire was issued to all military users under the Ministry of Defence, and the same questionnaire went out with a circular letter to the Chart Users Panel — a group of experienced shipping company personnel who serve as advisors to the Hydrographer to reflect merchant marine requirements. Then, to achieve an even wider cross section of responses, the same questionnaire was disseminated in the Admiralty Notices to Mariners, with an invitation to all users to respond. (See Admiralty NM 1737/68.)

By the closing date of 31 December a total of 786 replies had been received and examined, although the Committee had already been able to commence its work on the basis of an interim analysis of approximately 400 replies on hand before the end of November.

One early recommendation reached by the Committee was that, although these books are now clearly titled "Pilot", and this term has long historical associations, it could cause possible confusion with the same term used for the expert person brought aboard to guide a ship in restricted waters. Moreover, it was noted that the index chart in the Admiralty catalogue referred to the volumes collectively as *Sailing Directions*, and they were generally so named within the Department which prepared them. The Committee came down firmly with a recommendation that all future editions be titled "*Sailing Directions*". If adopted, this recommendation will be another step in standardization, for the IHB uses this term.

The review led the Committee to a re-definition of what the aims of the *Sailing Directions* should be, and considerable discussion led to a statement of aims which is so clear that it deserves verbatim recording here :

The aims of the *Sailing Directions*

"1. The content of Admiralty *Sailing Directions* should be determined by the practical needs of mariners, any value as a work of reference for persons other than mariners being incidental.

"2. *Sailing Directions* are complementary to other Hydrographic Department publications; their distinctive function is to advise the mariner as a live pilot would do, drawing attention to significant features and giving directions based, directly or indirectly, on the practical experience gained by those familiar with the area together with general information and regulations affecting mariners.

"3. The information included should be that which is of importance for navigation in unfamiliar waters. The amount of detail will vary with the

importance of the area and the scale of charting, but will normally cater for all classes of vessels likely to navigate in the area other than very small craft. The specialist needs of submarines and hovercraft are not covered.

"4. The information should be written in clear and concise English supported by diagrams where essential; ease of reference and maintenance of up-to-date information to be prime considerations."

A careful review of all of the opinions expressed in the replies to the questionnaires left the Committee with the impression that users had few radical changes to suggest, so the Committee's main object would be to examine the volumes in detail, looking for means of streamlining and improving the content, and then to give close attention, too, to the methods of correcting published information, in order to meet as far as possible the criticisms that had been offered. Some 14 different defects in the existing order of preparation, arrangement, content, and revision or correction of the books were identified and addressed in this comprehensive review.

A close scrutiny convinced the Committee that much could be done to improve the Chapter I included in each volume, dealing with general information about an area, including such natural conditions as currents, climate, ice, etc. An outline for a standard sequence for the contents, divided under three definite headings, was worked out and recommended. Similar close attention was given to the arrangement of each chapter covering a geographical area, and again, although recognizing that every stretch of coast needs individual treatment, the Committee arrived at an outline pattern to recommend.

After considering alternative possibilities, the Committee concluded that detailed information on ports should be treated in the main text. Noting general deficiencies in this type of information, even for ports in the British Isles, the Committee recommended much more positive collection efforts be initiated.

A particularly thorny question arose when the Committee came to consider the basic policy to be followed with respect to using the Sailing Directions *with* navigational charts. Mariners dislike wading through long descriptive texts which tell them things that they can readily see on the chart itself, but complete removal of all such details would be impossible if a description of those items which are not charted is to be clear and understandable. The Committee recognized that the scale of the chart is the controlling factor here; "Where charts were of a large scale from modern surveys the amount of descriptive matter in SDs could be small and the text should concentrate on uncharted information of use to the mariner. In areas where the charts were on a small scale (very approximately 1/50 000 and smaller) it was useful to retain a fair amount of text in the SDs as detail was sometimes not so easy to appreciate on the chart."

But what should a compiler of Sailing Directions do in those cases where his own office's charting at medium or large scales has been withdrawn, or where none exists, and the Sailing Directions may have available for consideration a large amount of detail which would be most

difficult to understand in relation to the small scale chart coverage to which the navigator would have to refer? Here the Committee split, recognizing two fundamental differences of opinion:

(a) If a place was of such minor importance that a reasonable scale chart did not exist, then it would be logical for the Sailing Directions describing that place to be reduced as well.

