

INTERNATIONAL HYDROGRAPHIC
ORGANIZATION



ORGANISATION HYDROGRAPHIQUE
INTERNATIONALE

NAUTICAL CARTOGRAPHY WORKING GROUP (NCWG)

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

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NCWG Letter: 09/2016

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Date 20 September 2016

Dear Colleagues

Subject: NCWG2 Actions 10, 15, 23, 25, 26, 43 – Follow-up to Letter 05/2016

Thank you to the 21 NCWG members and ESRI who replied to Letter 05/2016. We had a good consensus on all questions, with some additional comments which enable us to refine some of the new or revised S-4 clauses a little more. I plan to submit these refined versions to HSSC8, to enable us to publish a revision of S-4 early next year. This can also include the clarifications which were the subject of NCWG Letter 04/2016, an analysis of those responses will follow in due course, as they do not need to be submitted to HSSC for approval.

Annex A lists all the responses, with my own comments in response to the comments where required. Annex B details the slightly revised versions which will be submitted to HSSC8.

There is no need to reply to this letter, but if you have further comments you are free to do so.

Yours sincerely,

Mikko Hovi,
Chair NCWG

Annex A: Consolidated responses to NCWG Letter 05/2016

Annex B: Changes to S-4 required following discussions by NCWG at NCWG2 meeting and subsequent correspondence

NCWG2 Actions 10, 15, 23, 25, 26, 43

CONSOLIDATED RESPONSES TO NCWG LETTER 05-2016

Action	Question	Yes	No
10	Do you agree with the proposed additional international abbreviation 'man'?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Do you agree with the proposed new clause B-452.9?	AU, BR, CA, DE, DK, ES, ESRI, FI, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	FR
	Do you agree with the proposed new clause B-473.8?	AU, BR, CA, DE, DK, ES, ESRI, FI, GR, IN, IR, KR, NL, NO, PK, SE, UA, UK, US, ZA	FR
	Do you agree with the proposed additions to INT1?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	IT
	Should we use the same generic 'Aids to navigation' note for both new clauses?	BR, CA, DK, ES, ESRI, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	AU, DE, FI, FR, US
15	Do you agree with the proposed new clause B-444.9?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
23	Do you agree to add a new international abbreviation for seagrass 'Sg'?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Do you agree with the proposed changes to B-425.5?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Do you agree with the proposed new clause B-425.6?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Do you agree to insert a new cross reference in B-428.2?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Do you agree with the proposed additions to INT1?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
25	Do you agree with the proposed addition to clause B-140 (2 nd paragraph)?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	IN
	Do you agree with the proposed changes to clause B-142.3?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Do you agree with the proposed new clause B-142.4?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Do you agree with the proposed addition to clause B-254.2?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	IN

26	Do you agree with the proposed changes to B-254?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	IN, IR
	Do you agree with the proposed changes to B-254.1?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	IN, IR
43	Do you agree that 'Bubble curtain' is the most appropriate term to describe the feature?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Do you agree with the proposed new clause wording?	AU, BR, CA, DE, DK, ES, ESRI, FI, FR, GR, IN, IR, KR, IT, NL, NO, PK, SE, UA, UK, US, ZA	
	Should the proposed new clause be placed at (choose one only):		
	a. B-444.10?	AU, CA, DK, ES, ESRI, FI, GR, IN, IT, PK, SE, UA, UK, US, ZA	
	b. B-449.5?	BR, DE, FR, IR, KR, NL, NO,	
	c. Somewhere else (please specify under comments below)?		
	Is an entry required for INT1?	AU, BR, CA, DE, ES, FI, FR, GR, IN, KR, IT, NL, NO, SE, US, ZA,	DK, ESRI, PK, UK
	If Yes, then should it be at (choose one only):		
a. F29.2?			
b. L45?	AU, BR, DE, FI, FR, KR, NL, NO, SE, US, ZA		
c. Somewhere else (please specify under comments below)?	CA, ES, GR, IN, IT		
	IR,		

Further comments

AUSTRALIA

B-473.8: A question in relation to how these may be used: Could this method be used in an area where there are several (or many) lights that are manually activated? If the answer to this is “yes”, then the “must” in the first paragraph becomes a problem, as it may cause undue cluttering on the chart. In such cases a general note reference centred in the area would be considered to be sufficient. Suggest at this stage that this be “should” or “must normally”, and if necessary include an additional paragraph for areas where all the navigational lights may be manually activated.

