

**11<sup>th</sup> CSPCWG/1<sup>st</sup> NCWG Meeting  
Rostock, Germany, 27-30 April 2015**

**Paper for Consideration by CSPCWG/NCWG**

**Covered Berths – Further Considerations**

<b>Submitted by:</b>	Australia
<b>Executive Summary:</b>	Discussion on the depiction of covered berths on paper charts by CSPCWG Letter has identified additional issues that require further consideration of the CSPCWG/NCWG.
<b>Related Documents:</b>	<ol style="list-style-type: none"> <li>1. CSPCWG10-08.10A_Covered_berths;</li> <li>2. CSPCWG Ltr 10-2014 CSPCWG10 Actions 15 and 18-21;</li> <li>3. CSPCWG Ltr 14-2014 Actions 15 &amp; 18-21 Follow-up to CSPCWG Letter 10;</li> <li>4. S-4 – B-321.9;</li> <li>5. INT1 – D5 (BSH (7<sup>th</sup> Edition 2011).</li> </ol>
<b>Related Projects:</b>	S-4 Maintenance; INT1 Maintenance.

### Introduction / Background

The depiction of covered berths on paper charts was raised by Finland at CSPCWG10 (ref (1)). The conclusion from discussion at CSPCWG10 and resultant action is summarised in the CSPCWG10 Minutes and this summary and the proposed new specification is included in CSPCWG Letter 10/2014 (ref (2)). The result of CSPCWG vote on this action and additional comments from CSPCWG members is included in CSPCWG Letter 14/2014 (ref (3)). These additional comments raised some issues regarding the depiction of covered berths on paper charts that require further consideration the CSPCWG/NCWG.

### Analysis / Discussion

Paper CSPCWG10-08.10A is included at Annex A of this Paper for reference. The resultant CSPCWG10 summary of discussions, action and proposed new specification as included in CSPCWG Letter 10/2014 is as follows:

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#### 8.10 Covered berths (FI)

*Docs: CSPCWG10-08.10A Covered berths*

M Hovi (FI) briefed on the method FI had used for charting a covered berth, i.e. extending the building tint across the quay and water area, while retaining the blue tint in the water. The meeting agreed this solution worked well, although accepted it could not be used if an HO used open line style without tint for built-up areas.

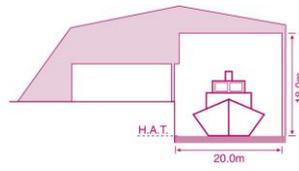
**ACTION 21:** Secretary to draft S-4 specification for covered berth.

Proposed new specification B-321.9:

**B-321.9** A covered berth should be labelled by an appropriate descriptive legend or name, for example: ‘Covered wharf’; ‘Hull All-Weather Terminal’. Transparent urban tint (see B-370.4) may be inserted over the charted hydrography so that any shallow water tint shows through. A vertical clearance (see B-380.1-2) should be shown, if known.



A profile diagram may be included if considered useful (see B-390).



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The result of the CSPCWG vote on the proposed new S-4 specification and the additional comments from CSPCWG members (and resultant Chair or Secretary comments) as summarised in CSPCWG Letter 14/2014 is as follows:

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WG10 Action	Question	Yes	No
21	<p>Do you agree with the proposed new specification B-321.9?</p> <p><b>Chairman: Various comments below imply we need to consider this further (at WG11).</b></p>	AU, BR, CA, CL, DE, DK, ES, ESRI, FR, GR, IN, LV, NL, NO, NZ, SE, UA, UK, ZA	FI, US(NOAA)

Further comments

AUSTRALIA

**Action 21:** As conceded in the CSPCWG10 record, the method for depicting the area of an all-weather terminal cannot be used by some HO's (eg Australia). While Australia agrees with the proposed new specification B-321.9, we suggest that further discussions take place within the CSPCWG so as to provide additional solutions to cater for all HO's.

**Secretary:** The proposal is to label the terminal, which can be applied to any nation's charts. The transparent tint is an additional option only available to those HO's whose technology allows. However, it may be that there are other possibilities. AU will prepare a paper for CSPCWG11.

FINLAND

21: We also think that this needs more working on. The proposed symbol does seem "incomplete" without a line on the edge. Many of these structures, like the one shown in CSPCWG10-08.10A, do have solid walls making them physical obstructions. A tint only symbol does not feel like an obstruction.

**Chairman:** Agree further discussion about an 'edge', roof supports, detached wharves and how to depict on charts which do not use urban tint is necessary. AU will prepare a paper for CSPCWG11.

GERMANY

21: See comments of Latvia but do we need an INT1 entry and extra number for this?

**Chairman:** See response to Finland. I think as we are using existing symbols and will include an explanatory legend, there is no need to include anything in INT1.

INDIA

21: B-321.9: The information pertaining to covered berths could be provided in the MN\_PUB where all relevant point information including onshore facilities have been made available to the mariner. Depicting of too many shades on the chart may lead to confusion.

**Chairman:** Guidance on how to encode covered boathouses in ENC has been included in S-57 Appendix B.1, Annex A – Use of the Object Catalogue for ENC, clause 4.8.15, and may be easily extended to include covered berths. This will be discussed by the IHO TSMADWG on adoption of the specification in S-4. See also response to Finland.

