



CHART STANDARDIZATION & PAPER CHART WORKING GROUP (CSPCWG)

[A Working Group of the Hydrographic Services and Standards Committee (HSSC)]

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To CSPCWG Members

Date 14 October 2010

Dear Colleagues,

Subject: CSPCWG6 Actions 10-13 – use of ‘Foul’ (further to Letter 11/2010)

Thank you to 22 CSPCWG representatives who responded to CSPCWG Letter 11/2010. This subject has proved very difficult to resolve and it seems impossible to get complete agreement. However, you will see from the consolidated responses at Annex A that we do have large majorities in favour of all the proposals in the last letter on the subject. Once again, you have provided thoughtful and useful comments in addition to your votes, which have enabled us to fine-tune the outcome. A revised draft specification for S-4 Part B is at Annex B.

I doubt if there is anything now to be gained by further rounds of correspondence in this Working Group. Also, as many of you that have been engaged in the correspondence are unable to come to Simon's Town, I do not plan to include it on the agenda for further discussion at CSPCWG7. I think that our internal consultation has now been sufficiently exhaustive (and perhaps exhausting) to be able to submit the outcome to IHO Member States for approval.

Thank you again for your patience and thoughtful contribution to this issue. We will now prepare a draft CL. There is no need to respond to this letter; however, if over the next few days you wish to comment on anything in the annexes to this letter, please do so, **not later than 29 October 2010**.

Yours sincerely,

Peter G.B. Jones,
Chairman

Annex A: Consolidated responses to Letter 11/2010, with Chairman's & Secretary's comments
Annex B: Draft Specification S-4 Part B (B-422.8).

Consolidated Responses to CSPCWG Letter 11/2010

	Question	Yes	No
1	<p>Do you agree to have no reference specifically to ‘Foul Areas’ in INT1?</p> <p>Good consensus.</p> <p>US(NOAA) concerns could be addressed by an additional entry in their national version of INT1.</p>	AU, BR, CA, DE, DK, ES, (ESRI), FI, FR, GR, ID, IN, JP, LV, NL, NO, NZ, SE, UK, US-NGA, ZA	US-NOAA
2	<p>Do you agree in principle to word S-4 so that the use of the English word ‘Foul’ is gradually removed from charts?</p> <p>There is a clear majority in favour. This proposal also supports the long standing principle of using symbols rather than text.</p>	BR, CA, DE, DK, ES, (ESRI), FI, FR, GR, ID, IN, JP, LV, NL, NO, NZ, SE, UK, ZA	AU, LV, US-NGA/NOAA
3	<p>Do you agree to insert a depth in brackets adjacent to the # symbol, if required?</p> <p>There is a clear majority in favour.</p> <p>The comments describing the ‘no’ votes actually support the view that a danger circle associated with the legend ‘foul’ is misleading (and are really obstructions). This proposal is dealing with the abnormal, when the position of a foul coincides with a selected depth.</p> <p>Japan’s proposal is logical and associates the foul feature with ‘nature of the seabed’, thereby giving priority and position to the depth. It is a symbol currently used by a Member State and, so far as we know, the original proposal is not. We therefore suggest accepting Japan’s method as the way to show the situation, if necessary.</p>	AU, BR, CA, DK, ES, (ESRI), FI, FR, GR, IN, JP, LV, NO, SE, US-NOAA, ZA	DE, ID, NL, NZ, US-NGA
4	<p>Do you agree that where an area of foul ground is large enough to be charted true to scale, it should be according to the same principle as N2.2, N12.1, N20, ie:</p> <p>a. use the # symbol as a centred symbol in small areas of foul ground?</p> <p>There is a clear majority in favour (and this replicates what is already done in ENC). However, FI, LV & SE all express a valid concern that a centred symbol may be mistaken for an actual position. SE explains that the cited N2.2, N12.1 and N20 are not really comparable and suggests that L5.1 is a better model. This makes sense to us, so we agree that a symbol in a circle should be used (and we may have to consider whether the same approach should be applied to K48.1 for consistency).</p> <p>b. use the # symbol in the limits of large areas of foul ground?</p> <p>There is a clear majority in favour. Provided the limit is long enough to include several, regularly spaced symbols, there seems little possibility of confusion with actual fouls. Japan’s point is not understood, as there should be no problem creating a polygon around such as area. Such ‘foul ground’ areas can already be captured in ENC.</p>	BR, CA, DE, DK, ES, (ESRI), FI(b), FR, GR, ID, IN, JP(a), NL, NO, NZ, SE(b), UK, US-NGA/NOAA, ZA	AU, FI(a), JP(b), LV, SE(a)
5	<p>Do you agree with the draft revised specification B-422.8?</p> <p>We have made some changes to cover most of the reasons for ‘no’</p>	BR, CA, DE, DK, ES, (ESRI), FI, FR, GR, ID, IN, NL, NO, UK, US-NGA, ZA	AU, JP, LV, NZ, SE, US-NOAA