Chair comment: So far as we know, this method is currently limited to Canada and US, but it seems likely to spread (similar to AIS transmitters on aids to navigation). This observation is therefore a quite possible development. Following the precedent at B-489.1, we would amend ‘must’ to ‘must normally’ and add a paragraph:

In areas where the local authority has decided that all (or most) fog signals/lights will be manually activated, such that adding ‘(man - see Note)’ at all or most fog signals/lights will result in excessive chart clutter, the relevant hydrographic office should issue a statement to this effect and insert a note on charts (or in an associated publication) stating that this is the case.

Aids to Navigation Note: Australia considers that the more specific note heading is more beneficial to the mariner, so would prefer the examples to be as shown in the Letter. However, we acknowledge that where both types (light and fog signal) exist on a single chart the Note heading should be generic.

Chair comment: The majority view is to use a generic ‘Aids to navigation’ note, with CA and US, as the instigators of these new clauses, taking opposite views. Nevertheless, US in particular makes a strong argument for retaining separate notes (although the problem envisaged should not arise provided the appropriate legend is applied to each light or fog signal in situ). We will amend the text to allow the use of a generic note by adding at the end of B-452.9 and B-473.8:

If there are both manually activated lights and fog signals on the charts, the notes may be combined under a generic heading ‘Manually Activated Aids to Navigation’, with the wording of the note adjusted as appropriate.

INT1 – F-29.2: Firstly, these features will only exist in ports (as far as we can interpret). Secondly, there is already a vacant entry for this very feature at F-29.2, therefore we think this should be utilised.

Chair comment: This is the majority view.

GERMANY

10(e): see comment from Finland

23(d/e): The symbol J13.2 should be possible to be used for both seaweed and seagrass. For the user it is the same danger.

Chair comment: I am not sure this is true. Kelp may be an indication of the presence of rocks, but I do not think that is the case with seagrass, so symbol J13.2 would not really be appropriate for seagrass.

43(4a) N61 should be removed in the next INT1 editions, see under F29.1

The symbology for F29.2 is easy to include in S-4, it is not necessary to describe it with the link to L40.1. This should be avoided.

Chair comment: This is the majority view.

ESRI

43(4): The proposed change is text only, not an addition, change or depiction of the symbol L40.1. Adding an INT1 entry to describe the pipe function does not seem necessary.

Chair comment: This is a minority view.

FINLAND

10(e) We don't see added value in always using a generic note. There might well be cases where it is the best choice though.

Chair comment: See response to Australia.

43(a) It is good to note that 'bubbler system' is an IHO approved term already. In S-57 it is defined as "a submerged pipe from which warm water bubbles, preventing the surrounding water from freezing". This is one of the categories for pipeline. The usage in the definition is narrower than in what we are inserting in S-4, but essentially we are talking about the same thing. Further, it is good to note that S-57 does make a distinction between 'bubbler system' and 'oil retention (high pressure pipe)' which is a category of oil barrier. It is defined as follows: "A pipe with holes from which air blows. When the air bubbles reach the surface they form a barrier which prevents the spread of oil". Considering that the new 'bubble curtain' maps to (at least) two S-57 (and S-101) attributes, it is quite reasonable to use a term that is not identical with any of them.

Chair comment: A source for the term is missing from S-57 nor is it included in the Hydrographic Dictionary (S-32). We should refer it to the HDWG for consideration.

FRANCE

10(b,c) In B-452.9 and B-473.8, "must" could be replaced by "should" (for instance if manual activation is only reported in a publication).

