INTERNATIONAL HYDROGRAPHIC ORGANIZATION

ORGANISATION HYDROGRAPHIQUE INTERNATIONALE

CHART STANDARDIZATION & PAPER CHART WORKING GROUP (CSPCWG)

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

Chairman: Peter JONES
Secretary: Andrew HEATH-COLEMAN

UK Hydrographic Office
Admiralty Way, Taunton, Somerset
TA1 2DN, United Kingdom

Telephone:
(Chairman) +44 (0) 1823 337900 ext 5035
(Secretary) +44 (0) 1823 337900 ext 3656
Facsimile: +44 (0) 1823 325823
E-mail: peter.jones@ukho.gov.uk
andrew.coleman@ukho.gov.uk

CSPCWG Letter: 11/2009

UKHO ref: HA317/010/031-06

To CSPCWG Members Date 24 September 2009

Dear Colleagues,

Subject: Actions from CSPCWG5 (Round 2)

We received 20 responses to CSPCWG Letter 7/2009; I believe that is a record and shows how much interest new specifications arsing out of discussions at our last meeting have generated. Thank you to all of you.

In general, the proposals were well received, with 5 out of the 7 receiving unanimous 'YES' votes, although some useful proposals for improvements were also suggested; see Annex A for details and my responses. Two of the proposals, while receiving a positive response from the majority, nevertheless met some opposition with reasoned arguments that need addressing. As usual, we have collected all the responses together in Annex A to this letter, with my comments added in red.

The two needing further consideration are: Action 14 'Unsurveyed areas' and Action 33 'FFl'.

Action 14 'Unsurveyed areas'. The Nordic proposal was accepted at CSPCWG5, there seems valid reasoning to support it and the majority (16-3) of respondents do support it. The issues raised by FR of 'vibration' effect and possible usage of a similar symbol for secondary shallow areas on old charts do not seem strong enough to prevent the proposal being accepted.

However, AU and FR are both concerned about the introduction of another variant for unsurveyed areas, and US challenges the use of magenta. Perhaps it would be more appropriate to drop the magenta variant in the interests of standardization? The normal practice is to use black text and lines for detail associated with depth, with blue colouring as a warning of shallow water. Magenta may originally have had a 'warning' element, but that is not the main usage for it and using it to mark unsurveyed areas does not fit with any of the principles listed in B-142. I have therefore asked the question in a new response form at Annex I.

Action 33 'FFl'. Although the majority of respondents are willing for FFl to be made obsolescent, AU argues strongly for its retention and I find the argument to be convincing. DE and NO provide support and US expresses some concern. On balance, I think the case to retain FFl is made. This also avoids changes to other documents (such as INT1 and S-12) and a conflict with ENC practice.

However, the issue which originally started this debate was the AU usage of FIso and FQ (which do not appear in INT1 or S-12 and cannot be encoded in S-57). We need to consider whether they are valid, and if so, should they be added to INT1 and S-12 (and possibly S-57, S-52, S-101). An alternative is to use Fl here in the wider application of any rhythmic light, in which case the examples in AU waters would revert to FFl. Please use the response form to indicate your view on this.

Action 11 (Bridges). I would like your thoughts on one further item, arising from the draft specification for bridges. The example provided by US (now B-381.6 Example B) shows the opening span of a bridge removed in order to show the depths underneath it. This is contrary to the advice in B-381.3 that opening bridges should be shown in the closed position. I am concerned that this practice could be misleading, by implying that the bridge is redundant and the span over the channel has been permanently removed. I would welcome your views.

I would be most grateful to receive your **responses by 23 October 2009**.

Yours sincerely,

Peter Jones
Chairman

Annex A: Consolidated list of responses to CSPCWG Letter 07/2009
Annex B: Draft New Specifications for B-443.8 and B-444.5 - Pipeline tunnel entrance (CSPCWG 5 Action 10)
Annex C: Draft Revised Specifications for B-381 - Bridges (CSPCWG 5 Action 11) – separate PDF file
Annex D: Draft Revised Specifications for B-445.12 - Wave energy devices (CSPCWG 5 Action 13)
Annex E: Draft Revised Specifications for B-418 - Unsurveyed areas (CSPCWG 5 Action 14)
Annex F: Draft New Specification for B- 445.2f - Platform with superstructure removed (CSPCWG 5 Action 16)
Annex G: Draft Revised Specification for B-447.4 - Shellfish beds (CSPCWG 5 Action 17)
Annex H: Use of abbreviation **FFI**. (CSPCWG 5 Action 33)
Annex I: Response form

Selected Actions from CSPCWG5
CONSOLIDATED RESPONSES TO CSPCWG LETTER 7/2009

CSPCWG5 Action	Subject	Question	Yes	No
10 (Annex A)	Pipeline tunnel	Do you approve the draft revised specifications B-443.8 and B-444.5?	AU, BR, CA, DE, DK, ES, FI, FR, GR, ID, IN, JP, NL, NO, NZ, PK, SE, UK, US, ZA	
11 (Annex B)	Bridges	Do you approve the draft revised specifications B-381?	AU, BR, CA, DE, DK, ES, FI, FR, GR, ID, IN, JP, NL, NO, NZ, PK, SE, UK, US, ZA	
13 (Annex C)	Wave energy devices	Do you approve the draft revised specifications B-445.12?	AU, BR, CA, DE, DK, ES, FI, FR, GR, ID, IN, JP, NL, NO, NZ, PK, SE, UK, US, ZA	
14 (Annex D)	Unsurveyed areas	Do you approve the draft revised specifications B-418?	BR, CA, DE, DK, ES, FI, GR, ID, IN, JP, NL, NO, NZ, PK, SE, UK, ZA	AU, DE, FR, US
16 (Annex E)	Disused / abandoned platforms	Do you approve the draft revised specifications B-445.2?	AU, BR, CA, DE, DK, ES, FI, FR, GR, ID, IN, JP, NL, NO, NZ, PK, SE, UK, US, ZA	
17 (Annex F)	Shellfish beds	Do you approve the draft revised specifications B-447.4?	AU, BR, CA, DE, DK, ES, FI, FR, GR, ID, IN, JP, NL, NO, NZ, PK, SE, UK, US, ZA	
33 (Annex G)	FFl	Do you agree that the light description abbreviation FFl should be made obsolescent, using Fl.& F. instead?	BR, CA, DK, ES, FI, FR, GR, ID, IN, JP, NL, NZ, PK, SE, US, ZA	AU, DE, NO. UK

Comments (with Chairman's response in added in red)

AUSTRALIA:

AU agrees with the proposed new text but does not agree with the proposal to number these new clauses B-381.3 and B-381.4 and re-number the existing B-381.3 (Opening bridges) and B-381.4 (Submersible bridges). In the case of opening bridges in particular, all of the portrayal issues with regards to bridge supports and detail under the bridge are just as relevant as for fixed and transporter bridges. AU also considers that it would be "tidier" to leave all the different types of bridges portrayed on charts grouped together in B-381. AU therefore proposes that the new clauses be numbered B-381.5 and B-381.6. Agreed and done.

Bridges: Minor editorial correction. B-381.4, second paragraph, second bullet point: Amend to "show soundings in their true position, …..". Agreed and done.

B-445.12: Should the point symbol have its own INT1 reference? Refer to K31 (Foul ground), K46 (Fish haven), K48 (Marine farm), etc. Agreed; we have allocated L6.1 for the point symbol and L6.2 for the area symbol (whether the area includes restrictions or not, consistent with L5).