(b) If charting was inadequate, the very function of the Sailing Directions should be to compensate for this lack as far as possible in book form.

Arguments were recognized in favor of both views. With limited resources, selectivity must always be involved in what can feasibly be published, said those in favor of (a). On the other hand, in many cases the information was already in the Sailing Directions, and discarding it on purpose would leave the occasional mariner who might have to visit such places without information he could have had, which would favor policy (b). Furthermore, the argument was advanced that sketch plans could be incorporated in the Sailing Directions in those cases where the chart scale was inadequate for understanding of the descriptions. The Committee finally made a recommendation, temporary in this case, on the side of (b), suggesting that sketch plans be tried on a very limited and selective basis. (See further discussion later in this article on this subject.)

Generally one might suppose that enough information on lights could be found in the Light Lists and on the charts. But the Committee recognized two exceptions where Sailing Directions have an important function in treating lights: (1) where light structures are painted or shaped distinctively for recognition during daylight, it is reasonable to describe these; and (2) lights which serve particular purposes (leading lights, lights in line marking special features, sectored lights, traffic signals, etc.) can have their full significance given only in Sailing Directions in textual treatment.

On the subject of lights, the Committee noted that it would be ideal if the Sailing Directions were to give the Light List number of each light mentioned, but since these numbers change too often, an increased correctional load would result, and confusion would exist when the two different publications were not corrected at the same time.

Turning to buoys, the Committee found that existing pilots were capable of considerable improvement. Information about buoys had to be considered under two categories: buoyage systems and the actual individual buoys in use.

If buoyage systems were to be described better in Chapter I of each Sailing Directions volume, preferably with coloured diagrams of buoy shapes as well as diagrams showing typical methods of disposition and the use of topmarks, then such detail need not be treated for each buoy, so this goal was a recommendation. For the buoys themselves, existing SDs gave detailed descriptions of most of them, using no abbreviations. But this made the text of a well buoyed area tedious to read. Such full description had in the past been supported on the grounds that there was no Buoy List published by the Admiralty (as recommended in IHB Technical Resolution H 3), and that therefore the SDs had to be the primary authority on buoys. But this view was found to be outdated, since the SDs certainly do not contain every buoy, nor does the 18-month cycle for supplements

permit keeping up with the multitude of buoy alterations. These considerations led the Committee to formulate the following logical recommendations :

(a) Where buoys are numerous and charts are of adequate scale to show them clearly, virtually all channel buoys can be omitted in SDs, or mentioned only collectively.

(b) Landfall, fairway, offshore danger, and special purpose buoys will generally need individual mention in the text, giving name/number, type, and position. Other details such as shape, colour, topmark, etc., should follow in brackets. Light characteristics may be given when essential and should be in shortened form in brackets, but charting abbreviations should not be used.

Another fault found with current Sailing Directions was that the texts attempt to define the positions of various types of features unnecessarily closely, using phraseology that is both hard to read and hard to understand, and an example was given:

“Hamstead Ledge, with a least depth of 25 feet (7.6 m) over it, extends about 2 cables north-north-westward from a position about 3-3/4 cables west-north-westward of Hamstead Point.”

Substituting 340° for north-north-westward and 290° for west-north-westward would shorten the text, but the Committee thought a page filled with figures would be unattractive. Using only initials for the compass directions, such as NNW and WNW, was also considered, and this the Committee tended to favor, but doubted whether it should be extended so far as to include cardinal points : N, E, S, and W, although recognizing that IHB Technical Resolution A 7 would call for these.

Referring to the Sailing Directions of other nations, the Committee found that no nation abbreviated the three-word points of the compass *only*, while the majority of the more important publishers used the single letters completely. Even the Soviet Union, it was noted, departed from the Cyrillic alphabet to use these initial letters of the roman alphabet. Germany adhered to O (for Ost) instead of E, but in general used mainly initials, although they did use adverbial endings with the initial letter (as, in English, one would write NW-wardly or N-erly). France used only initial letters for the quadrantal and interquadrantal points.