Chair comment: this is covered by the addition proposed by Australia.

Please replace "(Man)" by "(man)" in B-452.9 and B-473.8.

Chair comment: yes, this will be done.

10(e) While acknowledging that this generic "Aids to navigation" can of course be used when manually activated fog signals and lights occur on the same chart, we prefer to keep two different examples in S4.

Chair comment: see response to Australia.

INDIA

25(a): B-140 Use of non-standard colour variations may create confusion.

Chair comment: That is possible, which is why this text requires HOs to refer any such use to NCWG for approval.

25(d): B-254.2 Yellow is used for land on four coloured charts. Using yellow for large scale limit may create confusion.

Chair comment: The text implies that this should only be done on multicoloured charts, with the yellow used being the same as light flares, not land tint.

26(a): B-254 This should be limited to adjoin charts of same scale as per standard practice. For further information pertaining to the large scale and plan reference, the existing S4 (Edn 4.5.0) B254.2 holds good.

Chair comment: The existing text allowed for some flexibility ('same or similar scale'); this simply extends B-254a to embrace the new decision to allow references to smaller scale charts; the guidance on how to do it given at B-254.1.

26(b): B-254.1: Existing B-254.1 of S4 (Edn 4.5.0) is appropriate to the present context.

Chair comment: The discussion at NCWG2 agreed that it is acceptable to provide border references to smaller scale charts. This addition provides guidance on how this should be achieved. It is, of course, a matter for individual HOs to decide whether they wish to do it.

All these optional changes are supported by a clear majority.

IRAN

10(a): It is recommended to use the International abbreviation 'man.' Instead of 'man'.

Chair comment: Please refer to B-540.3; a full stop would not be appropriate for terminating an international abbreviation.

26(a): Adjoining charts should be the same scale, we rather not to include smaller scale in this clause.

Chair comment: See response to India.

43(c): Is not necessary to have an entry in INT1 at all, since it is taking about marine application, we think It should go under N.66

Chair comment: These two statements seem contradictory. However, there is a clear majority in favour of showing the 'bubble curtain' at F29.2.

ITALY

10(a): The abbreviation 'man' should be written always 'man' or 'Man'.

Chair comment: Agree, see response to France. We will amend all notes to use 'man'.

10(d): The proposed addition to INT1 should be modified from R2 to R17.

Chair comment: It is often difficult to allocate an INT1 reference for something new. In this case, the method of activating a fog signal seems to fit better under the 'general' heading, rather than the 'type of fog signal'. The majority agree. I am happy to leave the final decision to the INT1 subWG.

US

10(b) Deletion of "and" in paragraphs B-452.9 and B-473.8 changes the meaning in a way that is not intended.

The following phases results in the indicated sets:

Apples, oranges, and grapes, or walnuts = (apples, oranges, grapes) or (walnuts)
(This structure would result in the intended meaning of all of a list of things, or one other thing)

Apples, oranges, grapes or walnuts = (apples, oranges, grapes) or (apples, oranges, walnuts)
(This is how the proposed (redlined) change is currently structured, which results in the unintended meaning of either of two lists of multiple things)

Recommend that one of the following be used (the last is the least ambiguous):

"... the type of signal, activation method, channel/frequency, and duration of signal activation, or to refer to an associated publication..."

"... the type of signal, activation method, channel/frequency, and duration of signal activation; or to refer to an associated publication..."

"... the type of signal, activation method, channel/frequency, and duration of signal activation, or the note should refer to an associated publication..."

Chair comment: Yes, 'and' should have been retained for the reasons you state (although correct English punctuation would have no comma before the 'and'). I think the first (and original) version is actually more correct; the initial 'should' applies to the insertion of a note'; the content of the note is optional. To be clear, we will change to:

A note should be inserted either to provide the details (including activation method, channel/frequency, duration of activation) or to refer to an associated publication for details. I think it may be unnecessary to state the type of signal, as this should be obvious from the charted feature the legend is attached to.