	<p>votes across.</p> <p>We have not included the term ‘Obstruction Area’ suggested by AU and endorsed by others. This option already exists (K40) but has not satisfied US requirements. If US indicate they agree with the suggestion, then ‘Foul Area’ is no longer required and the existing specification at B-422.9 can be amended if necessary.</p>		
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Comments:

AUSTRALIA

At CSPCWG6, it was agreed that in general the problem with the use of the terms “foul area” and “foul ground” (or the term “foul” in general) were with the nautical cartographer rather than the chart user (CSPCWG6 Minutes 8.2), and there has not been, to my knowledge, any concern raised in IHO from a chart users point of view on the interpretation of “foul” as it appears on charts. As a result most of the actions generated from this agenda item related to S-4, and none involved making any changes to what is depicted on the paper chart. HDWG has since developed a proposal for a revised definition for foul ground which better differentiates it from foul area in S-32, and informal discussions are taking place in TSMAD to develop a proposal to remove the Category of Obstruction foul ground as an enumerate for the Obstruction feature and making foul ground a separate feature in S-100. Unfortunately none of this good progress solves the problem that there are, in hydrography, two similar terms meaning different things that both contain the words “foul”, as both terms will still exist in S-32, S-100 and, with all the CSPCWG discussions to date, in S-4. I have tried to take a blank sheet of paper approach to the issue of foul area and foul ground with this in mind and, in consultation with many AU colleagues, including mariners, would like to suggest the following:

S-32:

- Insert new definition for “obstruction area”, being a slight variation on the current definition for foul area: “An area of numerous uncharted OBSTRUCTIONS. The area charted serves as a warning to the mariner that all dangers are not charted individually and that navigation through the area may be hazardous. Also called [*foul area*/FOUL AREA].
- Remove the definition for foul area (1915). Or alternatively replace the existing definition with “See OBSTRUCTION AREA”.

S-4:

- Re-name B-422 “WRECKS, OBSTRUCTIONS”.
- Amend clause B-422.8 to relate only to obstruction area with wording similar to that proposed above, i.e.:

B-422.8 An **Obstruction Area** in general is an area of numerous uncharted dangers to navigation. The area charted serves as a warning to the mariner that all dangers to navigation are not charted individually and that navigation through the area may be hazardous. Depiction of obstruction areas should not be applied to a soft continuum with indefinite boundaries such as mud or sand; to areas congested with marine vegetation such as kelp or grass in water; or to materials not likely to cause damage to a vessel.

An obstruction area must be delimited by a danger line, (K1, see B-420.1), filled with blue tint. Further information regarding the nature of the obstruction area may be provided by appropriate legends (eg ‘numerous rocks’, ‘numerous obstructions’, ‘coral heads’), or may be provided by insertion of a representative selection of the appropriate symbol(s) within the area (eg rocks, wrecks, stumps) to indicate the characteristics of the uncharted dangers to navigation, where known. The legends ‘*Foul*’ or ‘*Foul Area*’ should not be used.

For foul ground not hazardous to surface navigation, see B-449.7.

- There may need to be some amendments made to B-422.9 to better synchronise these clauses.

- Move the existing clause B-422.8 to B-449.7 as suggested in CSPCWG Letter 07/2010. AU preference would be for the depiction of foul ground to remain as it is (with the addition of the bracketed sounding next to the K31 point symbol), as this has not been identified as an issue for the chart user, but CSPCWG may decide to introduce new additional and/or alternate guidance, or replace the existing guidance as has been suggested in this Letter.

INT1:

- With the possible exception of making changes to K31 dependant on the result of this Letter, do nothing. CSPCWG and INT1 Sub-Working Group may wish to consider amending or expanding K40 to include an example of an obstruction area in general.

S-100:

- Remove value 7 (foul ground) from the attribute CATOBS (Category of Obstruction). Add new feature for foul ground (e.g. FOUGRD) with appropriate attributes/enumerates.

- Amend value 6 (foul area) for the attribute CATOBS (Category of Obstruction) to “obstruction area in general”. Amend definition to new S-32 definition for obstruction area.