The Committee wound up by tabulating the advantages and the disadvantages of using “all initials” as follows :

For “all initials” :

- (a) Greater saving in printed matter.
- (b) Simplicity of being consistent.
- (c) No complications regarding endings (-ly, -ward, -ern).
- (d) In use by several other countries.
- (e) Eases comprehension by foreign readers as he is not confused by words such as “northernmost”.

Against "all initials" :

- (a) Appearance of printed page is not improved.
- (b) North, south, east, west are short words which do not normally need abbreviating, but the quadrantal and inter-quadrantal points are so long that abbreviation is justified.
- (c) Use of the cardinal points in words together with occasional use of the endings will help to provide variation in the text.
- (d) Flow of English is spoiled together with precision of meaning.
- (e) Use of S for south could be confused with the use of S for Saint, San and Santo, etc.

IHB Technical Resolution C 6 calls for an approximate geographic position to be shown in the heading of each subdivision in Sailing Directions (generally one to each page or pair of pages). The British review group considered that their own volumes could be improved by greater use of parenthetical listings of such positions in the text, to aid quick reference to the chart, and to eliminate the present frequent references by bearing and distance from previously mentioned features.

The Committee found that chart references in the Sailing Directions were extremely useful to the reader, but they can lead to maintenance problems as chart coverage changes. Action has already been taken, for the future, to eliminate the small scale chart references that have previously been given at the foot of each page. References in the text will continue to refer to the largest scale chart; and so long as each page carries at least one such chart reference, there is no need to repeat it at the head of the page. Quite in line with a subject being considered by Bureau action at the moment was the Committee recommendation that, where BA charting is small or inadequate, there should be mention of larger scale charts produced by other nations, although it was suggested that the actual chart number should *not* be stated since this could add to correctional problems.

Of course one of the key parts of Sailing Directions is the actual "directions" that they contain. Generally British practice had been to place this paragraph at the end of a section, after all the detail for that section had been discussed, but this required considerable repetition. Since the main function of the publication is to *direct* mariners, the Directions paragraph should be given more importance, with discussion of details being tied closely to it. The Committee found that many users suggested that directions could often be more concisely presented with the aid of a sketch plans. (This ties in with the previously mentioned discussion of use of sketch plan, too, where the scale of existing charting is inadequate). The Committee, being divided in opinion, set forth arguments which were brought up on both sides of this policy question, as follows :

-Supporting inclusion of sketch plans :

- (a) Function of Sailing Directions is to amplify the chart and thus to give, as far as possible, information that cannot be or is not charted.

- (b) Textual geographic descriptions are often difficult to follow without some accompanying graphic at a suitable scale. Sketch plans need not be highly accurate to serve this purpose.
- (c) Improves overall usefulness of Sailing Directions.
- (d) Existence of sketch plans could help to resolve decisions which must be made in many borderline cases as to whether a chart should be retained in use (particularly charts involving minor plans with only limited scales).
- (e) Plans could be drawn by trainees rather than skilled cartographic draughtsmen.

Against inclusion of sketch plans :

- (a) Existing policy is against including information and detail in Sailing Directions for charts that have been withdrawn.
- (b) Drawing capability, being limited, should be conserved for higher priority work in chart draughting.
- (c) Sketches might be misleading or dangerous for inexperienced navigators.
- (d) Sketches could not substitute for minor plans on charts when one wants to plot on them, without mutilating the book to remove the sketch.
- (e) Difficulty in establishing any limit on number of sketches to be included, once they are introduced.

For some years hydrographic offices have been debating whether or not is possible to provide radar views in Sailing Directions (or published separately) which can really assist navigation by radar. (IHB Circular Letter 19 of 1968 provided the results of a recent Bureau inquiry and study of this subject). The British questionnaire to users of Sailing Directions asked specifically whether radar views were found to be useful or not. User response on the utility and value of these reproductions of radar PPI scopes indicated a very mixed opinion on their worth. The Review Committee reached the conclusion that it should recommend discontinuing use of these views, a recommendation that actually supported a policy decision already instituted in the U.K. hydrographic office.