Regarding the use of "mic" verses "microphone," this was not discussed at the meeting. The secretary is making an assumption that the term is unfamiliar to non-native English speakers. The majority of the NCWG members present at the meeting were in fact, non-native English speakers, and yet I don't recall any of them objecting to the use of "mic." It should also be noted that both the Oxford English Dictionary (OED) and Merriam-Webster now consider "mic" a word in its own right. Therefore, basing the justification for the use of "microphone" on the fact that "mic" is not listed in S-4 or INT1 as an international abbreviation is invalid; it's not an abbreviation. The context of the rest of the note should also make the meaning of the shorter word clear. We always try to make our notes as compact as possible. Recommend that "mic" be used as originally proposed.

Chair comment: The secretary acknowledges he did not consult the OED, which he regards as the authority for English words. It is true 'mic' is now considered a word in its own right, so can be used without the need for an entry in the abbreviations list, and it is more compact than microphone. We will amend the example notes accordingly.

10(e) The generic "Aids to navigation" should not be used. For a buoy that has both a horn and a light (a very common situation), it would be unclear to the mariner which one they would be activating.

Chair comment: see response to Australia.

15: Although "tether" appears in the diagram, so does "anchor." Recommend using "anchored" in B-444.9.

Chair comment: Strictly, the pipeline is tethered to the anchor which is embedded in the seabed. Either word would be correct but, on reflection, perhaps 'anchored' would be better in a nautical publication such as S-4.

43(d) Bubble curtains are encountered in ports or at least near shore in relatively shallow water, thus it is more appropriate to show this symbol in section P Ports, and not L Offshore Facilities.

Chair comment: this is the majority view and will guide the INT1 subWG in its decision.

Changes to S-4 required following discussions by NCWG
at NCWG2 meeting and subsequent correspondence

The following lists NCWG2 Actions requiring substantive changes to S-4, followed by the associated extracts from the NCWG2 report. The associated Explanatory Notes (ENs) are listed in the NCWG2 report extract below and can be viewed on the NCWG2 page of the IHO website, if required. Discussions follow under the heading 'Outcome' with agreed changes to S-4 shown in red, with deletions crossed through. In the cases of new S-4 clauses, the proposal is shown in black.

Action NCWG2/10: Secretary to draft specifications for user activated AtoN and circulate to WG for comment and approval.

NCWG2 Report Extract:

8.1 Radio-activated Aids to Navigation (**US, CA**)

Docs: NCWG2-08.1A Radio Activated Aids to Navigation (+ 3 Annexes)

Presentation available

Colby Harmon (US) gave a presentation on recommendations for charting mariner activated aids to navigation. The meeting accepted the recommendations as follows:

'man' approved as an INT abbreviation for 'manually or mariner activated'

Example descriptions: Horn (man – see Note); Fl.G.3s (man – see Note).

Two example notes to be included in S-4 (as in paper).

Outcome:

From EN NCWG2-08.1A Annexes A, B and C, with minor changes following NCWG2 discussions.

Add to:

B-122.1 **Man** **Manually activated** P56, R2

New clause:

B-452.9 **Manually activated fog signals** must be depicted by a legend containing the **international abbreviation** 'man', after the signal type, for example:

Horn (man - see Note)

Text should be sloping if associated with a floating aid. A note should be inserted either to provide the details (including activation method, channel/frequency, duration of activation) or to refer to an associated publication for details. For example:

Manually Activated Fog Signal (man)

Fog signal is activated by keying the mic 5 times on VHF-FM Ch 81.

Horn will operate for 30 minutes.

or

Manually Activated Fog Signal (man)

For activation details, see [associated publication].

If there are both manually activated lights and fog signals on the charts, the notes may be combined under a generic heading 'Manually Activated Aids to Navigation', with the wording of the note adjusted as appropriate.

