INTERNATIONAL HYDROGRAPHIC ORGANIZATION

ORGANISATION HYDROGRAPHIQUE INTERNATIONALE

CHART STANDARDIZATION & PAPER CHART WORKING GROUP (CSPCWG)

[A Working Group of the Committee on Hydrographic Requirements for Information Systems – CHRIS]

Chairman: Peter JONES
Secretary: Andrew HEATH-COLEMAN

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

Telephone:
(Chairman) +44 (0) 1823 337900 x 3020
(Secretary) +44 (0) 1823 337900 x 3656
Facsimile: +44 (0) 1823 325823
E-mail: peter.jones@ukho.gov.uk
andrew.coleman@ukho.gov.uk

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To CSPCWG Members Date 26 January 2007

Dear Colleagues,

Subject: Draft revision M-4 Section B-440 to B-449

As advised at CSPCWG3, we are continuing the revision of M-4 Part B-400 in sub-sections. Annex A to this letter is the first draft of the next sub-section, B-440 to B-449. As usual, we have used 'track changes', with marginal comments where an explanation is needed. It is hoped that the resultant draft text will be sufficient explanation of why a change was needed; if not, then additional explanation can be made available. Changes which are directly due to the conventions or improvements to the English are already 'accepted' (in blue) to avoid cluttering the track change column. Where we propose a non-conventional change however (eg 'shall' to 'should' or 'may'), this is shown as a track change.

Some of the graphics need modernizing, or amendment. This has been indicated as a comment at present; the amendment will be done when the final version is converted to InDesign for incorporation into M-4. Page set-up and other format problems will also be resolved at that time.

Particular changes to note include:

1. The section on International boundaries and national limits has been updated to reflect UNCLOS, which came into force since the original specifications were published.
2. B-440e. The existing specification implies that any other colour is preferred to magenta for international boundaries. However, it seems that nearly every state uses magenta. **Should we therefore amend the specifications to make magenta the preferred (or only) option?** This decision affects several succeeding paragraphs.
3. B-440.8. A new symbol for a continental shelf boundary may be needed. We have included one suggested by the CSC (Chart Standardization Committee) consultant – a 'V' embedded in the maritime limit in general. This is stated to be derived from a geophysical symbol for 'break of slope' (although we have been unable to substantiate this). We have been unable to think of a better symbol,

but you may consider that this is not intuitive, that it will only rarely be needed and that a legend on a limit symbol may suffice. **Do you agree with the proposed symbol, propose something different or consider that no symbol is needed?**

4. B-441.5 **Is it still valid to state that submarine exercise areas and transit lanes should not generally be charted?**
5. B-441.8. Specifications for charting mine danger areas and former mined areas added. There is also a need for a consistent international specification for charting individual mines or explosives. **Do you agree that a small circle of line style N2.1 is appropriate?**
6. B-442.5. This new specification is specifically to cover a French practice of designating small dumping grounds for explosives which are to be made safe in due course. **Does any other nation have a similar practice? Is an INT number and specification necessary for a possible unique national practice?**
7. B-445. The section on oil and gas production has been extensively re-written as a result of many developments in this field since the original specifications were drafted. Because of the many additional features to be covered, and the limited number of specification numbers available, some re-numbering and further sub-division by use of alphabetical paragraph numbering has been necessary.
8. B-445.1.

   a. **is there a requirement for the symbol INT 1 L31.3, which has never been approved by IHO?**

   b. **is there a requirement for the abbreviation Prod Well?**

   c. **do you agree to the new abbreviations SWOPS?**
9. B-445.5c. A new symbol for a storage tanker is proposed, for L17. A similar symbol is already in use on several nations' charts and already appears in the national variation column in INT 1. **Do you agree with the proposed symbol?**
10. B-447. A general heading 'Aquaculture' has been introduced for the section dealing with fish farms, etc. Within this section:
    a. B-447.4 - the differing use of black and magenta for shellfish beds has been clarified in line with convention.
    b. B-447.5 - The method of showing depths in fish havens has been clarified and added to, in line with what we agreed for Fairways.
11. B-448. An abbreviation 'DG range', already in common usage, is proposed for degaussing range. **Do you agree?**
12. B-449. We have been unable to think of a better title for this section. **Do you have a suggestion?**
13. B-449.1. Dates have been added to the ice front symbols, as previously requested.
14. B-449.2.The log pond specification has been widened to cover other floating barriers. **Do you agree with this extension to its use? And do you consider that the ZA shark net symbol should be adopted as an INT symbol?**
15. B-449.3. We have retained the specification for incineration areas, as we are unsure whether they have been entirely discontinued. **We would welcome any advice on this subject.**
16. B-449.6. As discussed at CSPCWG 3, we have introduced a more intuitive symbol for seaplane operating areas, to include a point symbol as well as an area symbol. 'Operating area' is preferred to the previous 'Landing area', as it has wider application, covering anchoring, take off, and water gathering (for fire-fighting operations).

The only IHO Technical Resolution (TR) relevant to this sub-section is B2.35. The text has been fully

included in the introductory remarks at B-440 (2nd paragraph) and it is suggested the TR could be withdrawn on publication of the revised section.

A suggestion was made by a WG member that we should include pictures of oil and gas features in M-4. We have carefully considered this idea but decided against it at this time because:

- it would increase the size of an already very large document
- we would be repeating material readily available elsewhere (eg on the internet)
- there may be copyright issues
- we do not have sufficient knowledge to choose authoritative pictures
- there would be a maintenance issue, in this fast developing sector
- it could lead to pictures being requested for buoys, wind turbines, other landmarks…etc.