Even though radar is widely used, the results of the British opinion survey showed users of Sailing Directions favor retaining pictorial horizontal views of coastal features (drawings or photographs). The Committee was of the opinion that views are better included on charts, where they may usually be shown at a larger scale than is possible in the Sailing Directions. The actual state of existing views that were in the SDs was cause for concern, because the number of them that were too old was "deplorable". Thus the Committee recommended that U.K. survey ships be directed to collect more photographic views along coastlines, and also that the experimental work being done to obtain low-level photos from helicopters be vigorously pushed.

The Committee noted that, commencing about 1957, as an economy measure, all of the views published in Sailing Directions had been grouped together at the back of the book, so that these pages could be printed on a

higher quality paper (art paper) for good photographic reproduction. Recognizing that the value of a view is much greater if it can appear on the same page as the text which refers to it, the group recommended investigation of the possibility of using better quality paper for the entire volume, to permit views to appear in any part.

Economy was also found to be behind another existing rule for preparation of these publications which the Committee attacked, this one relating to the use of diagrams to present certain types of information in an organized manner. While these were supposed to be kept to a bare minimum, because it was originally felt that they were expensive to produce, more difficult to correct, and used draughtsman effort that could not be spared, the Committee suggested the old basis was no longer in keeping with modern trends, recommending positively that the following diagrams *should* be included :

- Index Chartlet;
- Winds and Currents (quarterly if possible);
- Ice Limits;
- Ice Accumulation;
- Ice Photos;
- Barometric Pressure Distribution;
- Surface Air Temperature;
- Sea Surface Temperature;
- Hurricanes, etc.;
- Buoyage-shapes;
- Buoyage-dispositions;
- Life saving and Coastguard Stations chartlet.

Hydrographers, navigators, military intelligence personnel, geographers, and even newspaper reporters have learned the value of the comprehensive listing of geographic names in the indexes of the volumes of Sailing Directions (of any country) — serving as they do, in this case, as a form of gazetteer. When the U.K. Review Committee came up against this aspect, they found somewhat difficult sailing. The gazetteer value could not be disputed, yet they were also conscious of their aim to make the Sailing Directions of maximum direct value for their primary purpose. So the question had to be addressed; could not a large reduction be made in the Sailing Directions if many named features, about which there was no more information available than that shown on the chart, could be deleted from any mention in the text and yet inserted in the index with a geographical position shown in place of a page number? Again both advantages and disadvantages were tabulated and show the extent of this problem :

Advantages of using the index as a direct gazetteer :

- (a) Simplicity and flexibility of reducing the size of the SD text without losing the gazetteer function for names about which it is often difficult to decide whether to insert in text or leave out and lose for all time.

- (b) Removes the clutter from the SDs and hence would improve their value.
- (c) Ease of reference.
- (d) Once the initial task of inserting GPs had been done the future indexing task would be greatly reduced as GPs did not change significantly.
- (e) Minor names need not be lost for the sake of one line of print in the index. Minor places also had a habit of blossoming into relative importance in less time than it takes to issue a supplement so that places could always be located.
- (f) Effort now absorbed in describing charted features would be available for better compilation of uncharted information.

Disadvantages :

- (a) The index will not reduce and may tend to increase in size.
- (b) Additional effort required by reviser to insert GP originally.
- (c) It is more satisfying to be referred to a page of the book where the named feature is mentioned even though it gives no more than is charted.
- (d) The gazetteer function of the SD was only a by-product and not an aim.
- (e) Other nations had not found it necessary to gazetteer in this way yet their SDs were apparently adequate, although it is thought that the Admiralty name coverage was generally more complete.
- (f) Wholesale removal of names from the text would detract from the function of SDs in acquainting the mariner with the area.

The Committee gave detailed attention to all of the appendices and all of the preliminary pages used in U.K. Sailing Directions discussing them in detail, but here their findings related more specifically to the British case and so need not be covered here. It is worth considering the findings, however, with respect to the use of a Glossary, which would be a common problem to all producers. Here is what the report shows on this subject.

It is normal book practice to place the glossary at the end of a book with the Appendices, but it is long established practice to have this at the beginning of the pilots and it is suggested that it should follow the Explanatory Notes as being by its nature explanation of foreign words used in the text.

There had been several proposals to have a standard glossary in SDs, but it was not really practicable to do this too rigidly as it was quite useless to list words and terms which were not applicable to the area.