In areas where the local authority has decided that all (or most) fog signals will be manually activated, such that adding '(man - see Note)' at all or most fog signals will result in excessive chart clutter, the relevant hydrographic office should issue a statement to this effect and insert a note on charts (or in an associated publication) stating that this is the case.

New clause:

B-473.8 **Manually activated lights** must be depicted by a legend containing the **international abbreviation** 'man', after the light description, for example:



★ Fl.G.3s (man - see Note)

Text should be sloping if associated with a floating aid. A note should be inserted either to provide the details (including activation method, channel/frequency, duration of activation) or to refer to an associated publication for details. For example:

Manually Activated Light (man)
Light is activated by keying the mic 5 times on VHF-FM Ch 81.
Light will operate for 30 minutes.

or

Manually Activated Light (man)
For activation details, see [associated publication].

If there are both manually activated lights and fog signals on the charts, the notes may be combined under a generic heading 'Manually Activated Aids to Navigation', with the wording of the note adjusted as appropriate.

In areas where the local authority has decided that all (or most) lights will be manually activated, such that adding '(man - see Note)' at all or most lights will result in excessive chart clutter, the relevant hydrographic office should issue a statement to this effect and insert a note on charts (or in an associated publication) stating that this is the case.

New entries for INT1:

P56	(man)	Manually activated		473.8
R2	(man)	Manually activated		452.9

In INT1 list of abbreviations, add: man Manually activated P56, R2

Notes:

NCWG2 agreed not to include a new line in B-471.1 (as suggested in EN NCWG2 – 08.1A Annex B) as 'manually activated' is not a type of light in the same sense as Aero, Dir and Ldg, which are included as pre-fixes to the light description. It is a qualification to any type of light, more like '(occas)', to be included in parenthesis, subordinate to the light description.

Within the discussions at NCWG2, recorded above, we have used the terms 'Radio-activated', 'Manually activated', 'Mariner activated' and 'user activated'. All accurately describe what happens. Given that four US/CA organizations (as mentioned in the US EN NCWG2-08.1A) have already agreed to use the abbreviation 'man', and that it works in English, French and Spanish, unless there is a strong argument to change to one of the other descriptions, we should accept this. Therefore we have not included the '(or Mariner)' insertions in the term, as mentioned in the NCWG2 Report.

Action NCWG2/15: Secretary to amend draft for sub-surface floating pipeline and circulate to WG for comment and approval.

NCWG2 Report Extract:

8.4 Suspended submarine pipelines: *Presentation (TR)*
Docs: NCWG2-08.4A Rev2 Suspended Submarine Pipeline
Presentation available

Bülent Gürses (TR) showed some pictures of the construction phase of the sub-surface floating pipeline, which helped the meeting understand the details of this feature. The recommended addition to S-4 in the paper was generally accepted with the following amendments:

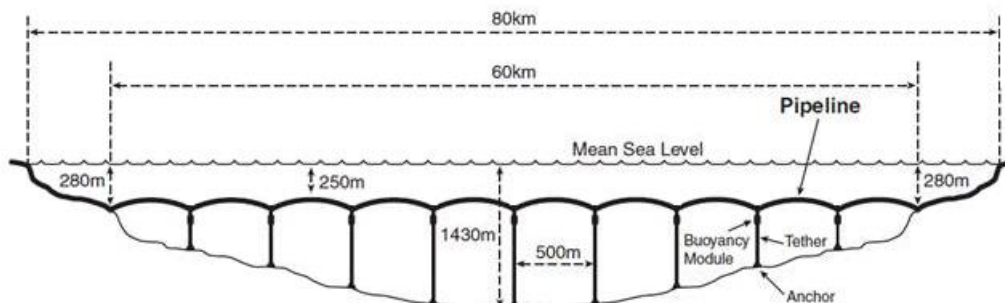
B-444.9 Sub-surface pipelines that are floating in the water column and anchored....

The example diagram should be adjusted to remove the appearance of buoys above the pipeline and to show the depth marker above the highest part of the arc.