I would be grateful if you would now examine Annex A, paying particular attention to the track changes and comment boxes and the changes highlighted above. I will assume that any changes which are not commented on can be incorporated into the draft revision without further WG consultation. There are also some specific questions arising (in bold above); these are repeated in the response form at Annex B. Please send me your responses and any suggestions for improvements **by 23 March 2007.**

Yours sincerely,

Peter G.B. Jones,
Chairman

Annex A: Draft Revision of M-4 Part B-440 to B449 (separate document).
Annex B: Response form

B-440 INTERNATIONAL BOUNDARIES AND NATIONAL LIMITS

The United Nations Convention on the Law of the Sea, 1982 (UNCLOS) came into force on 16 November 1994. UNCLOS contains navigational provisions as well as provisions for determining the limits of various maritime zones. These provisions are binding to all states that have ratified the Convention. For technical aspects of UNCLOS, see IHO publication S-51.

IHO Member States should show, on selected series of their charts, their own baseline and maritime limits in accordance with UNCLOS. (Former IHO Technical Resolution B2.35)

In this section (B-440), the term '**boundary**' is used for any delimitation between adjacent states or those which face each other across channels or seas (known as 'opposite states'). The term '**limit**' is used for the line marking the seaward extent of any coastal zone where no other state is concerned.

Any statement to the effect that international boundaries shown are only approximate should be confined to **land** boundaries. Such a statement should be in an associated publication, rather than on individual charts. Sea boundaries must only be charted if precise positions have been agreed by the states concerned.

The provision of symbols does not imply that any particular boundary or limit should be charted (other than a land boundary). Boundaries and limits of no significance to navigation or other chart users should be omitted from navigational charts.

The mariner may be interested in the exact location of international maritime boundaries for two principal reasons:

- When crossing a boundary he could be subject to different laws and regulations which may effect his navigation, e.g. buoyage systems, pilotage regulations, fishing rights, reporting procedures, pollution regulations.
- Where a boundary passes through groups of offshore islands he may wish to know upon which side of the boundary a particular island falls.

The boundaries and limits dealt with in this specification are described, with their principal navigational significance, below.

a. **International boundaries on land** should be charted, at least in the vicinity of coasts.

b. **International maritime boundaries** which have been established by agreement between adjacent or opposite states. Boundaries are sometimes negotiated on the basis of the equidistance or 'median' line principle. For various reasons, however, agreed boundaries even when negotiated on this principle are seldom true median lines. The term 'median line' should not therefore be used on charts or in navigational publications.

Navigationally, international boundaries may vary in their significance over different parts of their lengths. Inshore, they may represent the delimitation of territorial seas of two states or 'internal waters', (eg within bay closing lines or straight baseline systems). Offshore, they may represent exclusive economic zone and/or continental shelf boundaries.

c. **Limits associated with territorial seas**

The term **'Baseline'** refers to the line from which the breadth of the Territorial Sea, the outer limits of the Contiguous Zone, the Exclusive Economic Zone and, in some cases, the Continental Shelf are measured. It is also the dividing line between internal waters and territorial seas.

The normal baseline is the low water line of the mainland, islands, or low tide elevations, as

Commentaire [c1] : Definitions brought into line with UNCLOS. The section has been reviewed by UK's Law of the Sea Officer.

Commentaire [c2] : Can this resolution be withdrawn on publication?

Supprimé : Some charts carry disclaimers

Supprimé : It is recommended that any such statements

Supprimé : only

Supprimé : and preferably should appear in an official navigational handbook rather than on individual charts.

Supprimé : recommended

Supprimé : a recommendation

Supprimé : fishing

Supprimé : preferably

Supprimé : always

Commentaire [c3] : Deleted customs limits. Water areas not on land and they are not INT boundaries. Covered at B-440.2

Supprimé : Customs limits may be charted (on land and water areas) of ports which have special customs regulations. If shown, they shall be considered authoritative.¶

Supprimé : where delimiting lines

Supprimé : frequently

Supprimé : constitute

Supprimé : or other lines of delimitation

Supprimé : Territorial sea baselines determine the seaward extents of internal waters, the territorial sea, the contiguous zone and the economic zone.¶
Saut de page
These baselines may be

depicted on large scale charts officially recognised by the coastal state. Closing lines, up to a maximum of 24 nautical miles, are used to enclose bays and estuaries, provided they satisfy the provisions of UNCLOS. River closing lines are used to enclose rivers that flow directly into the sea. In certain circumstances, straight baselines may be used to connect seaward points on a deeply indented coastline; or a coastline that is fringed with islands.

Features which dry at low tide (eg rocks, reefs, banks) may comprise elements of the baseline provided they lie wholly or partly within a distance not exceeding the breadth of the territorial sea. Artificial structures carry no territorial rights (but may have 500m safety zones, see B-445.6).

Supprimé : to enclose bays, estuaries or rivers; or for coastal areas fringed with islands.

Supprimé : drying

'Normal' baselines correspond to the low water line (which is not defined any more precisely by UNCLOS), including the coasts of islands, marked on the large-scale charts officially recognised by the coastal state; they therefore do not require any special symbol.

Special cases are:

(i) **Coral reefs.** Usually, areas of reef plateau are charted as a single area of drying coral since it is impossible to chart all the individual lumps and heads, and the area is for practical purposes unnavigable. The symbol for drying coral is used to illustrate the extent of this feature on a chart, and it is the edge of this symbol that is taken as the "... seaward low-water line of the reef, as shown by the appropriate symbol ...".

Commentaire [c4] : UNCLOS only mentions coral reefs, but the same may equally apply to mangroves and salt marsh. An additional line could be added to explain this.