Unsurveyed areas: AU does not agree with the insertion of horizontal blue bands in unsurveyed areas. From a chart users perspective, blue tint indicates shoal water to depths indicative of the shade of the tint (as specified in B-411.6 and depicted in INT1 I30). These shoal water blue tints are based on surveyed data compiled on the chart, which has no correlation to unsurveyed areas, and may confuse the mariner, particularly in small unsurveyed areas adjacent to or inside surveyed shoal water blue tint areas. The logical inference from blue and white bands is that it may be deep or shallow but the data is not available. In the context where the proposed symbol will be used, the water is likely to be shallow. Additionally, the fact that an area does not contain depth detail should be indicative enough for the mariner to determine that an area is unsurveyed, and if in the cartographers opinion this may not be the case, the use of the boundary and legend (existing I25) should be sufficient. SE has explained why this may not always be practical. Also, the addition of yet another variation in the specification for depiction of unsurveyed areas (they can already be depicted in black or magenta) does not

promote world-wide consistency in portrayal. True, but which is more useful: the magenta version or the blue and white band version? The latter was approved at CSPCWG5. Another consideration is the corresponding portrayal of unsurveyed areas in ECDIS, which both CSPCWG and DIPWG (from the point of corresponding portrayal of ECDIS symbols on paper charts) should consult in regards to consistency between different types of navigational products. The symbol for an unsurveyed area in ECDIS is a grey tint with small darker grey horizontal dashes dispersed through the area. Are you suggesting that the paper chart symbol should be consistent with this? It seems much less intuitive than blank areas or blue and white areas.

Disused/abandoned platforms: Editorial – As the last line after the last bullet point in the new section "f" is a new paragraph, insert a blank line after the last bullet point. There is also an apostrophe at the end of the last line of the section which should be deleted. Agreed & done.

FFl: The issue of when a light is FFl and when lights are Fl&F has been discussed at TSMAD (quite a few years ago now). The results of this discussion are evident in clause 12.8.3 of the Use of the Object Catalogue (UOC) for ENC (S-57 Appendic B.1 - Annex A), which contains a paragraph stating:

"Some lights recently constructed may appear to the mariner as "fixed and flashing - FFL" by night, while the real world object actually comprises two separate lights vertically disposed, one fixed and the other flashing (F&Fl). When it is known that two separate features actually exist, they must be encoded as separate objects, in this case two **LIGHTS** objects, one with attribute LITCHR = *1* (fixed) and the other with LITCHR = *2* (flashing), and not as one **LIGHTS** with LITCHR = *13* (fixed and flashing)."

The implication of this paragraph is that the encoding of these lights for ENC should be in accordance with the real world entity, i.e. a single fixed light with an intensified "pulse" encoded as a single light with attribute LITCHR = 13 (FFl), and 2 lights, one flashing and one fixed, vertically disposed encoded as separate lights (Fl&F). AU agrees with this in that features should be portrayed on navigational products where possible in accordance with their real-world characteristics. To be consistent with ENC, and to conform with compilation of multiple product types from a single database, AU would prefer that the light description FFl be retained. If there is inconsistency in the interpretation (is this from a mariners or compilers perspective – the illustration at INT1 P10.10 seems to be fairly self-explaining from a mariners perspective), AU suggests that a paragraph similar to that contained in UOC clause 12.8.3 be inserted in S-4, perhaps after the table at B-471.2 (a footnote or asterisk may be placed next to FFl in the table to draw attention to this paragraph if considered useful):
I think this is a well-argued case, and although there is still a case against FFl, it may be better to accept the status quo and acknowledge long precedents.

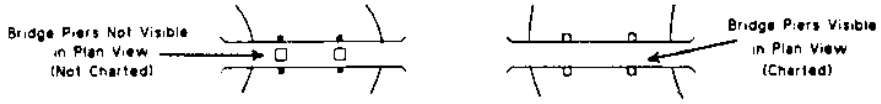
"* Some lights recently constructed may appear to the mariner as "fixed and flashing" (FFL) by night, while the real world object actually comprises two separate lights vertically disposed, one flashing and the other fixed (Fl&F). When it is known that two separate lights actually exist, they should be depicted as such, ie each light description shown separately, eg: Fl.5s 15M & F.10M. When it is known that a single light exists with an intensified "pulse" (FFl), it should be depicted as such, eg: FFl.5s 10/15M.". This seems a sensible suggestion. As it is not a change of policy, I propose that this is an editorial addition at the next new edition.

Feedback from our Nav Marks experts is that, while it is unlikely that FOc would ever be implemented in a light, it is possible that FIso or FQ may be, and in fact we have recently depicted a FIso light on one of our new editions. Even though FFl may be uncommon, this should not mean that they cannot be depicted as such on the paper chart. It was the FIso and FQ lights on AU charts which originally started us thinking about the validity of FFl. The question remains what to do about FIso and FQ: should they be charted as FFl (using Fl in the wider sense of any rhythmic light), or should FIso and FQ be added to S-4 and INT1 as additional options? If adopted, how would they be encoded in S-57?

CANADA:
10 – pipeline tunnel – the Canadian specification shows the following wording that we propose to incorporate to the IHO wording of submerged pipes "... where a cable is buried so deep and protected by an overlay of rock or other material that it is not vulnerable to damage from anchoring, fishing or other activity."
This suggestion is to add wording to the specification for a buried cable which was not actually being reviewed at this time (we reviewed and revised the specifications for buried cables and pipelines in 2008). I do not think CA's suggestion is necessary; the important point for the cartographer is that the cable (or pipeline) is buried sufficiently to be 'not vulnerable to damage'. It may simply be because it is so deep that an anchor could not penetrate.

11 – bridge supports – the Canadian specification shows the following wording that we propose to use as the IHO wording of bridge support, for it's simplicity.

"Charts shall always make it clear whether a bridge is fixed (by indicating its vertical clearance) or opening (by the appropriate legend). The position of piers or cribs which obstruct navigation shall be indicated, whether or not these are visible in the plan, i.e. overhead, view. On bridges where these obstructions are not visible in the plan view, their existence shall be symbolized by a small black .020" square positioned on either side of the bridge at the location of the hidden obstruction as in the following illustration:"



Some of this wording is already present in B-381. The words 'where these obstructions are not visible in the plan view' is useful and we have added it. We avoided the word 'pier' because, although correct in English usage, it could cause confusion with the more common usage (B-321.2). 'Crib' must be a Canadian (or North American) usage; it does not mean a bridge support according to the Oxford English Dictionary. I do not think the small black square is intuitive in depicting an out of position support which is actually under the bridge; the examples already shown seem to me to achieve the aim better.

13 – wave energy devices – could you please clarify the following questions about the numbering of this spec and of the specs that are referenced within it?:
a. Does the IHO have a spec for ARTIFICIAL ISLANDS FOR RESOURCE EXPLORATION ? what number is it? in CHS specs, it is 445.12.
b. Does the IHO have a spec for ABOVE WATER WELLHEADS ? what number is it? in CHS specs, it is 445.7, and the reference made in the proposed 445.12 is confusing.
c. Is 439,6 a spec that was renumbered or a spec that was added to the IHO specs? when did this change occur?
The secretary has answered these questions directly to CA.

33 – FFl – FFl has been in CHS' Symbols & Abbreviations since Oct 1984.and we are not aware of any complaints of FFl being confusing. Suggest that IALA is consulted before the change is made and not after. They might have a better sense of what could be potentially confusing to a mariner.
We are not aware of any complaints, either. The Chairman of IALA's AtN Committee was consulted; as stated in the CSPCWG5 record. However, see comments in letter.