If required, AU would be prepared to compile a proposal in support of the above suggestions for discussion at CSPCWG7, as well as proposals for other IHO Working Groups (HDWG, TSMAD) dependant on the decisions made by CSPCWG.

GERMANY

To 3.) If a depth is required another symbol can be used (e.g. K26/K27 or K41/K42). We used the depth in brackets adjacent to the # symbol as the national symbol Kc for years but according to INT 1 simplification and to avoid redundant symbols we stopped the use and made the symbol obsolescent.

To 5.) According to our answer to question 3 the sentence “The depth over the area, if known, may be shown in brackets adjacent to the symbol, if required, eg #(22);” should be deleted.

It would be fine to get an interim solution before our next New Editions of INT 1 planned for 2011. For CSPCWG7 DE will prepare a paper with a new structure of K with a reduced number of symbols.

FINLAND

4a) Disagree. See comment originally made by SE.

4b) Agree.

5) Agree, except the part related to question 4a.

FRANCE

4- The main problem is the confusion for English speakers with Foul. I propose for non English speaking countries to keep the existing ‘true to scale area + legend’ symbol K31 valuable. There is no confusion in French for example.

INDONESIA

3. We prefers to use the symbols K26,27,30 or K41.42 instead of the depth in brackets adjacent to the symbol.

JAPAN

3. In Japanese charts, symbol of ‘Foul Ground’ is put under the depth like quality of bottom where the depth is known. As whether it is navigable or not depends on the draught of the vessel, we propose the above way of description i.e. ¹⁸#, in addition to the way of inserting a depth in brackets adjacent to the # symbol.

4b. The principle of using symbol in the limits of areas is applied to the artificially defined areas (e.g. restricted area), and should not be applied to the danger areas which cannot be limited by circle nor polygon. Required numbers of # symbols should be put only in the areas.

5. We request above proposal of amendment be included in the revised specification B 422.8.

LATVIA

We think that, if there is no confusion from the chart user side about the word “FOUL” as legend or short on charts for “FOUL GROUND” and only, then is OK. It could be misunderstood to show the # symbol in the centred position or in line and the same time to use it as a point object with no changes. We would prefer to see the legend “FOUL” or other legend (like “UNCLEAN” or “DEBRIS”) for the # symbol if it is shown as an area with black dashed line.

“OBSTRUCTION AREA” (as mentioned in AU comment) with legends, like “numerous rocks“ or depicted representative adjacent symbols (they are point symbols with exact positions, but those depicted are from exact positions in this area and others are not shown, but in the dotted line limits) could be good idea instead of “FOUL AREA” as it clearly says what it is.

NETHERLANDS

3. NL prefers to use the symbols K26,27,30 or K41.42 instead of the depth in brackets adjacent to the symbol; normally, we only chart the symbol without the depth.

NORWAY

It may be appropriate to mention that the English word ‘foul’, to our knowledge, never has been present on any Norwegian chart printed in Norway.

NEW ZEALAND

3: We think that a foul of known depth is actually an obstruction. We agree with Australia’s proposal to rename Foul Area as Obstruction Area. This will make it clearer for the chart compiler, but should not change anything for the mariner i.e. it is still delimited by a danger line and blue tint. Within the Obstruction Area a representative selection of dangers, and/or known dangers with depths can be charted.

5: We agree with the draft revised specification, except to change the name Foul Area to Obstruction Area.

SWEDEN

4a) SE do not support the usage of the # symbol as a centred symbol within dashed limits since it is not obvious for the user that the symbol is not in position. If there is a need for a centred symbol SE propose using the same principle as used for Wind farms (L5.1) and portray the # symbol within a circle as shown below. The principles used in N2.2, N12.1 and N20 could not really be applied in this case since N2.2, N12.1 and N20 are not physical features and there is no need in that case to distinguish between objects in or out of position.



5) Apart from the comment above SE opposes the usage of symbols (eg rocks, wrecks, stumps) within a Foul Area since it is not obvious for the user that the symbols are not in position. These types of symbols are always in position elsewhere.

A **Foul Area** must be delimited by a danger line, (K1, see B-420.1), filled with blue tint. Further information should be provided by appropriate legends, eg ‘numerous rocks’, ‘numerous obstructions’, ‘coral heads’, or may be provided by insertion of a representative selection of the appropriate symbol(s) within the area (eg rocks, wrecks, stumps) to indicate the characteristics of the uncharted dangers to navigation, where known. The legends ‘Foul’ or ‘Foul Area’ should not be used.