Supprimé : which are extensive areas which are very nearly dry at low water, with individual drying coral heads generalised to show a simplified edge symbol - the latter is often taken as the low water line

(ii) **Unstable coasts**. Where, because of the presence of a **delta** or other natural conditions, the coastline is highly unstable, the appropriate points may be selected along the furthest seaward extent of the low-water line and, notwithstanding subsequent regression of the low-water line, the straight baselines shall remain effective until changed by the coastal state in accordance with UNCLOS.

Supprimé : Deltaic or other highly unstable coasts,

Supprimé : where it has been proposed that appropriate points may be selected along the furthest seaward extent of the low water line to draw straight baselines, notwithstanding subsequent regression, but subject to certain other conditions.¶

Straight baselines, or the limits derived from them, should be shown on official charts of a scale or scales adequate for determining them. Many coastal states interpret this position as permitting depiction on special charts, not on the standard navigational series.

Supprimé : derived there

Internal waters comprise all areas of the sea on the landward side of the territorial sea baselines, as well as inland waters including rivers, lakes, etc. Internal waters form an integral part of the land territory of a state.

The Territorial Sea is a belt of water of a defined breadth but not exceeding 12 nautical miles measured seaward from the territorial sea baseline. Within the territorial sea, a coastal state has full sovereignty limited only by a right of innocent passage for foreign ships.

Supprimé : a belt of water generally of a defined breadth, measured from the territorial sea baseline. The 1982 UN Convention on the Law of the Sea recognises a breadth of 12 nautical miles.

The Contiguous Zone is a zone adjacent to the territorial sea where the coastal state may exercise the control necessary to prevent or punish infringement of its customs, fiscal, immigration or sanitary laws and regulations within its territory or territorial sea. Under UNCLOS, the outer limits of this zone may not extend beyond 24 nautical miles measured from the territorial sea baselines.

Supprimé : and/

d. **Limits of zones in which exploitation of natural resources is regulated**

The following limits represent the extent of claims to various rights, from control of fishing to exclusive control of all economic exploitation and conservation, but preserving freedom of navigation.

Supprimé : Until international law has been further codified, the cartographic and navigational implications are not wholly predictable.

Exclusive fisheries zones: areas beyond the territorial seas where coastal states proclaim that they alone may regulate fishing. Within any such zone other countries which have traditionally fished the area are often allowed to do so under bilateral agreements. Where states have permitted others to fish in **parts** of the area, it may be desirable to chart the outer limits of both

the full area and the area of special concessionary rights.

In some instances, claims are described as 'conservation zones'; for practical purposes these may be classed with exclusive fishery zones since their intended function is to institute fishery conservation measures.

Most of the fishery zone claims are limited by fixed distance (200 nautical miles in some cases) from the territorial sea baselines.

Limits of Exclusive Economic Zone (EEZ). In the exclusive economic zone, the coastal state has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds. Under UNCLOS, the EEZ shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.

Limits of the Continental Shelf: The continental shelf of a coastal state comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance. The delineation of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured is complex. Details are given in UNCLOS Article 76 (see S-51). However, the fixed points comprising the line of the outer limits of the continental shelf on the sea-bed either shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 metre isobath.

The coastal state exercises sovereign rights over the continental shelf for the purpose of exploring it and exploiting its natural resources.

e. **Symbols: General points**

Land boundary symbols must be in black. The symbols for boundaries and limits shown on water areas should be in a colour. On charts where boundaries or limits have to be superimposed on magenta detail such as routeing measures, it is preferable to use a colour other than magenta. The following symbols should be used, for any colour, but, where a colour other than magenta is used, boundaries and limits may be shown by simple unbroken lines, labelled in some way. Wherever the cross symbol is used, the 'horizontal' line (ie the one in line with the limit) should be twice as long as the 'vertical' line. Legends on limits should be placed on the landward side of the limits.

Generally, because they are measured from common baselines, the various limits do not coincide. However, they may merge towards an international boundary between two or more 'opposite' states. In such cases, the Territorial Sea limit takes precedence, as it includes all the regulations applicable to the other areas. It will usually be possible to include other symbols (such as fish or EEZ legends) at suitable intervals on the same limit, if required.

B-440.1 **International land boundaries** should be shown by a line of black crosses. State names may be shown at appropriate intervals in black upright text, the form in accordance with B-552.4.

N40

B-440.2 **Customs limits**, where details are provided by a regulatory authority, should be charted in magenta,

Supprimé : the 1982 Convention

Mis en forme : Couleur de police : Bleu

Supprimé : the EEZ extends to a distance of 200 miles from territorial sea baselines, in which the coastal state will have sovereign rights to explore, exploit, conserve and manage the natural resources, whether living or non-living. A number of countries have already claimed exclusive economic zones.¶

Supprimé : in juridical terms the "Continental Shelf" of a coastal state has been defined as comprising the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory. The 1982 Convention defines the limits as extending to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines where the outer edge of the margin does not extend up to that distance. The 1982 Convention defines the continental margin as comprising the submerged prolongation of the land mass of the coastal state, and consists of the seabed and subsoil of the shelf, the slope and the rise. It does not include the deep ocean floor with its oceanic ridges or the subsoil thereof. The coastal state exercises sovereign rights for exploration and exploitation of the mineral and other non-living resources of the continental shelf.¶

Supprimé : should

Commentaire [c5] : Most 'INT 1s' in fact show magenta. Should we opt for magenta?

Supprimé : Legends on limits should be placed on the landward side of the limits. State names should preferably be in small sans serif capital letters.

Supprimé : one

Supprimé : on land

Supprimé : If necessary, s

Commentaire [c6] : DID amend state names to original form (as current 5011 N40)

Supprimé : at particular ports may

Supprimé : preferably

on land and sea, by the symbol

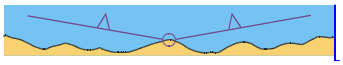
N48

or may be charted by a simple dashed line with suitable legend.