ITALY

21: At the moment Italian HO has no information about "Covered wharf". Don't you think that the proposed representation may be confused with a mistake of the land tint?

**Chairman:** See response to Finland.

LATVIA

21: B-321.9 – We agree that symbol is needed. From our point, the symbol looks a bit unfinished though.

As NOAA suggests, it could be solid line or may be dashed line around the tint (N1.2), so indicating “water area” it covers and it is also possible to add also note to this “area” if needed (limit could also be useful to encode it to ENC as area with info). Also unclear a bit is profile picture against the added chartlet. Profile has posts in the water holding the roof, so there should be maybe minor piles in the water also under the building tint. Maybe also there should be then shown possible entry and exit paths (arrows of kind), if piles are not just in the corners, but more along the outer edge of a tint?

**Chairman:** See response to Finland.

#### NEW ZEALAND

21: What are the allowances/guidelines for covered berths in countries that don't use urban tint?

**Chairman:** See response to Finland.

#### US(NOAA)

21: Section B-321.9: I don't feel strongly about this, but the image proposed for B-321.9 looks like what could be mistaken for a tint error. I realize that there is a vertical clearance shown, but a black line around the perimeter would give a quicker impression that this is a structure. Hydrography would still show through. The profile is a nice touch if there is room on the chart.

**Chairman:** See response to Finland. It occurs to me that the term ‘pictorial sketch or photograph’ may be more consistent with S-4 and INT1.

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The majority of responses were in approval of the proposed new specification at S-4 – B-321.9, however additional comments indicated that further CSPCWG/NCWG discussion is required. From these additional comments, the issues that require further discussion include:

- The option to include the transparent urban tint to indicate the extent of the covered terminal can only be applied by those Hydrographic Offices (HO's) that use this convention. An option should be considered for those HO's that use a solid outline only for buildings indicating true shape;
- For the optional use of urban tint to indicate the extent of the structure, the tint alone may not provide sufficient indication to the mariner that there is a physical obstruction;
- The paper chart user may consider the covered berth to be a error/mistake with the urban/land tint;
- The possibility of including an entry in INT1 for a covered berth or terminal.

Options for other building symbol conventions: Noting the intent of the indication of the extent of the building as an additional option to supplement the descriptive legend, where the convention used by a HO is to show the building outline only as a solid black line (possibly with an additional thicker “shading” line), an option for covered berths could be to show the extent of the structure using a solid black line, with land tint infill, as for bridges. The actual berth face could be “gapped” where it crosses the covered berth structure, and possibly indicated as a dashed line where covered by the roofed structure. If the seaward edge of the roofed structure is open to the sea (i.e. supported by pylons only – no walled structure), this may also be indicated using the same convention as that used for bridges (B-381.5). Any depth information that is considered to be required under the structure may also be indicated as for bridges (B-381.6).

An alternative would be to indicate the seaward (“over water”) extent of the covered berth using a dotted “danger line” symbol, however as the general convention is for this symbol to be used for intertidal or submerged obstructions, it is suggested that this is not an appropriate option. Similarly, the use of a dashed line for the roofed structure outline may also be considered to be inappropriate as this is the convention used for a ruined building (INT1 – D8).

Urban tint: It must be noted that the building symbol including urban tint as included in INT1, (BSH 7<sup>th</sup> Edition 2011) – D5 4<sup>th</sup> option, has a solid black “outline” as part of the symbol. This may be included as part of the optional building outline where “urban tint” is used. This would also be consistent with ECDIS display of the covered terminal, as indicated in the example included in the CSPCWG10 paper from Finland, where the outline of the building is indicated with a solid brown line in addition to the tint infill. Such addition to the tint symbol would also resolve any issue of the chart user considering the tint to be an error in the printing of the chart.

INT1: As summarised in the Chairman's response to Germany above, it is considered that there is no requirement for a separate entry for a covered berth to be included in INT1, as the charting options use

existing INT1 symbols. This is consistent with the approach taken for charting bridge supports and depth information under bridges.

## **Conclusions**

Further discussion is required by the CSPCWG/NCWG for the most appropriate methods for showing covered berths on paper charts. The above analysis and discussion includes some additional options for achieving this, taking into account the symbols currently defined in INT1 for depicting buildings on paper charts. These options should be considered by the Working Group, in addition to any other possible options that have not been included in this Paper.

## **Recommendations**

- 1) To consider the additional optional specification of charting a covered berth using a solid black outline with land tint infill, including the convention of charting supporting information such as structure pylons and depth information under the structure as for bridges;
- 2) To consider the addition of the solid black outline of the building in addition to the “urban tint” in regard to the current proposed specification (CSPCWG Letter 10/2014);
- 3) To determine the requirement/non-requirement to include a separate symbol for a covered berth in INT1;
- 4) To consider any other options for the depiction of covered berths on paper charts.

## **Justification and Impacts**

The occurrence of covered berths is reportedly increasing as a feature in ports. The standardisation of the methods for depiction of these features on paper charts will avoid confusion for the mariner in interpreting such information.