GERMANY

Action 10: The symbol for the tunnel entrance seems a bit to big comparable to ES/FR/DE version of symbol D16. We think especially in the narrow Scandinavian waters the symbol should be of lower size. We should try to find an agreement for our INT 1 next editions (and S-4) in the INT 1 subWG (DE proposes to take the FR symbol) and we need the name/ text description for the new symbol. For the work of our cartographers a symbol for buried cables (e.g. L 33) would be appreciated. I agree the symbol used is large (based on NO original early draft). On the other hand, I also think the symbol in FR INT1 is a bit small so propose a symbol of 3mm length.

Action 11: I noted during CSPCWG5 that we proposed to add two paragraphs B-381.5 and B-381.6. With the new one paragraph B-381.3 we have to change a lot of entries in INT 1 and can be confused by two examples A and B. The topic "Depths under bridges" should be a separate paragraph. I include another example for the use of I 11 in an INT chart DE has adopted from Latvia in a separate file.
Agreed. Specification numbers B-381.5 & 6 used instead. A small extract from the LV chart added to the examples.

Action 13: We need the text description for INT 1 (the symbol size should be conform to L 5.2).
The symbol size is 5mm, the same as L5.2. and other circular symbols. For INT1, the text would be 'Wave energy device' and 'Wave farm'.

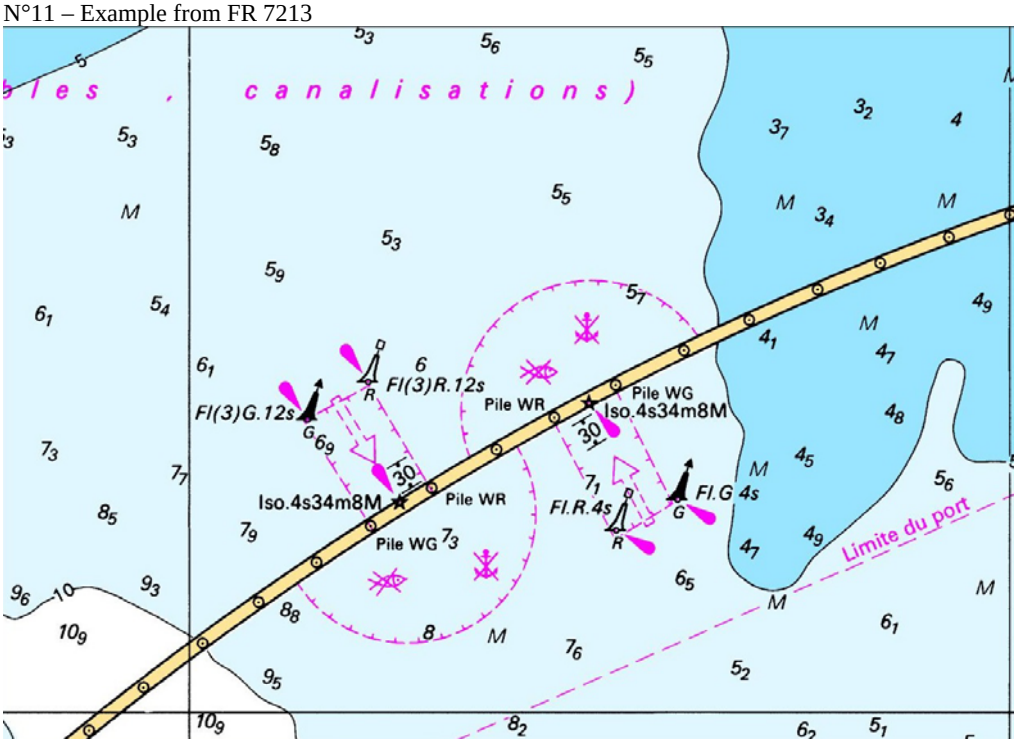
Action 14: The first choice should be to show the legend “Unsurveyed” etc., only in waters with no space (see SE example) it could be portrayed without a legend but there should be a note for the whole chart. A note would not be necessary if the blue and white band symbol is used. For INT 1 I would prefer to include the first case. Should the example with the ZOC diagram note also be included in INT 1? Not necessary as the legend is self-explanatory. S-4 should be sufficient for that. For the limit of the unsurveyed area a bold dashed line should be used. Agree.

Action 16: For the text description of L 14 in INT 1 I propose “Platform with superstructure removed” or “Platform, superstructure removed”. I prefer the second. I noted during CSPCWG5 to show the symbol without flare as the common case for abandoned platforms. Perhaps I am wrong and you have more examples where a flare is appropriate? We will delete flare from the first example, to show the basic symbol, but retain it on the second example for when there is a light (which we would expect to be the more usual situation).

Action 17: In S-4 I would prefer not to add the distance of the shell symbol in K 47 because the distance rule should be the same as used for other areas. DE would prefer a smaller size (2,0mm) for the mussel symbol in the limit.
We agreed that for new symbols, we would try to be as specific as possible and consequently included the distance between symbols (as at B-431.3, 431.4, 435.2, 488.1). However, we have accepted FR’s suggestion to add ‘or closer’. Perhaps we need to reconsider this point and make a more general guide? I think if we reduced the size of the shell to 2mm, the detail would be indistinct.

Action 33: DE uses the “&”symbol for two superstructures (see P 20.2, P 20.3). It could be confusing if it will be used for mixed lights. I understand the reason of shortage of space in charts of the Norwegian waters (see NO answer) because we have adopted a lot of national charts in these waters. Agree.

FRANCE:
N°11 – Example from FR 7213



I do not think this example is as useful as others. It is not clear what the unlabelled ‘fixed position’ circles along the bridge are. Also, the word ‘Pile’ is not appropriate in English for a bridge support.

N°14 - Unsurveyed areas – Proposed area symbol with horizontal bleu bands is too much close in appearance to the screened tints that may be used for shallow waters (§B-411.6) and it is not so expressive.
It is possible that such horizontal blue bands are on some existing charts to show shallow waters. It is the case, for example, of some old French Charts (see joined extract of charts FR6315 and FR 6570) which are in service.
I do not think the blue and white bands as seen of the SE example could be confused with the screened tints used for shallow water on modern charts. It will be clear if any old national charts have used blue and white bands for secondary depth areas that it is not 'unsurveyed' because of the presence of soundings. If it is considered that there may be confusion, then the usage could be explained in INT1 as 'obsolescent'. Indeed, the new symbol is similar to the FR former symbol I25.

Furthermore, the bands with 0,5 mm wide and 0,5 mm gap may generate vibration effect and should be avoided (see – Basic Cartography – Volume 1 – 2nd edition - International Cartographic Association – § 3.3.5.3 - pages 76 and 77 – joined).
This should not be a problem when used for small areas (as expected), but if necessary, the white band could be widened slightly which would avoid the problem.
By introducing two ways for charting unsurveyed areas, we would go against the harmonization of charts. There would be at least 3 ways, but which is the least useful? Letter refers.

N°17 - Shellfish beds – I propose to remove "at intervals of approximately 40mm". Such a value should be applied to long charted limits as Precautionary areas (§ B-435.2 b). I suggest to not specify a value as for Area into which entry is prohibited (N2.2 §B-439.3) or add "approximately 40mm or closer".
Agreed to include 'or closer'. But do we need a general guide?

N°33 – We have to keep in mind that the current rule for FFL is still used by most of the charts and it will take several years to update them. The new rule in S4 could be introduced by something like "As FFl is confusing, F.&FL. is preferable to FFl ; FFL should be avoided".
See comments in letter.