B-440.3 **International maritime boundaries** should be charted, where navigationally significant and agreed by the states concerned, by alternating crosses and dashes, in colour. State names should be shown at appropriate intervals in sloping matching coloured text, the form in accordance with B-552.4. Disputed boundaries must not be charted.

N41

B-440.4 **Straight territorial sea baselines** (including bay and river closing lines) may be charted, if required, by an unbroken line backed at intervals of 50mm (or closer) by open arrowheads pointing towards the coast, in colour. The base points used in the determination of these baselines may be indicated by circles with a diameter of 2mm.



N42

If agreed internationally that, in a highly unstable area, the furthest extent of the low water line may determine the baseline, notwithstanding subsequent regression, the same symbol may be used to depict the line where it differs from the charted low water line.

B-440.5 **Seaward limits of territorial seas** may be charted, in colour, by groups of two crosses, at intervals of approximately 50mm.

N43

B-440.6 **Seaward limits of 'contiguous zones'** (in the sense used in the description in B-440c) may be charted, in colour, by single crosses at intervals of approximately 50mm.

N44

Commentaire [c7] : Magenta?

Supprimé : should

Commentaire [c8] : DID amend state names to original form (as current 5011 N41)

Commentaire [c9] : Magenta?

Supprimé : about

Commentaire [c10] : DID Amend symbol (arrows point wrong way), as current 5011 N42.

Commentaire [c11] : Magenta?

Supprimé : (but closer if necessary)

Commentaire [c12] : Magenta?

Supprimé : cm (but closer,if necessary)

B-440.7 **Limits of fishery zones** commonly coincide with other charted limits, such as continental shelf and exclusive economic zone limits. This may be indicated by adding a fish symbol at appropriate intervals to the other limit symbol.

Limits of fishery zones which do not coincide with other charted limits may be charted, in colour, by a line broken at intervals of approximately 50mm by a fish symbol.

N45

If it is necessary to chart more than one limit, the line between the fish symbols may be dashed for the inner limit.

N45

B-440.8 **Limits of the continental shelf**

Complex procedures exist within UNCLOS for the establishment of the limits of the continental shelf. Where these procedures have been followed and the limits have received the approval of the 'UN Commission on the Limits of the Continental Shelf', the limits should be charted, if required, in colour, by a line broken at intervals of 50mm by an open arrowhead (ie a 'v' symbol), pointing up the slope.

N46

Where the limits of the Continental Shelf coincide with other charted limits, such as fishery zones or EEZ limits, the open arrowhead symbol should be alternated with the other limit symbol at appropriate intervals.

B-440.9 **Limits of exclusive economic zones (EEZs)**

EEZ outer limits should be charted by an unbroken coloured line with a suitable legend or abbreviation, eg EEZ or national equivalent, at intervals of approximately 50mm on the landward side of the line, eg:

N47

B-441 **MILITARY PRACTICE AREAS; MINEFIELDS**

Military practice (or exercise) areas at sea are of various types and may be classified as follows with regard to their significance for the mariner:

a. Firing Danger Areas (FDA), sometimes called Firing Practice Areas (FPA), ie permanent or temporary ranges, including bombing, torpedo and missile ranges.
b. Minelaying practice (and counter-measures) areas.
c. Submarine Exercise Areas.
d. Other exercise areas.

Permanent minefields may be wartime relics or modern defensive fields.

Commentaire [c13] : Magenta?

Supprimé : (but closer if necessary)

Commentaire [c14] : Magenta?

Commentaire [c15] : Suggested new symbol and INT 1 reference

Supprimé : The other limits of the continental shelf, as laid down in the 1982 Convention, are complex and very few coastal states, with continental shelves extending beyond 200 nautical miles, have determined their outer limits at present (1989). It is therefore inadvisable to recommend a symbol.¶

Commentaire [c16] : Magenta?

Supprimé : If

Supprimé : s of a defined width of 200 miles from territorial sea baselines are established by international agreement, it is recommended that their

Supprimé : preferably

Supprimé : appropriate

Supprimé : inner

Supprimé : as found in Swedish territorial waters

B-441.1 **Some degree of restriction** on navigation and other rights may be implied by the charting of military practice areas. There may be varying interpretations of the validity of the restrictions and possible infringement of the rights of innocent passage through territorial waters and elsewhere. Where it is thought desirable to chart such areas, even though clear range procedure may be observed, or the areas appear to be a derogation of the freedom of the seas, mariners should be informed (not necessarily on charts) that publication of the details of a law or regulation is solely for the safety and convenience of shipping and implies no recognition of the international validity of the law or regulation. By this means infringements are not condoned but the mariner receives a warning which may be necessary for his safety.

Supprimé : it is recommended that

As an alternative to including military practice areas on standard navigational charts, unless of definite navigational significance such areas may be charted on special small-scale non-navigational practice area charts, to avoid cluttering charts.

Supprimé : It may in any case be preferable to avoid cluttering charts with

Supprimé : exercise

Supprimé : and to promulgate them by means of

Supprimé : generally characterised

Supprimé : and

Supprimé : and, in some cases,

B-441.2 **Firing danger areas at sea** are frequently marked by special buoys (yellow Special Marks in the IALA System) sometimes laid around the perimeter of the FDA and/or by specially erected lights, beacons and targets. All such features which could assist the navigator in identifying his position, or could be a hazard, must be charted in the normal way, eg:

Q50

B-441.3 **The limits of firing danger areas.** If it is required to chart Firing Danger Areas, the symbol should be a magenta dashed line broken at approximately 50mm intervals by sketches of a small symbol for a bomb from which a flare is shown, spurting into the area.