US-NGA

2: NGA concurs with US/NOAA response. For historical and legacy purposes, “Foul” is used extensively on US charts. The use may eventually be phased off as new charts and/or digital charts are produced, but older versions will still yield the nomenclature. “Foul” is still used to indicate large foul grounds on NGA charts.

3: In NGA, Foul symbols (#) with a depth indicates a known hazard. NGA would consider these an obstruction/wk and prefers to use K26, K27, K30, K41, K42 to indicate.

4: As stated in comment for #2, NGA routinely uses the word “Foul” to indicate a large foul ground area.

US-NOAA

NOAA supports charting a foul area with the use of the dotted line K1.

NOAA will continue to use the label, “Foul”, for foul areas, (an area of numerous uncharted dangers) as it has done since the 1880’s.

The IHO Hydrographic Dictionary (Publication S-32) has associated “foul area” or “foul ground” with dangers to navigation for almost 60 years. Any attempt to delete “foul area” from S-32 would leave thousands of foul areas shown on U.S. hydrographic surveys since 1880 without a definition in this important international dictionary.

“Foul Area” is a valid selection for the S-57 attribute CATOBS. “Rocks” and “Coral heads” are not available selections for CATOBS. S-101 might change that, but not for some time to come. S-57 attribution is important for the production of paper charts from a single charting database encoded in S-57.

The proposed Section B-422.8 still includes the phrase, “Further information should be provided by insertion of a representative selection of the appropriate symbols within the area.” The insertion of actual or a representative selection of symbols within the area may lead the mariner to mistakenly believe that all dangers have been charted within the area, while by definition, the area contains numerous “uncharted” dangers. That is the purpose of showing a foul area, rather than individual symbols.

SOUTH AFRICA

5. Recommend that the paragraphs relating to ‘Foul Area’ and ‘Foul Ground’ at least be grouped together and move the 3rd paragraph statement to the end of the specification.

Draft Specification: S-4 Part B

B-422.8 A **Foul Area** is an area of numerous uncharted dangers to navigation. The area charted serves as a warning to the mariner that all dangers to navigation are not charted individually and that navigation through the area may be hazardous. The term ‘foul area’ should not be applied to a soft continuum with indefinite boundaries such as mud or sand; to areas congested with marine vegetation such as kelp or grass in water (~~unless attached to rocks or obstructions~~); or to materials not likely to cause damage to a vessel (S-32 No.1915).

Foul Ground is an area over which it is safe to navigate but which should be avoided for anchoring, taking the ground or ground fishing (eg remains of wreck, cleared platform).

It is important to distinguish between these two uses of the description ‘Foul’ on charts. Therefore, the word ‘Foul’ should ~~no longer be inserted~~ be avoided on charts, because of the potential for confusion by the chart user.

A **Foul Area** must be delimited by a danger line, **K1** (see B-420.1), filled with blue tint. Further information should be provided by appropriate legends, eg ‘numerous rocks’, ‘numerous obstructions’, ‘coral heads’, ~~or may be provided by insertion of a representative selection of the appropriate symbol(s) within the area (eg rocks, wrecks, stumps)~~ to indicate the characteristics of the uncharted dangers to navigation, where known. ~~No symbols should be inserted in the area and the~~ legends ‘Foul’ or ‘Foul Area’ should not be used.

The **foul ground** symbol # ~~K31.1/L22~~ should be used as a point symbol to indicate small areas of sea floor debris, eg: the distributed remains of a wreck, a dropped anchor, the site of a cleared production platform (provided the platform has been removed to the sea floor). Note: Platforms which have been cut-off **above** the sea floor must be charted as obstructions, see B-422.9.

If the position of the # coincides with a selected sounding, the # symbol should be placed under the sounding, in the manner of a seabed characteristic, eg:

18
#

~~The depth over the area, if known, may be shown in brackets adjacent to the symbol, if required, eg #(22); the swept symbol K2 may be inserted underneath, if appropriate. This~~

Larger ~~a~~ areas of **foul ground** must be shown by symbol # K31/L22 centred in a circle and placed within dashed limits where the extent is known and the area is large enough to be charted true to scale:



For ~~extensive~~ large areas, the # symbol may be included in the limit, at intervals of approximately 40mm or closer and not exceeding 50mm:



The background colour should be in accordance with the depth. ~~Areas too small to be charted true to scale should be shown by the symbol alone.~~ The legends ‘Foul’ or ‘Foul Ground’ should not be used.