Outcome:

New clause (taken from EN NCWG2-08.04A, with changes following NCWG2 discussions).

B-444.9 'Sub-surface pipelines' describes pipelines that are floating in the water column. They are anchored to the sea floor at regular intervals with large 'buoyancy modules' on the anchor hawsers, a little below the actual pipeline, so that it is submerged to a designed minimum depth. These pipelines do not generally constitute a danger to surface vessels, but are potentially a danger to submarines. Also, submarines and deep trawlers could damage the pipeline. A schematic diagram of a typical sub-surface pipeline is:



Sub-surface pipelines must be shown, where required, using the appropriate pipeline symbol as specified in clauses B-444.1 and B-444.2 above. To indicate the minimum design depth of the pipeline, a legend similar to *Water (submerged 250m – see Note)* must be placed along the pipeline, repeated as required if the pipeline extends across a substantial area of the chart. A cautionary note should be charted, for example:

WATER PIPELINE

In depths greater than 280 metres the pipeline is anchored to the seabed at 500 metre intervals, so that it is submerged to a minimum depth of 250 metres. Mariners are advised not to anchor or trawl in the vicinity of submarine cables and pipelines.

If there are other conventional pipelines shown on the chart, the last sentence of the note should be excluded, and a generic pipeline note, such as that shown at clause B-444.1, positioned immediately above or adjacent to the note relating to the sub-surface pipeline.

A pictorial representation of the sub-surface pipeline, for example as shown above, may be included in addition to, or in lieu of, the note, in magenta, see B-390.1. If the diagram is included in lieu of the note, the legend along the pipeline symbol should read similar to *Water (submerged 250m – see Diagram)*.

Action NCWG2/23: Secretary to circulate proposed revisions on seagrass to S-4 to WG for approval.

NCWG2 Report Extract:

8.9 Seaweed and Seagrass (ES)

Docs: NCWG2-08.9A Seagrass/Seaweed (Macro-Algae) (+ 2 Annexes)

Presentation available

Federico Yanguas Guerrero (ES) presented the paper. There was general support to approve a new INT abbreviation 'Sg' for seagrass. The proposed symbol was not approved (it is too complex), nor an alternative to use the marsh symbol (C33) as it is already also used for above water reed beds, which might be confusing to the chart user. It was also decided that Coralline Algae should remain at J10 (as far as the mariner is concerned, the difference is unimportant).

Outcome:

Suggested amendments to S-4 and INT1, based on EN NCWG2-08.9A (including Annexes) and discussions at NCWG2.

B-122.1 Add new entry after 'sf': **Sg Seagrass J13.3**

B-425.5 **Standard abbreviations.** English language abbreviations should be used, as in the following list.

...

J9 .2 Bo -Boulders

(usually used in intertidal areas)

J10	Co	-Coral and Coralline Algae	
J11	Sh	-Shells	(skeletal remains)
J13.1	Wd	-Weed	(including extensive areas of Kelp, see B-425.6 and B-428.2, etc)
J13.3	Sg	-Seagrass	(where distinguished from weed, see B-425.6)
J30	f	-fine	(only used in relation to Sand)
...			

B-425.6 ~~Currently unused.~~ **Marine vegetation** may be divided into two groups: Algae (seaweed, of which kelp is a large species) and Plants (seagrass). Many source documents do not distinguish between these groups, referring to them both as 'Wd'. However, seagrass is increasingly being protected so, if the information is available, it should be distinguished from seaweed by using the **international abbreviation 'Sg'**. For associated protection measures, see B-437. For plants which rise above the sea surface, see B-312.2 (marsh and reed beds) and B-321.4 (mangroves and nipa palms).

B-428.2 Kelp (large species of seaweed) is an indication of the presence of submerged rocks. It must normally be charted by the following symbol:

 **J13.2**

A legend may be used in place of the symbol, but only for extensive areas.

Wd **J13.1**

For seagrass, see B-425.6.