N30

Supprimé : Those countries wishing to chart

Supprimé : should delineate these areas by a

Supprimé : magenta

Supprimé : magenta

Supprimé : preferably

Supprimé : towards the centre of

A note may be added to the chart in magenta where considered necessary, which could include information about signals, firing times and contact details. Temporary Firing Danger Areas should not be charted: such areas should be promulgated by Temporary Notices to Mariners.

Supprimé : cautionary

Supprimé : should be added on the chart

Supprimé : and this note could

Supprimé : the

Supprimé : that firing times are promulgated by MN

Supprimé : where this is applicable.

Supprimé : normally

B-441.4 **Mine laying (and counter-measures/clearance) practice areas.** The existence of these areas implies the possibility of unexploded mines or depth charges on the bottom, and also the presence of harmless practice mines. Such areas must be depicted by means of a dashed magenta line, broken at intervals by a mine symbol, horns pointing into the area.

N32

B-441.5 **Submarine exercise areas and transit lanes** should not generally be charted because submarines exercise over wide areas which it would not be practicable to chart, and over which cautions (to keep a good look out for them) are unlikely to be effective; moreover, submariners have instructions to keep to depths clear of surface ship draughts. They may, however, be charted if considered useful to do so where they occur in or near major shipping lanes or port approaches. The symbol for the limits must be dashed magenta lines with a submarine shape or appropriate legend within the area.

N33

A cautionary note may be added if considered necessary.

B-441.6 **Other naval exercise areas** outside territorial waters should not be charted unless necessary for the safety of shipping, in which case a dashed line, in magenta, with a cautionary note should be shown.

Within territorial waters, areas in which navigation is permanently restricted for military purposes must be delineated by the symbol for restricted areas, with appropriate legend, eg:

N31

B-441.7 **Temporary practice and exercise areas** must not be charted.

B-441.8 **Minefields** laid and maintained for defence purposes must be charted by the general symbol for the limits of restricted areas (T-shaped dashed lines) in magenta, with a cautionary note giving the precautions to be taken by mariners. In cluttered areas, a magenta tint band may be added inside the limit, for emphasis, see B-439.6d.

N34

Mine danger areas and former mined areas. The method of charting old wartime minefields will depend on the assessment of the degree of danger remaining and must be symbolized according to the particular circumstances of each case. If danger to surface navigation still exists, they must be charted as minefields (N34); the legend '*Mine Danger Area*' may be used instead of '*Minefield*'. If danger to surface navigation is now no greater than the normal hazards of marine navigation, but there is a possible residual danger for submarine or seabed activities, a magenta general maritime limit (N1.2), with legend and associated explanatory note will usually be appropriate, eg: '*Former Mined Area (see Note)*', or equivalent.

For mine-laying practice areas, see B-441.4.

Individual mines. Drifting mines cannot be charted. Sunken mines should not to be charted as they are liable to move and are not considered a hazard to surface navigation. Also, it may give a false impression that other areas are clear of mines. However, all such mines or explosives could still constitute a hazard for vessels anchoring, fishing or engaged in submarine or seabed operations. If it

Supprimé : It is recommended that those countries wishing

Supprimé : to chart these

Supprimé : show the limits

Commentaire [c17] : Is this valid?

Supprimé : shall

Supprimé : shall

Commentaire [c18] : DID, insert latest N31 graphic.

Supprimé :

Supprimé : The method of charting old wartime minefields will depend on the assessment of the degree of danger remaining and must be symbolised according to the particular circumstances of each case.

Commentaire [c19] : This is inconsistent with other areas considered hazardous to seabed activities (eg explosive dumping grounds) which use T-shaped dashes but helps to distinguish from minefields.

is required, exceptionally, to chart them, this should be by a small circle of magenta T-shaped dashes (N2.1 – see B439.2) with the legend *Mine*, *Explos*, or equivalent, alongside.

Commentaire [c20] : Several different methods are used, eg danger line and black legend. We need a consistent specification

B-442 DUMPING GROUPS: GENERAL; HARMFUL MATERIALS

Materials deliberately dumped at sea in specified areas (other than those associated with reclamation works) may be classified, according to their significance to the mariner, as follows:

a. Materials which are generally dispersed before reaching the seabed, eg sewage sludge, are of little significance and no charting action is required.

b. Spoil from dredging operations or other works which might reduce charted depths significantly in the designated spoil ground. See B-446.

c. Concrete blocks, cars, or other objects dumped as havens for the breeding of fish. See B-447.

d. Harmful materials, including explosives and chemicals, which are likely to remain concentrated on the seabed. See B-442. 1-4.

e. Explosive or suspicious devices (eg a bomb, shell, mine, torpedo) which are jettisoned in designated areas or zones, for recovery at a later date. See B-442.5.

Commentaire [c21] : CSC 44. FR INT 1 Nb, UK INT 1 Nb

f. Areas where vessels burn off dangerous chemicals. See B-449.3.

Commentaire [c22] : Delete? See comment at B-449.3

B-442.1 **The dumping of harmful materials** from land based sources has been the subject of several conventions.

For the purpose of these specifications, dumping grounds for any harmful materials (eg radio-active waste) should generally be treated as below for explosives (or munitions) or chemicals.

Supprimé : it is recommended that

Commentaire [c23] : CSC 32

Supprimé : described

B-442.2 **The limits of dumping grounds for harmful materials** must be shown by the magenta general maritime limit for restricted areas (N2.1). The limits must be shown on all charts of scale 1:500 000 and larger, and on smaller scales in the case of deep water areas where no larger scales exist or where it appears desirable to draw attention to the areas, eg:

Supprimé : symbol for the limits of

Supprimé : T-shaped dashed lines

Supprimé : , in magenta

N23.1

N24

Magenta is used because to the chart user the significance of these areas is similar so that for other hazards (eg cables) to such seabed operations as trawling, cable laying, anchoring or mineral exploitation (see B-142.2).