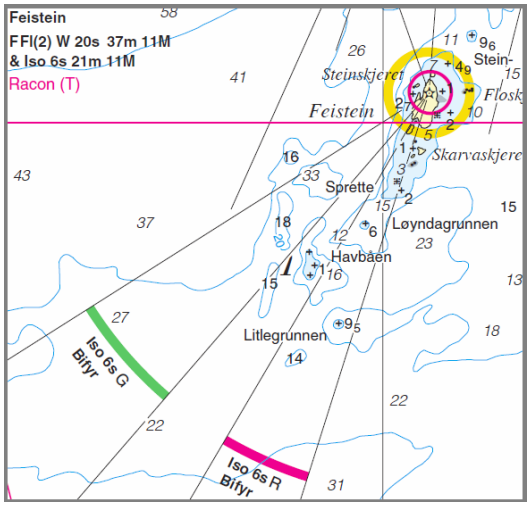
France also provided examples of the use of blue bands used on old French charts.

GREECE:
Action 33, Annex G: Reference to FFl should be also removed from M-12 (Standardization of List of Lights and Fog Signals), Appendix A, page A-12, Description 9.
See comments in letter.

NORWAY:
Action 14:
The comments from France are relevant, so perhaps the width of the blue bands and gaps should be increased a bit to reduce the risk of generating vibration.
It would probably only work if one (the white) band is increased, to avoid the 50/50 situation. But is it necessary? (See also comments regarding FR response, and in letter)

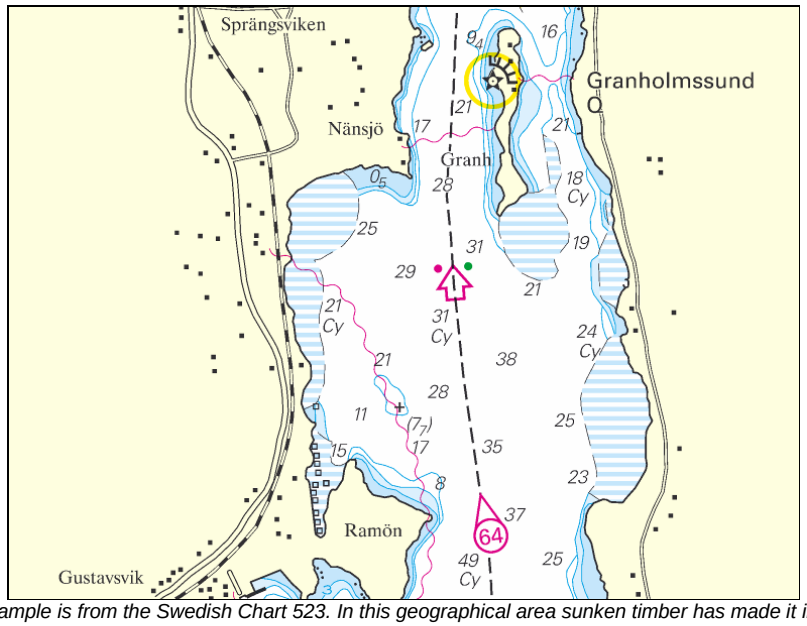
Action 33:
In Norway there are several lights with the FFl characteristic. (It is well known, and not so comparatively rare in Norway). Since FFl is a compressed set of letters we prefer that instead of the much longer Fl. & F. Due to the complicated Norwegian coast we also avoid the use of full stop in light characteristics. We use space instead. The full stop can easily be misinterpreted as the symbol for a small islet or a rock which does not cover.

The chart segment below shows the Norwegian way of using the & to separate the two different characteristics for a light with subsidiary light (P-42). (The subsidiary light is installed lower in the same structure as the main light).



Since the FFl is a character belonging to one single light installation showing a fixed light varied at regular intervals by a flash of higher intensity, we vote for keeping the FFl because we think it gives a better expression of this actual kind of light.
This is helpful.

SWEDEN:
Action 14 (comment to FR and AU):
In certain cases where there are many small unsurveyed areas it is impossible to use the existing S-4 standard since the chart would become too cluttered with the legend "Unsurveyed" if portrayal where made according to the standard. That was one of the reasons why Denmark, Finland, Norway and Sweden forwarded the proposal with blue bands, a symbology used in Swedish charts as a national symbol more than 40 years, in order to have a method in S-4 to portray unsurveyed areas in inshore waters such as coastal archipelagos where a positive form of warning is required. I such areas one want to make sure that surface navigation is not performed. See also the example below where a commercial fairway is close to such unsurveyed areas:



This example is from the Swedish Chart 523. In this geographical area sunken timber has made it impossible to perform any hydrographical surveys near the shoreline.

May we include this example in S-4?
US:
Section B-433.8- Consider insertion of a comma between the words, "tunnel" and "the". Agreed and done.

Section B-418.1- This specification allows either “bold dashed black or magenta limits”, but does not specify when the magenta limit would be used as opposed to a black limit. A magenta limit would imply “no permanent physical obstruction” but that claim cannot be made if the area has not been surveyed. Needs further consideration – see letter.

Also, the United States agrees with the comments from France (FR) in opposition to the use of the blue bands in unsurveyed areas.

Annex G- The argument is logical, but note that FFL is currently allowed as input in S-57 (attribute: LITCHR). This would require coordination with TSMAD.
See comments in letter.

CSPCWG 5 ACTION 10: Secretary to draft specification for pipeline tunnel entrance, and include in WG letter.

Draft revised specification (new text in red)

B-443.8 **Cables, buried** so deep that they are not vulnerable to damage from anchoring, should not be charted (so that mariners are not unnecessarily inhibited from anchoring or fishing). In marginal cases they may be charted in magenta with a note stating the nominal depth to which they are buried, as L42.1, but with a cable symbol:

If they are partly laid in a tunnel, the entrance, if required to be shown, must be charted as L42.2, but with a cable symbol. For details, see B-444.5.

Comment: DID: please add symbol of cable, with legend '*Buried 1.6m*' above (as L42 with cable symbol, no L number.

Draft revised specification (new text in red)

B-444.5 **Pipes of all types, buried** so deep that they are not vulnerable to damage from anchoring, should not be charted (so that mariners are not unnecessarily inhibited from anchoring or fishing). In marginal cases they may be charted in magenta with a note stating the nominal depth to which they are buried.

L42.1

If required to be shown, the entrance to a pipeline tunnel must be charted by a magenta symbol (black symbol in the case of an outfall in a tunnel):

L42.2

The pipeline inside the tunnel should not be charted. This symbol helps to distinguish partly lifted pipelines (or cables, see B-443.8) from those which are in use, but partly in a tunnel.

Comment: DID: please amend size of tunnel entrance to measure 3mm from top to bottom.

CSPCWG 5 ACTION 11: Secretary to draft revised specification B-381 (Bridges), including some examples, and include in WG letter.

Comment: We think that several examples are useful to help guide the cartographer, so all have been retained.

Draft additional specification

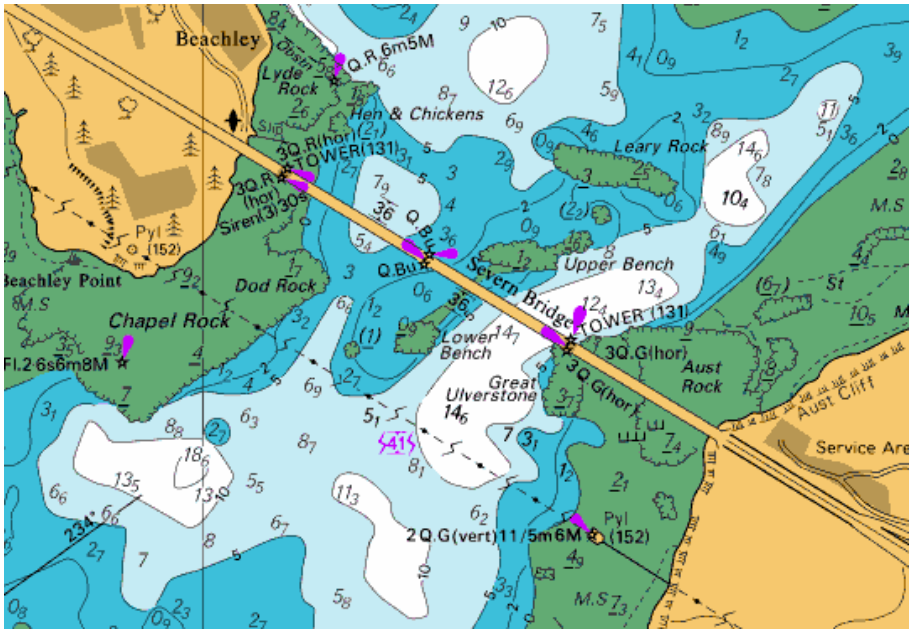
381.5 Bridge supports

Bridge supports may be an obstruction to navigation and should be charted (if the positions are known) whether or not these are visible in plan view. It is difficult to be prescriptive about how they should be charted, as circumstances may vary considerably. Some options (which may be combined) are:

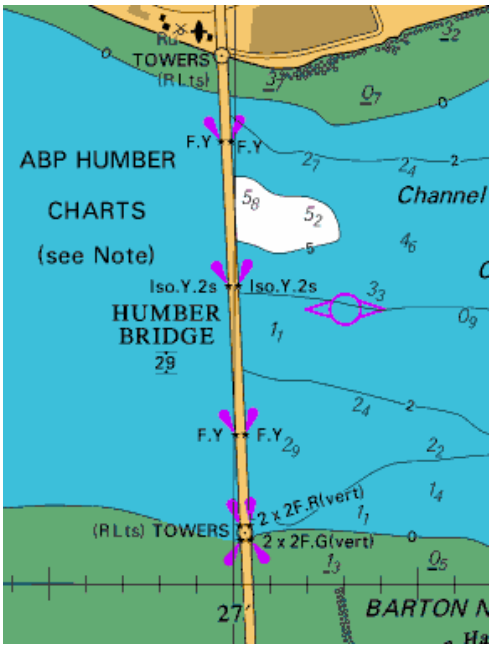
Comment: Added at suggestion of CA.

- Where bridge supports carry navigation lights (and/or daymarks), chart as small light stars (and/or beacons) with appropriate descriptions. Add a legend, eg 'TOWER', 'Pylon', as appropriate to distinguish between lights on the bridge superstructure and on bridge supports (examples A to C);
- For suspension bridges, or others for which the supports extend above the bridge, a position circle symbol with legend should be shown, eg 'TOWER', 'Pylon' (example B) or, if large enough scale, the tower can be shown to scale (example F);
- Where bridge supports are wider than the actual bridge, show to scale in plan outline (usually continuing the bridge sides through the widening, unless it is known that the bridge itself widens at those points) (example C and D);
- The supports may also be shown as lines across the bridge, even if they do not protrude beyond the width of the bridge or above the bridge (examples E to G);
- Insert a large-scale inset plan to enable the above actions to be taken (example F and G)
- Add a profile view diagram (example H and I):

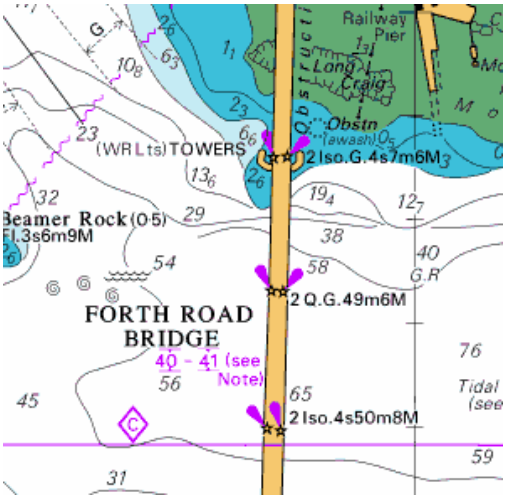
Comment: CA proposes another option (2 small solid squares either side of the bridge). However, this does not seem to intuitively demonstrate that the supports are actually located under the bridge (ie the symbol is out of position).



Example A (Source: United Kingdom Hydrographic Office)



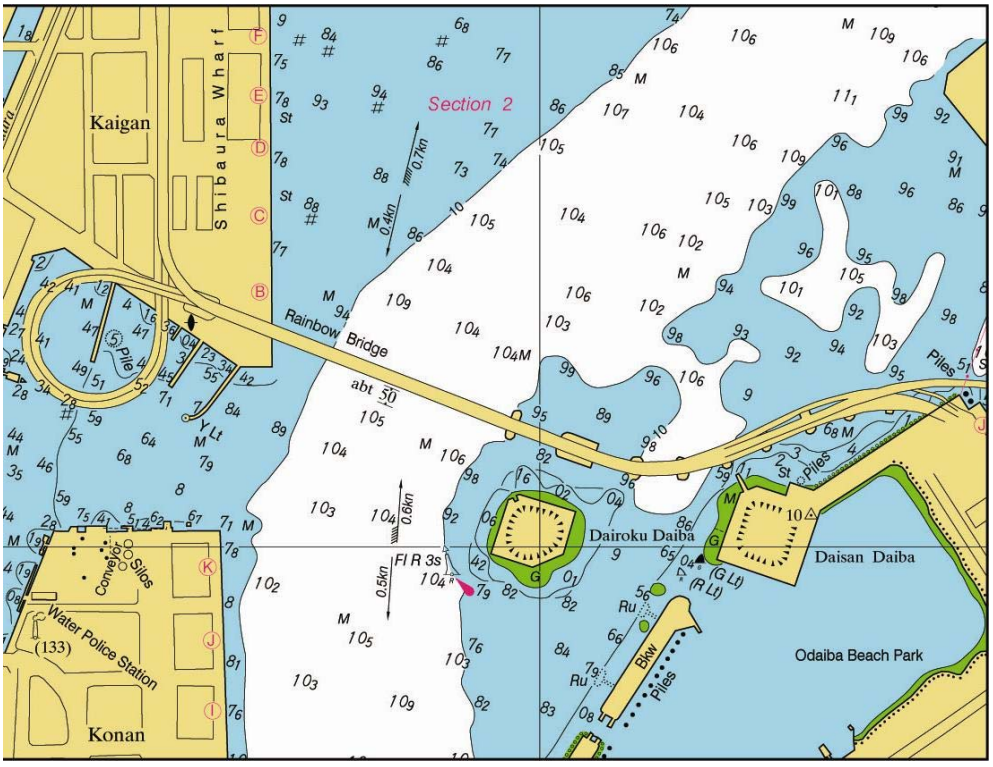
Example B



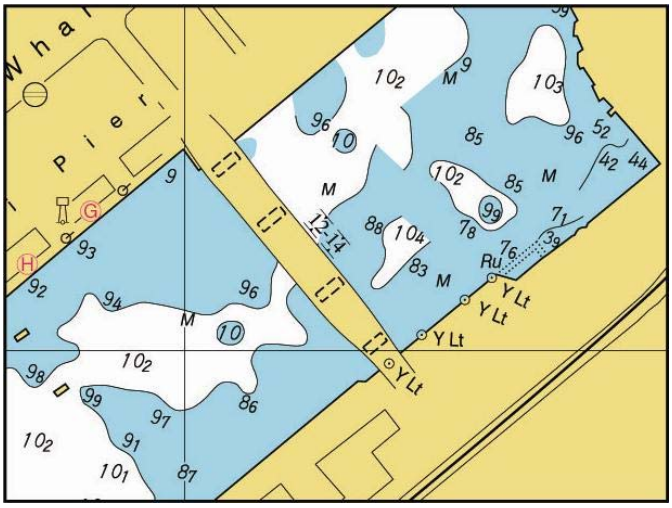
Example C

Comment: DID: please remove legend 'ABP HUMBER CHARTS (see Note)' from example B.