The object of the glossary was to list and explain foreign words which were used in the text and on charts of the area. Primarily the geographical terms should be listed, but there was also a need to list some common nouns and adjectives used as parts of proper names.

The glossary should not attempt to list general use words for well known languages, for which dictionaries and phrase books were readily

available. There was however a case for expanding the glossary slightly for some of the more remote languages as dictionaries may not be readily obtainable.

The Committee further recommended that a list of English words which should be considered for including in any glossary should be compiled as a standard for guidance to those involved in preparing new editions, or new supplements.

Attention was directed, too, to the physical appearance of the pages, and how these might be improved to aid the user. Further refinement of rules of style, typefaces, and so forth were suggested. In the matter of page size, the Committee took note of the widespread trend toward standard paper sizes and suggested that the major revision of the volumes which its recommendations would entail might create the right breaking point for a change to a standard size (denoted as A4 by the ISO system, 210 mm × 297 mm), since such a change seems eventually inevitable.

Equally detailed consideration was given by the Committee to all the phases involved in keeping the Sailing Directions volumes up-to-date, but, of course, much of this discussion relates to internal procedures in the U.K. hydrographic department which may have little direct parallel with procedures used elsewhere. But the Committee was concerned that production of new editions has been steadily drifting away from the desirable target of once every ten years which had been the goal, finding as much as 14 years between editions in some cases.

On the other hand, the main complaint that the Committee found in the responses to the questionnaires related to the method of correction of the Sailing Directions. Users stated a strong dislike for the system of supplements, since this required a navigator to read three documents at once : the basic Sailing Direction volume, the chart, and the latest published supplement to the SD volume. Many users suggested loose-leaf format, as employed by the U.S. NAVOCEANO. This was not a new suggestion, having been considered a number of times in the past in the U.K. always with a negative finding because the arguments against seemed to outweigh those in favor, according to the following list included in the Committee's report:

Against Loose-leaf :

- (a) No reasonably priced loose-leaf binder has yet been devised that does not damage pages, or become distorted so that sheets can fall out.
- (b) Used fully, and not as a partial supplement with pen and ink corrections as well, it is expensive to maintain.
- (c) Interleaf recording of alterations becomes very complex.
- (d) User has to make up the book on first receipt from several blocks of change pages before he can attempt to read it.
- (e) Books would be so tedious to amend in the office that reference copies might not be used so frequently as the bound books and their supplements.

- (f) Increase in storage for stocks as "changes" are not always self-cancelling as with supplements.
- (g) USC&GS do not use loose-leaf and have issued an NM to explain why they do not do the same as the USNAVOCEANO.
- (h) Japanese are basically loose-leaf but have many times issued supplements as well. Other countries using loose-leaf have also been forced to do this presumably on grounds of expense of new pages.

For Loose-leaf :

- (a) Once new pages have been inserted the book is easier to use.
- (b) Large amendments can be made.
- (c) New diagrams and views can be inserted where required in the text at any time.
- (d) Books open and stay flat if the more expensive type of ring binders are used.
- (e) Blank pages for recording notes can be easily inserted by users.

A possible alternative answer to this vital problem was considered. If revised editions could be issued more frequently in cheaper paper-back editions, the unwieldy supplements could be eliminated. A feasibility study has been undertaken by Her Majesty's Stationery Office (printer of the U.K. Sailing Directions) to determine whether it might be possible to use modern computer-assisted film setting methods to achieve the result in this manner. Such a system, if it proves feasible, will be of interest to the entire worldwide hydrographic community (*). (See IHB Tech. Resolution A 12).

The IHB is of the opinion that Admiral RITCHIE and his staff are to be congratulated on the extent of this serious review of Sailing Directions, and appreciation is expressed to the U.K. Hydrographic Department for willingness to share their findings and recommendations with other hydrographers. Questions on specific individual detail should be addressed to Hydrographer of the Navy in the U.K., while any questions or comments on general subjects or related IHB Technical Resolutions should be submitted to the Bureau.

(* See also "An Improved System of Producing and Printing Loose-leaf Sailing Directions and Corrective Change Pages", by F.W. BOWDEN, *I.H. Review*, Vol. 43, No. 2, July 1966.