Supprimé : recommended

B-442.3 **Legends** such as 'Explosives Dumping Ground', 'Dumping Ground for Chemicals', or equivalent, must be inserted in sloping lettering on the magenta plate within or adjacent to the charted limits, eg:

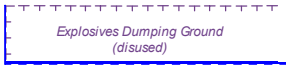
N23.1

N24

B-442.4 **Disused dumping grounds for harmful materials** must be considered dangerous for an indefinite period and must therefore remain charted. '*(disused)*' or the equivalent should be inserted under the legend. The date when the area ceased to be used should also be given on the chart, or in an associated publication, if known.

N23.2

B-442.5 **Occasional dumping grounds.** Zones have been designated in some coastal waters for the dumping of a suspicious or dangerous device taken on board or caught up in nets. The device will then be recovered or disposed of by the relevant authorities. The limits of these zones must be charted in the same way as dumping grounds for harmful materials, with the legend '*(occas)*', or equivalent. A list of these zones, and an explanation of their function, should be given in an associated publication.



N23.3

B-443 SUBMARINE CABLES

Submarine cables are used to carry power or telecommunications. All power cables and most telecommunication cables carry high voltages. Submarine cables are potential hazards to both vessels and life, particularly to fishing vessels engaged in trawling the seabed. Where possible, submarine cables are now buried beneath the sea floor to a depth of 40-90 cms in water depths of less than 1000 metres; however there remains a large percentage unburied. Submarine cables are vulnerable to damage from anchoring, trawling or other seabed operations; even small craft anchors can penetrate a soft seabed sufficiently to foul a cable. Damage to telecommunication cables can lead to extensive disruption of national and international communications, whilst damage to power cables can disrupt electricity supply.

Submarine cables, including disused cables, should be charted to indicate their presence to vessels engaged in anchoring, trawling or seabed activities in order to:

- warn mariners of the potential hazard to their vessel, including electric shock to any vessel fouling or breaking the cable, possible capsize of a small vessel if its fishing gear or anchor is trapped under the cable, or loss of gear (trawls or anchor cables).
- prevent damage to the cable and avoid disrupting the service the cable may be providing.

Active cables should be charted to a depth of 2000 metres (which is the deepest depth of water to which vessels may be endangered by fouling the cable). For disused cables, see B-443.7.

For cables related to degaussing areas see B-448.

B-443.1 **The exact route of individual cables** must be charted where possible to give the chart user full information, using the symbol of a wavy magenta line (see B-142.2).

L30.1

Where several cables land at the same point, the symbols may be terminated before they reach the coast or inshore water on smaller scale charts, in order not to obscure other important detail. In oil and gasfields, where pipelines and cables are often laid on the same route, the cable may be omitted.

B-443.2 **Cable areas.** Where cables (including disused cables) are so numerous in an area that it would be impossible to chart them individually without impairing the legibility of the chart, the area must be delimited by the general symbol for the limits of restricted areas (N2.1), interspersed intermittently with short sections of the cable symbol. The cable symbol must be repeated sufficiently to characterize the line (see B-439.3).

Supprimé : It is recommended that t

Supprimé : the Sailing Directions

Commentaire [c24] : DID, add date, eg 2006 in the brackets, ie *(disused – 2006)*

Commentaire [c25] : See FR INT 1 Nb for example

Commentaire [c26] : DID: please replace *(disused)* by *(occas)*.

Commentaire [c27] : Suggested new INT 1 number – or do you consider no INT number necessary for a simple combination of existing symbol and abbreviation?

Supprimé : Cable information is charted primarily to give cables protection against damage by shipping, principally trawlers, by making their existence and location known as widely as possible.

Supprimé : All submarine cables are to be charted, regardless of depth.

Supprimé : Where several cables land at the same point the symbols may be terminated before they reach the coast, or inshore water, on smaller scale charts in order not to obscure other important detail.

Supprimé : T-shaped dashed lines

Supprimé : The line shall be in magenta

 **L30.2**  **L31.2**

The outer limits of a cable area must enclose the area in which anchoring and certain forms of fishing are prohibited or inadvisable, ie, the limits must lie a safe distance beyond the actual lines of the outermost cables. See B-443.4 referring to regulations prohibiting anchoring and certain forms of fishing.

B-443.3 **Power transmission cables** carrying high voltage electric currents should be distinguished from telephone and telegraph cables, for the protection of the mariner. The power 'flash' symbol (in magenta) should break the cable symbol at intervals of about 50mm.

 **L31.1**

In the case of power cables across narrow channels, where it is considered that notice boards give adequate warning of the danger, the chart symbol may be omitted.

In certain circumstances, high voltage power cables may cause a deviation in a ship's magnetic compass; in these cases, where reports have been received, they should be treated as local magnetic anomalies (see B-274) and the legend 'Magnetic Anomaly (see Note)' should be added in black at appropriate points along the cable.

B-443.4 **Regulations prohibiting anchoring** or certain forms of fishing near submarine cables within territorial waters differ in detail from country to country. Where such regulations exists, it may be indicated by use of the symbol  and/or  in magenta (N20, 21) within a cable area (see B-439.4), or by reference to a note.

B-443.5 **Cable beacons, notice boards, or lights,** marking cable landings must be shown in black on the largest scale charts, eg:

 **Q123**

B-443.6 **Buoys marking cables.** Cables are sometimes marked by buoys; these should be charted with an indication of their purpose, unless it is clearly apparent, eg:

 **Q55**

B-443.7 **Disused submarine cables.** Where disused cables traverse possible anchorages or where there is known seabed activity, eg trawling grounds, they should be charted on the largest scale charts (including the largest scale INT chart – see B-402.3e), provided they do not obscure more important information. Disused cables must be shown by the same wavy line as active cables, but broken by omitting every fourth complete sinusoid.