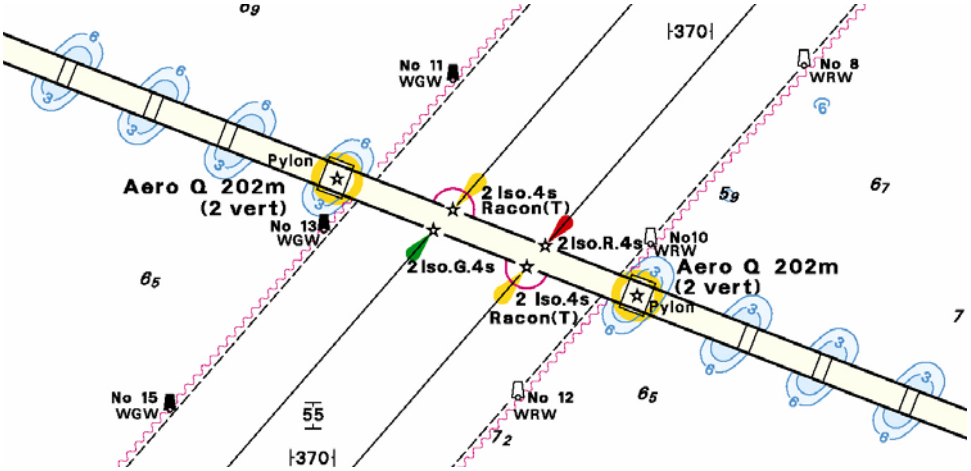
Examples B & C (Source: United Kingdom Hydrographic Office)



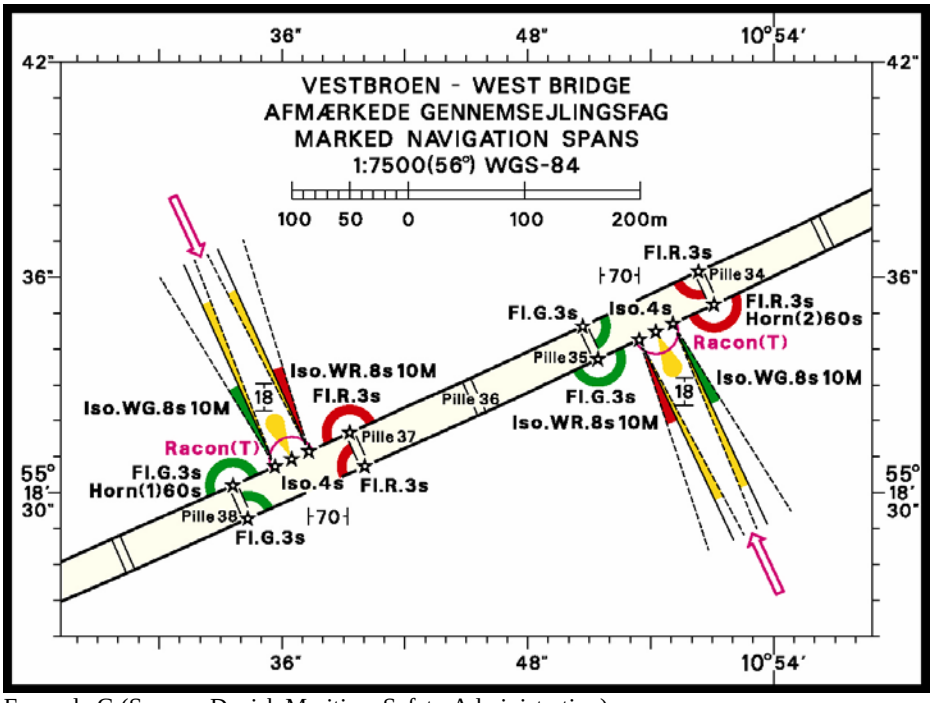
Example D (Source: Japanese Hydrographic and Oceanographic Department)



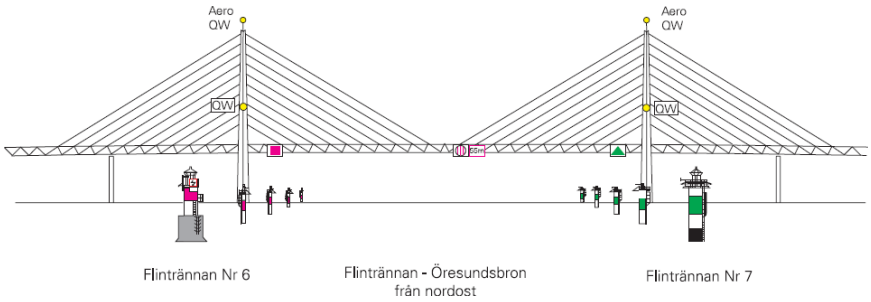
Example E (Source: Japanese Hydrographic and Oceanographic Department)



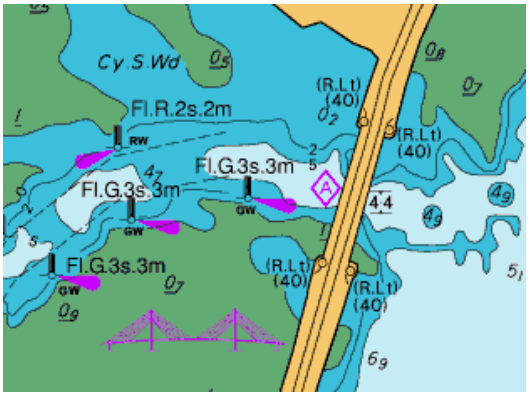
Example F (Source: Danish Maritime Safety Administration)



Example G (Source: Danish Maritime Safety Administration)



Example H (Source: Swedish Maritime Administration)



Example I (Source: Bahrain Chart)

381.6 Depth (including obstructions) under bridges

The physical presence of a bridge can affect the flow of water and hence the location of shoals and deeper channels in its vicinity, including underneath it. Normal sounding selection principles apply in the waters either side of a bridge. However, it may be appropriate to select a sounding (or obstruction) which is under

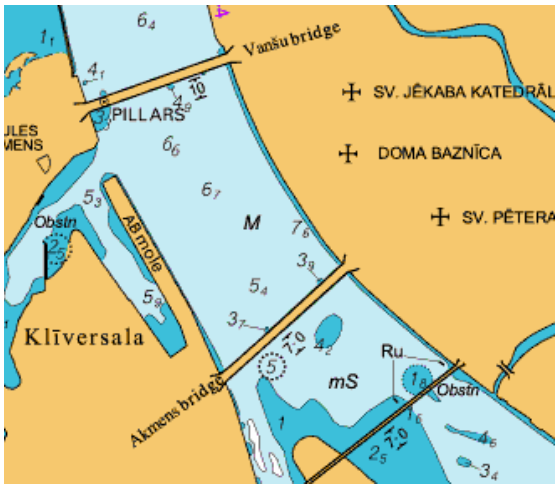
the bridge (either because it is a controlling depth, or because depth varies significantly across the width of a bridge span). In such cases it should be shown as a 'sounding out of position', in accordance with the guidance at M-4 B-412.2. I11. Using a pointer (Example A) is to be preferred to I12, as the exact position under the span may be important.