INT1 Add new line: **J13.3 Sg Seagrass**
Add new international abbreviation: **Sg Seagrass J13.3**

Action NCWG2/25: Secretary to draft amendment to S-4 to allow use of yellow for chart limits and circulate to WG for comment and approval.

Action NCWG2/26: Secretary to draft amendment to S-4 to include all options for referencing smaller scale and adjoining charts for consideration by the WG.

NCWG2 Report Extract:

8.10 Larger scale chart limits in yellow (SE, NL)	
Docs: NCWG2-08.10A	<i>Presentation of chart boundaries</i>
NCWG2-08.10B	<i>References to other charts</i>

Andreas Andersson (SE) presented his 'A' paper on the colour used for chart boundaries (on multicolour charts). He advised the meeting that some magenta had been added to the yellow to make it clearer, following chart user feedback. Mikko Hovi (FI) also advised the meeting that user feedback had indicated that this method of de-cluttering was preferred to transferring the larger scale chart limits to a small diagram. The meeting agreed that this is a sensible method of de-cluttering the magenta layer and agreed it should be added as an option for multi-coloured charts.

Ben Timmerman (NL) presented his 'B' paper on references to smaller scale charts. The meeting agreed that this option should be included in S-4. Mikko Hovi (FI) suggested an alternative (to avoid words) of showing the smaller scale/adjoining chart number flanked by arrows and this was also well received. Options to use legends, for example 'adjoining chart'; 'smaller scale chart'; just the chart number, were also considered as appropriate, depending on the national convention.

Outcome:

The meeting agreed that the use of yellow for chart boundaries is a sensible method of de-cluttering the magenta layer. However, the general guidance on the use of colours (in B-140) does not cover the concept of de-cluttering the magenta layer by using different colours, only by using magenta tint, although this has become generally accepted for multicoloured charts. It is therefore time to include some brief explanation in an appropriate part of B-140 by the following addition to 2nd paragraph of B-140, a revision of sub-paragraph B-142.3 and a new sub-paragraph B-142.4:

B-140 USE OF COLOUR

....

The use of alternative colours, for example red instead of magenta, and of screened colours, tends to reduce the level of possible standardization. However, such colour variations can, if desired, produce an element of national individuality without affecting the comprehensibility of a chart as much as, for example, a non-standard symbol. Use of a non-standard colour, for example to reduce clutter on the magenta layer, should be referred to the Nautical Cartography Working Group (NCWG) for approval. It can then be included in this publication, to support standardization of multicoloured charts.

B-142.3 Magenta tint ~~may must~~ be used ~~in congested areas where it is important not to obscure black detail, and~~ for specific symbols ~~such as including: Traffic Separation Zones; , Particularly Sensitive Sea Areas and Archipelagic Sea Lanes; Radar ranges and, when useful, for emphasizing restricted areas.~~ Magenta tint may also be used to subdue submarine cables and pipelines where they may obscure more important black or magenta detail.

B-142.4 The magenta layer on charts can become cluttered. Multicoloured print technology enables other colours to be used instead. For example, green was introduced for environmental information (see B-145 and B-437.2b) and yellow for chart limits on multicoloured charts (see B-254.2). When other colours are used to de-clutter the magenta layer, this should be referred to the NCWG (see B-140).

More specifically, both Actions 25 and 26 require some changes to B-254, as suggested below:

B-254 REFERENCES TO OTHER CHARTS

Hydrographic offices should include on their charts references to similar or larger scale charts published by their own nation; references to smaller scale charts may also be included. These fall into two categories:

- a. References in the border of the chart to adjoining charts of the same or similar scale, to smaller scale charts and to continuation insets.
- b. References to larger scale charts or plans which cover part of the area covered by the chart.

Note: **Insets**, including continuation insets and large-scale plans, are small charts with their own borders included within the limits of a larger chart. A **plan** is a large scale inset of a nautical chart (for example a port plan). For more detailed definitions, see the Hydrographic Dictionary, S-32.