 L32

Few disused cables are recovered and so to chart them all would lead to clutter on some charts. Also, accurate records of their positions are likely to be incomplete (some cables having been cut or dragged out of position), so there is a case for charting them very selectively.

B-444 SUBMARINE PIPELINES

Submarine pipelines can be divided into two main categories:

a. Oil, chemical, gas and water supply pipelines are now an important feature of many areas. The

Supprimé : thus delineated shall

Supprimé : correspond to

Supprimé : may

Supprimé : probably

Supprimé : thought necessary, the

Supprimé : existence of a prohibition of anchoring and/or fishing may be indicated by a short legend, in magenta, or preferably by use of the symbol of an anchor and/or a fish crossed out with an "x", all in magenta. See B-439.

Supprimé : preferably,

Supprimé : should

Supprimé : As, a

Supprimé : would not be

Supprimé : after a time

pipes are generally encased in concrete for protection and to give them negative buoyancy; this coating can significantly increase their external diameter. Pipelines are generally laid directly on the seabed, with sections over local dips or hollows being supported physically from beneath. In some cases e.g. in shallow water or near the shore, where the external diameter of the pipeline would represent a significant reduction in the water depth above it, the pipelines may be laid in trenches and possibly covered over.

In all cases it must be assumed that the pipes are vulnerable to damage from anchoring or trawling, although in a few cases concrete domes are used to protect particularly vulnerable junctions. Gas pipes present a severe hazard to ships damaging them (from fire, explosion, or possibly loss of buoyancy). Oil and chemical pipes are a danger to the environment if fractured. Damage to water pipes supplying residential areas, mainly islands, results in disruption of water supply. In the above cases, submarine pipelines must be charted on all appropriate chart scales, using the symbol →→→→→→→→ L40.1 in magenta.

b. Discharge pipes such as sewers, and cooling water intakes, are mainly a feature of inshore waters. For small craft, in particular, such pipes are a potential danger to navigation. The pipes are also vulnerable to damage. They should be charted on at least the largest scales, using the symbol →→→→→→→→ L41.1 in black.

Oil, chemical, gas and water supply pipelines should be labelled 'Oil', 'Chem', 'Gas', 'Water', or equivalent. Water intakes and pipes discharging water, sewage or chemicals should generally not be labelled (to minimise the need for translation).

For pipelines on land, see B-377 and for overhead pipes, see B-383.

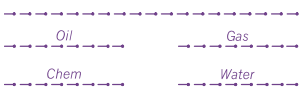
B-444.1 **Oil, chemical, gas and water supply pipelines.** The exact route of individual pipelines must be charted where possible to give the chart user full information, using the pipeline symbol L40.1 in magenta. Where pipelines are very close together, only one need be charted. The position of the dot in relation to the dash has no significance but, for consistency, the dot should be placed at the forward end of the direction of flow in a pipeline, if known.

Oil Pipelines should be labelled 'Oil', or equivalent.

Chemical pipelines should be labelled 'Chem', or equivalent.

Gas pipelines should be labelled 'Gas', or equivalent.

Water pipelines should be labelled 'Water', or equivalent.



IL40.1

The origin and destination names and/or name of a major pipeline may be inserted adjacent to the pipeline, in sloping magenta text, where these are not obvious, eg: *Ekofisk to Emden (Norpipe).*

Oil, chemical and gas pipelines present a greater danger to ships damaging them and it is recommended that a cautionary note be charted (on the larger scales) similar to the following (modified as necessary depending on the types of pipelines charted):

GAS PIPELINES
Mariners risk prosecution if they anchor or trawl near a pipeline and so damage it.
Gas from a damaged pipeline could cause fire or loss of a vessel's buoyancy.

Where several pipelines converge to land at the same point the symbols may be terminated before they reach the coast or inshore waters, on small scale charts, to avoid obscuring more important detail.

Supprimé : and laid in open trenches to be covered by natural deposition of sediment. In some cases it is not possible to dig trenches for them; in others, especially near the shore, they may be laid in trenches and then covered over mechanically.

Supprimé : large

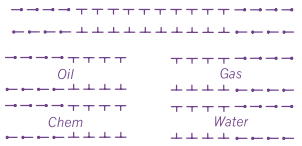
Commentaire [c28] : Delete? Covered in subsequent paragraphs

Supprimé : the precise positions are normally to be charted by the

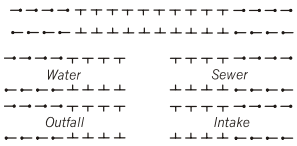
Supprimé : treatment of adjacent pipes, it is suggested that

Supprimé : seaward end of the dashes

B-444.2 **Where pipelines are so close together** in an area that it would be impossible to chart them individually without impairing the legibility of the chart, the area must be delimited by the general symbol for the limits of restricted areas (T-shaped dashed lines), interspersed at intervals of about 30mm with sections of the pipelines symbol (see B-439.3). The symbol must be in magenta for supply pipelines, and in black for discharge and intake pipes. The outer limits of the pipeline area thus delineated must correspond to the area in which anchoring, trawling and dredging are prohibited or inadvisable, ie, the limits must lie at a safe distance beyond the actual lines of the outermost pipes.



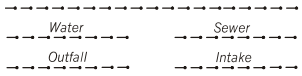
L40.2



L41.2

B-444.3 **Regulations prohibiting anchoring** or certain forms of fishing near submarine pipelines within territorial waters differ in detail from country to country. Where such regulations exists, it may be indicated by use of the symbol and/or in magenta (N20, 21) within a pipeline area (see B-439.4), or by reference to a note.