Other options are:

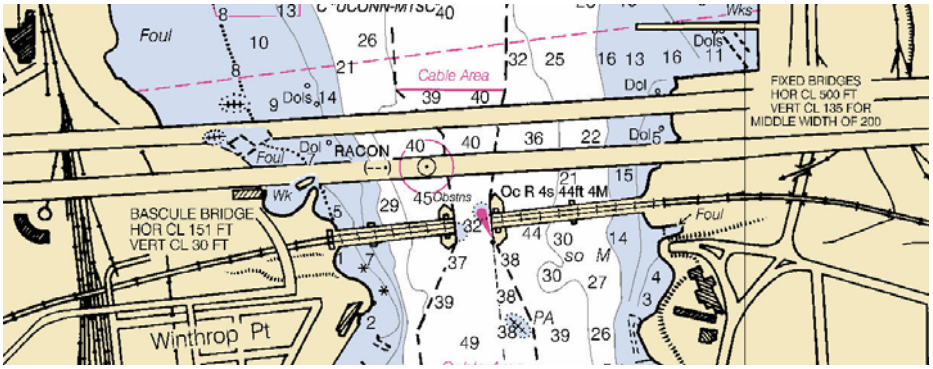
- to break the bridge, to allow bathymetry to be shown in the normal way (Example B)
- show soundings in their true position, with the bridge and land tint retained over the top (Example C).

Depth contours should normally be broken at the bridge as it will usually be obvious where the contours go. On very large scale charts, where the bridge is shown to scale and it clarifies the picture, the contours can be continued through the bridge.

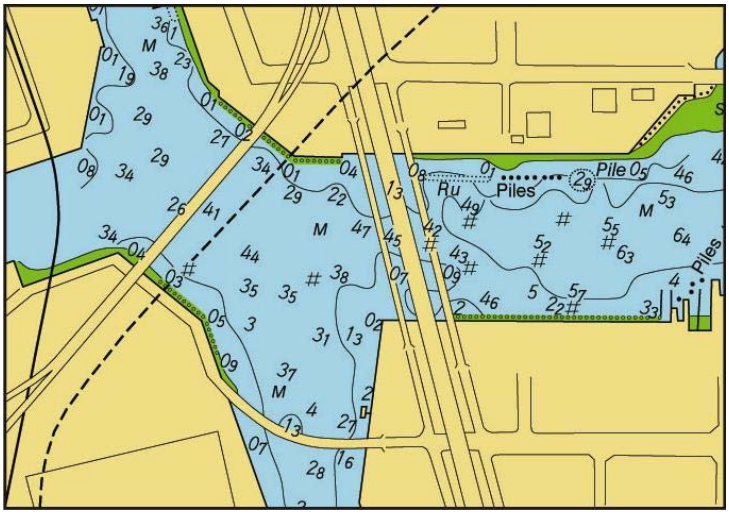
Comment: UK believes this is confusing as first impression is that the span has been permanently removed (as in a redundant bridge) and there is no air draught (draft) limit between the central supports. It is contrary to B-381.3 which indicates that bridges should be shown in the closed position.



Example A (Source: Latvian chart)



Example B (Source: United States Office of Coast Survey)



Example C (Source: Japanese Hydrographic and Oceanographic Department)

CSPCWG 5 ACTION 13: Secretary to draft a revised specification for B-445.12 (wave energy devices) and include in WG Letter.

Draft revised specification (new text in red)

B-445.12 **Wave energy devices; Wave farms.** A wide variety of devices for harnessing wave energy are being developed. These devices need protection and are also potentially dangerous to navigation.

Deleted: Farms

At the present stage of the industry, wave farms should usually be treated as Development Areas (limit N1.2, N2.1 or N2.2 as appropriate, see B445.7); that is, charted in magenta, as the actual obstructions will come and go or be moved as experiments progress. A legend such as '*Renewable Energy Installations - Development Area (see Note)*' should be inserted in the area. Small areas may be simply labelled '*Development Area (see Note)*' or '*Wave Farm (see Note)*'. All cables, buoys, lights and permanent structures should be charted as normal.

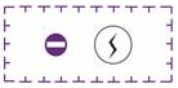
A magenta note should be inserted warning of the potentially hazardous nature of the area, for example:

DEVELOPMENT AREA
Extensive testing of renewable energy installations, both above and below the surface, takes place in this area. Mariners should exercise extreme caution if navigating in this area. For further information, see [eg associated publication].

Later, if such an area becomes established as a wave farm, the symbol for a renewable energy installation should normally be inserted in an area. Symbol N1.1 (black maritime limit implying permanent physical obstructions) should normally be used for the limit of a wave farm:

L6.2

However, if navigation is prohibited, N2.2 must be used:



L6.2

If there are other restrictions, N2.1 may be used, noting the principles for portraying coincident limits at B-439.6. Usually, the renewable energy installation symbol will be used in combination with an area symbol, although if necessary (eg because of scale or for a single device) it may be used as a point symbol, with the centre of the circle representing the position:

L6.1

Comment: Number added as requested by AU (and consistent with L5.1/5.2). INT1 terms will be 'Wave energy device', 'Wave farm' (as in specification)

CSPCWG 5 ACTION 14: Secretary to draft a revised specification for B-418 (unsurveyed areas) and include in WG Letter.

Draft revised specification (new text in red)

B-418 UNSURVEYED AREAS

Unsurveyed areas may be defined as those within which there is no available data derived from a systematic hydrographic survey. This may include areas which only have lines of passage soundings and/or other miscellaneous data such as isolated ship's reports.

Most of the world's waters are unsurveyed. The use of a legend 'Unsurveyed' may give a false impression that all other areas of a chart have been fully surveyed. Therefore the legend should be used sparingly, usually only where it is necessary to draw attention to unsurveyed areas amongst surveyed areas; such areas may not otherwise be obvious to the chart user.

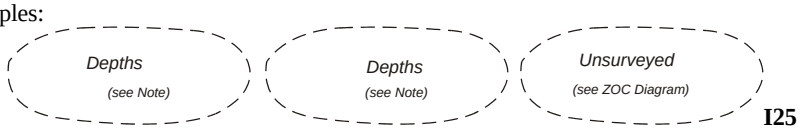
B-418.1 **Areas delimited by a bold line.** In unsurveyed areas which are considered dangerous for vessels to enter, a very positive form of warning is required. Such areas must be shown by bold dashed black or magenta limits, with the legend either:

- '*Unsurveyed*' (which may be accompanied by a note) or
- '*Depths (see Note)*'.

A reference to the Source or ZOC Diagram may be inserted instead of a note.

Comment: AU challenges the introduction of another variant for unsurveyed areas, and US challenges the use of magenta. The Nordic proposal was accepted at CSPCWG5 and there seems valid reasoning to support it (and the majority [16-3] of respondents support it). Perhaps it would be more appropriate to drop the magenta variant in the interests of standardization?

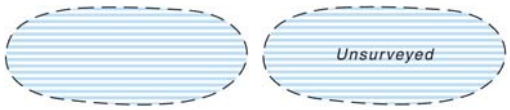
Examples:



I25

This treatment is likely to be most appropriate for small areas in inshore waters such as coastal archipelagos and barrier reefs and where ice has receded. It may be reinforced by the omission or insertion of colour tints within the bold line, or by horizontal blue bands (0.5mm wide, 0.5mm gaps) inserted within the area. If blue bands are inserted, the legend '*Unsurveyed*' or equivalent may be included if space permits:

Comment: The gap could be increased slightly, eg to 0.7mm, to deal with the 'vibration' effect problem, but perhaps this is not an issue, noting that it should only be used in small areas? We have tried to make that more explicit.



I25

Comment: Should the size of the examples be reduced (in INT1)? Would a chart cutting, as supplied by SE, be helpful in S-4?

Very small areas (eg gaps left in surveys because of obstructions such as icebergs, log ponds or moored vessels), should have the legend alongside the limit if blue bands are not inserted.

B-418.2 **Wide blank areas** on charts are generally self-explanatory. In areas where the only data are passage soundings, this should be made clear to the user by selecting soundings that retain the line pattern, rather than a regularly spaced pattern. If hazards are known to exist even though the area is unsurveyed, a warning is required, eg '*Coral heads are known to exist in this area*'.