Plans should not be printed on the back of a chart, see B-210.

For references to insets on Source diagrams, see B-293.6. For references to foreign charts, see B-254.4.

B-254.1 **Border references** should be shown in magenta and be worded ‘Adjoining chart...’, ‘See smaller scale chart...’ or ‘Continued in inset’, or equivalent, as appropriate. If it is preferred to avoid the use of words, the adjoining chart number may be inserted on its own or, preferably, flanked by arrows pointing out of the chart to the next chart available, for example:

↑ 1234 ↑

B-254.2 **The limits of larger scale charts or plans** should be identified by numbered outlines in magenta, or by the legend ‘see Plan’ if the plan is on the same sheet. On multicoloured charts, if it is preferred to subdue chart limits so that more important magenta detail stands out, the limits and associated numbers or text may be shown in yellow. The same tone of yellow as used for light flares is suitable, see B-470.4.

If there is more than one inset on a chart, they should be labelled A, B, C etc, and have letter identifiers added to the reference on the main chart, or in its border.

A charted outline ...

Action NCWG2/43: Secretary to draft new specification for ‘bubbler’ and circulate to WG for comment and approval.

NCWG2 Report Extract:

- 11.2 Vacant entries in INT1 (Task E4) **(Secretary)**
- Docs: NCWG2-11.2A Vacant entries in INT1
- NCWG2-11.2B US response re Fathoms and Compass Terms
- NCWG2-11.2C US response re Floating Barriers and Oil Retention Barriers
- Presentations available

Secretary presented the paper on vacant entries in INT1. Chair confirmed from participants that only

US had some comments, after which Colby Harmon presented his papers...

Colby Harmon presented his 'C' paper on floating barriers. The meeting agreed:

- That the entries at F29.1 and N61 should be split to show barriers without and with pile supports. The example list at each entry should be the same (if INT1 subWG decides to retain both entries).
- That the 'oil barrier' entry at F29.2 should be replaced by the term 'Bubbler', using a magenta pipeline symbol with legend 'Bubbler'.
- INT1 subWG to consider whether terms such as 'e.g.' and similar can be made consistent throughout INT1.

Outcome:

Further research into the use and terminology associated with 'bubblers': The term 'bubbler' seems most commonly associated with various toys, smoking pipes and drinking fountains. It may be used for the feature we are concerned with but, probably, only as a colloquial term. The term 'pneumatic pipe' has many applications, but not usually the one we are trying to depict. 'Bubble curtain' seems more accurately the term used for the feature we want to depict. It has various marine applications, including to: prevent acoustic transmission (such as pneumatic drilling and underwater explosions); prevent the spread of floating liquids (such as oil) or debris; to control the movement of fish. (It also has non-marine decorative use in aquariums). It is suggested it is the best available term and should be the one used on charts.

This is very different from the physical barriers which obstruct navigation depicted by F29.1 and N61, explained at B-449.2. We could use the vacant B-449.5, but possibly it is more appropriate to include it with other pipelines in the B-444 section. Although it could be added to B-444.1 under 'Water pipelines' as 'Bubble emitting pipelines', it is not primarily a 'supply' pipeline. Therefore, it should be a separate category, at B-444.10 (noting use of B-444.9 at NCWG2 Action 15 above):

New clause:

B-444.10 A **bubble curtain** (also known as a pneumatic pipe or 'bubbler') consists of a high pressure sub-surface pipeline (usually on the sea floor) with holes emitting a curtain of air bubbles. Its uses include: the prevention of acoustic transmission through the water; preventing the spread of surface debris or floating liquids (including oil); controlling the movement of fish.

A **bubble curtain** should be charted by a magenta pipeline symbol (L40.1) with the legend '*Bubble curtain*' adjacent to it in sloping magenta text, preferably inside the containment area.

NCWG respondents decided that the symbol and term should be shown in INT1 at F29.2, as this was the purpose of this entry, although up until now no INT symbol had been agreed.