The recommendations above are aimed at addressing Work Item A18 of the NCWG Work Program.

## **Action required of CSPCWG**

The CSPCWG is invited to:

- a. **Note** this Paper;
- b. **Discuss** the recommendations and any consider other alternative options for depicting covered berths on paper charts;
- c. **Determine** appropriate actions.

## Annexes:

- A: CSPCWG10-08.10A – Covered berths (Finland).

**10<sup>th</sup> CSPCWG Meeting  
Wellington, New Zealand, 21-24 January 2014**

**Paper for Consideration by CSPCWG**

**Covered berths**

<b>Submitted by:</b>	Finland
<b>Executive Summary:</b>	How should covered or 'indoor' berths be charted?
<b>Related Documents:</b>	S-4
<b>Related Projects:</b>	None

### Introduction

Port of Kokkola, Finland, has one of Europe's largest 'indoor berths' or an 'All Weather Terminal' as the port authority calls it. Currently there is no guidance in S-4 how 'indoor' or covered berths should be charted.

### Background

To protect certain bulk cargos against rain, snow and ice during loading, port of Kokkola has one fully covered berth, or All Weather Terminal as it is called. The terminal itself is a 132 m long and 62 m wide building with and 122 m by 35 m quay and 122 m by 25 m basin inside. Vessels up to 9,500 dwt, 8.3 m in draught and 23.5 m in height may be loaded or discharged in the terminal.



According to allweatherterminals.com similar facilities exist at least in Goole (UK), Amsterdam (NL), Rotterdam (NL), Antwerp (BE) and Marin (ES).

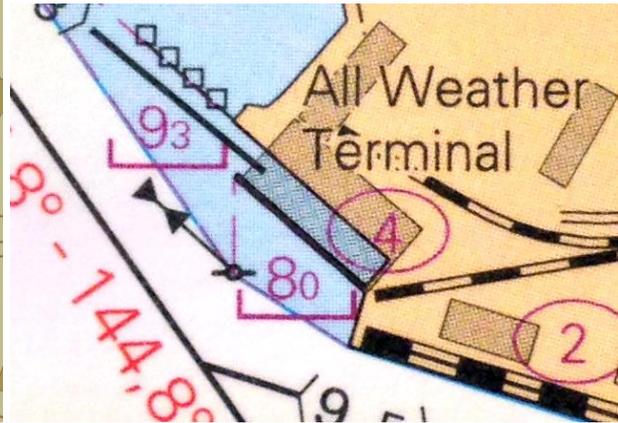
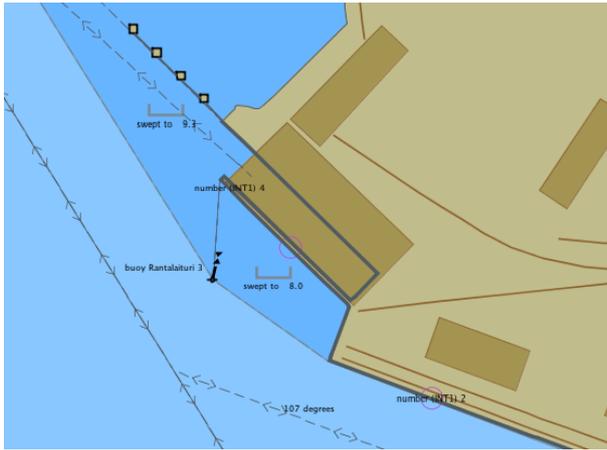
### Analysis / Discussion

At the Finnish HO it has been considered useful for the mariner to chart the terminal building, so that he can expect there to be a building that covers a berth, some navigable water and even a short segment of an official track.

There is no guidance on covered berths in S-4 unlike in S-57, where clause 4.6.1 of Appendix B.1 Annex A has the following guidance:

*"If it is required to encode a covered terminal into which ships can go, this should be done using HRBFAC [Harbour facility] with the purpose of the terminal defined by CATHAF [Category of harbour facility]. The roof of the terminal may be encoded using the attribute NATCON [Nature of construction], and the maximum height and/or draught of vessels able to use the terminal encoded using the attribute INFORM [Information]. Alternatively, the roofed structure may be encoded using a BUISGL [Building, single] object (see clause 4.8.15)."*

Based on the guidance in S-57, Finland has encoded the terminal building as a BUISGL that stretches over the basin. The basin is encoded as a navigable depth area. The outer wall which has no opening in it is encoded as land area. The image on the left below shows the situation on an ENC.



The same principle has also been seen suitable for paper charts and currently the All Weather Terminal in Kokkola is charted as seen in the image on the right above. The approach here is very straight forward – the grey building has been drawn over the otherwise normal harbour basin so that the blue and grey tints overlap.

We would welcome any examples on how similar facilities are charted in other HOs, as well as any comments on the method described above.

### Conclusions

None.

### Recommendations

CSPCWG to consider whether international guidance on covered berths would be useful and, if so, what it should be.

### Justification and Impacts

None.

### Action required of CSPCWG

The CSPCWG is invited to discuss the issue, consider the recommendation and agree on further actions, if any.