Note: a blank area in inshore waters may also be used to indicate that the chart is too small a scale for navigation (see B-404).

CSPCWG 5 ACTION 16: Secretary to include draft specification for platform with superstructure removed in WG Letter.

B-445.2 Platforms (including production platforms).

Several different types of platforms are in use. They are normally piled steel or concrete structures, the latter held in position on the sea floor by gravity. **Tension Leg Platforms** (TLP) consist of semi-submersible platforms secured to flooded caissons on the sea floor vertically below them by wires kept in tension by the buoyancy of the platform.

Platforms may serve a number of purposes. They may carry any of the following equipment: drilling and production equipment, oil and gas separation and treatment plants, pump-line stations and electricity generators. They may be fitted with cranes, a helicopter landing deck, and accommodation for up to 350 people. Platforms may stand singly or in groups connected by pipelines. Some stand close together in a complex, with bridges and underwater cables connecting them. Unwanted gas or oil is sometimes burnt from a flaring boom extending from the platform or from a nearby flare stack.

a. Platforms must be charted on all large and medium scale charts covering oil- and gas-fields. Where they lie close together, they may have to be generalised (on paper charts) so that a single symbol represents more than one platform.

The symbol for a platform must be:  **L10** and **P2.**

b. **Lights and fog signals.** As all platforms must carry lights, the small symbol is emphasized by the associated light flare. The lights and fog signals commonly used for platforms and associated structures consist of the following:

- A 360° white light (or lights operated in unison) flashing Morse code (U) (meaning 'You are standing into danger') every 15 seconds, visible 15 miles and exhibited at an elevation of between 12 and 30 metres.
- A secondary (emergency) light or lights with the same characteristics, but visible only 10 miles, automatically brought into operation on failure of the main light(s).
- Synchronized red lights, flashing Morse code (U) every 15 seconds, visible 2 miles, and exhibited from the horizontal extremities of the structure which are not already marked by the main light(s).
- A fog signal sounding Morse code (U) every 30 seconds, audible at a range of at least 2 miles.

On charts which include, or are likely to include, many platforms, a note should be inserted on the chart describing the lights and fog signals, instead of individual legends at each platform, eg:

OIL [and/or GAS] FIELDS
Platforms and associated structures exhibit white and red Mo(U) lights, red obstruction lights, and Mo(U) audible fog signals. Unauthorized navigation within 500 metres of all such structures is prohibited.

This note may be varied to take account of local circumstances, but where different (distinctive) lights are used, the light descriptions must be inserted individually against the platform symbols.

c. **Flares.** As with refineries on land (see B-374.1), offshore terminals may burn off gas from production platforms or from 'flare stacks' set up as separate structures a short distance from the production platforms. In the latter case the stacks must be charted by:

L11

with the international abbreviation 'Fla', but without a coloured light flare (or patch).

d. **Floating Production Facilities**. Semi-submersible drilling rigs and tankers are sometimes converted to act as production platforms, and are then known as `Floating Production Facilities` or `Floating Production Platforms`. If required, they must be charted in the same way as other platforms (L10). Floating Production Facilities are normally kept on station by a number of chains and anchors, usually extending well outside the designated safety-zone. Where scale permits, the positions of these chains and anchors should be charted by magenta lines and anchor symbols (L18). On smaller scale charts, a dashed magenta circle encompassing the anchors and other ground tackle with the magenta legend *'Anchors and Chains (see Note)'*, or equivalent, may be charted together with a suitable explanatory note.

e. **Platform designations** are often displayed prominently on the structures (see B-445.3). Platforms are usually protected by designated **safety zones** (see B-445.6).

f. **A disused or abandoned platform** may be labelled '(disused)', or equivalent. If the superstructure has been removed, leaving only an above-water base structure, this should instead be labelled 'Ru', or the adjective '(ru)' added under any retained designation (eg Z-44), or descriptor (eg SPM):

Comment: Flare removed from this example, as the most basic version. The other example provides possible additions. Suggest text description for INT1 at L14: 'Platform, superstructure removed'. Disused platform not required as self-evident to the user when label added.

Features associated with abandoned platforms should also be reviewed, eg:

- pipelines would normally be amended to disused;
- safety zones may still apply and if so should be charted accordingly;
- they may still carry navigation lights, so a flare (and if required a light description) should be included as appropriate;
- if no associated features remain, consideration should be given to enhancing their prominence on the chart (eg with a danger line) as they remain a significant collision hazard.

For charting platforms which have been removed below the surface, see B-422.8.

CSPCWG 5 ACTION 17: Secretary to draft a revision to B-447.4 (Shellfish beds) and include in a WG letter.

B-447.4 **Shellfish beds that do not contain physical obstructions.** The limits should be charted by a dashed magenta line (N1.2) with an oblique shell symbol (width approximately 3mm) at intervals of approximately 40mm or closer. For small areas, a centred oblique shell symbol may be inserted within the area defined by the dashed magenta line N1.2. A note may be inserted warning against anchoring or grounding in the area, or giving details of any local regulations.

Comment: As proposed by FR

K47

If shellfish beds contain obstructions to surface navigation, eg trestles, the symbol for a marine farm must be used (see B-447.6).

CSPCWG 5 ACTION 33: Secretary to draft WG letter regarding the use of abbreviation **FFl**.

UK took the opportunity of responding to IHO CL 71/2008 (requesting IHO MS approval of draft B450-479) with the following:

UK has recently identified inconsistencies in the interpretation of certain unusual light characteristics and recommends that the opportunity of this revision should be taken to clarify the relevant sections in B-470, specifically related to:

> b. The current specification allows the charting of FFl lights (IALA defines as a light in which a fixed light is combined with a flashing light of higher luminous intensity). No reference is made to the possibility of other combination lights such as FOc, FIso or FQ. UK believes that such combination descriptions would be confusing and recommends that the specification should be clarified to state that such descriptions must not be used; these would be better described separately as, for example, Oc.5s10M & F.3M. This is normal practice for 2 lights displayed from the same structure (B-471.8 refers). The continuing use of the potentially confusing (and comparatively rare) abbreviation FFl should be reconsidered by CSPCWG and possibly replaced by Fl. & F. (Note: as the rhythmic component is always the brighter, it is more consistent with other light descriptions to give it, with its greater range, first).

It is therefore suggested that references to FFl should be made obsolescent in INT1 (P10.10) and removed from M-4 (draft) B-471.2, B-471.8c and B-471.9c. If agreed, it would be necessary to also inform IALA of this decision.

Annex I to CSPCWG Letter 11/2009

Selected Actions from CSPCWG5
RESPONSE FORM
*(to be returned to Secretary **by 24 October 2009**)*
andrew.coleman@ukho.gov.uk

CSPCWG5 Action	Subject	Question	Yes	No
11 (Annex C)	Bridges	Do you agree with the method of showing detail under bridges shown in the US example, ie by removing a bridge span?		
14 (Annex E)	Unsurveyed areas	a. Do you agree that the magenta version of the 'unsurveyed areas' symbol should be removed from the INT specifications?		
		b. Is there any need to change the ratio of blue to white in the banding (to avoid 'vibration' effect).		
		c. Do you agree that the example from the SE chart would be useful in S-4?		
33 (Annex H)	FFl	a. Do you now agree that the light description abbreviation FFl should be retained, following the arguments put forward by AU?		
		b. If YES to (a), do you think the abbreviations FIso and FQ should also be accepted?		
		c. If YES to (b), should FIso and FQ be added to S-4 and INT1?		

Comments:

Member State……
Name……. Date……