B-444.4 **Outfalls and intakes.** Pipes used for discharging sewage, water or chemicals into the sea (outfalls) and extracting seawater (intakes) must have their exact course across the seabed represented by the pipeline symbol in black. They should only be labelled '*Sewer*' etc, or equivalent, exceptionally.



L41.1

Buoys marking outfalls and intakes should be charted on all navigable scales. Various types of buoys are used for marking outfalls. Some buoyage authorities may use different buoys to indicate the nature of the danger to navigation, as in the following example: A pipe which does not constitute a danger to navigation but could be damaged by anchoring will be marked by a (yellow) Special mark (in the IALA System). This implies that craft may safely pass inshore of the mark.

Q57

Where there is a possible danger to navigation, a Lateral (or possibly Cardinal) mark will usually be used.

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

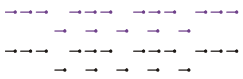
Supprimé : Regulations prohibiting anchoring, etc, near pipelines may differ in detail from country to country. Where thought necessary the existence of a prohibition may be indicated by a legend, or by the symbol of an anchor crossed out with an "x", all in magenta. See B-439.¶

Supprimé : appropriate

Supprimé : will imply

B-444.6 **Beacons, notice boards or lights** marking pipeline landings must be shown in black on the largest scales.

B-444.7 **Disused (abandoned) pipelines** of all types (unless known to be buried) should be shown on the largest scale charts by the pipeline symbol with every fourth element omitted. In the case of very short lengths every second element may be omitted.



L44

B-444.8 **Pipeline installations.** Diffusers and cribs at the end of pipes, and templates, manifolds (including Pipeline End Manifolds, or PLEM, see B-445.1 & 4) and other underwater installations associated with pipelines should be charted in the same way as other obstructions, either with the abbreviation *'obstn'* or an appropriate legend, eg *'Diffuser', 'PLEM'*. All specifications relating to obstructions apply; see B-411.6, and B-422.9.

B-445 **OFFSHORE ENERGY PRODUCTION FACILITIES**

Supprimé : OIL - AND GAS-FIELDS

Oil and gas fields are exploited in many parts of the world. Although the basic methods for exstracting oil and gas are well established, details of the systems and structures may vary with the characteristics of the different fields and are continually being developed.

Commentaire [c29] : The Mariners' Handbook (UK NP100) has been used extensively to update this whole section

In a typical field, oil or gas is obtained from wells drilled from fixed production platforms, usually standing on the seabed. From each production platform, the oil or gas is carried in pipes to a facilities platform where primary processing, compression and pumping are carried out. The oil or gas is then transported through pipelines to a nearby storage tank, tanker loading buoy or floating terminal, or direct to a tank farm on shore. One facilities platform may collect the oil or gas from several production platforms, and may supply a number of tanker loading buoys or storage units. Such facilities platforms are sometimes termed Field Terminal Platforms. Converted tankers or purpose-built vessels are often permanently moored and used as facilities platforms, floating terminals, and for storage.

It is important for charting purposes to distinguish between temporary structures used in the exploratory stages and permanent structures used in the production stage. Drilling rigs (also called 'oil rigs'and including semi-submersible rigs, 'jack-up rigs and drillships) are mobile structures used for drilling wells to explore and develop a field. Drilling rigs are of temporary significance and should not be charted Their positions are usually promulgated in Radio Navigation Warnings and by Temporary Notices to Mariners, especially when the rigs are located in traffic lanes.

Other offshore energy production facilities include wind turbines (see B-445.8-9) and underwater current turbines (see B-445.10-11). Other methods of harnessing tidal and wave energy are being developed.

B-445.1 **Wells and Wellheads**. In the course of developing an oil or gas field, numerous **wells** may be drilled. Some, which will not be required again, may be sealed below the seabed and abandoned; such wells must not be charted, as they have no relevance to navigation. '**Wellhead**' is a term used to describe a submarine structure projecting some distance above the seabed and capping a temporarily abandoned (or 'suspended') oil or gas well. Their associated pipes and other equipment usually project some 2 - 6 metres, but in some cases as much as 15 metres, above the seabed. Some may be covered by steel cages to avoid snagging trawling gear. In certain instances, a wellhead may project above the sea surface. Wells which are in use for producing oil or gas are termed '**Production Wells**'.

a. Wellheads must be charted on at least the largest scale charts, together with associated buoys, as a hazard to fishing and, dependant on depth, as a hazard to deep-draught vessels and towed structures.

Supprimé : bottom

Supprimé : in a few cases

The symbol must be a danger circle with the legend '*Well*'. Where the depth of water over the top of the wellhead is known, it may be inserted within the danger circle (as for any other obstruction).

L21.1 **L21.2**

Swept (K2) or safe clearance (K3) symbols should be added if appropriate. Blue tint appropriate to the depth should be added. If no depth can be inserted, blue tint should be added if the surrounding depths are less than 100m (see B-411.6).

Some countries have national laws prescribing 500 metres radius 'safety zones' around suspended wells. It is considered impracticable to show their limits on charts. (For safety zones around platforms, see B-445.6).

b. Submerged production systems. In relatively deep water a production wellhead may be a seabed installation only, eliminating the need for a permanent production platform. Due to the depth of water, such an installation is normally of no concern to surface navigation. Wells which are in use for producing oil or gas are termed '**Production Wells**' (sometimes known in the oil industry as 'subsea completions'). Their wellheads are often surmounted by a complex of valves and pipes, similar to those on suspended wells, known as a 'Christmas Tree'. Production wells are often marked by lightbuoys to assist recovery and to indicate a hazard to navigation or fishing. They generally have surrounding safety zones to protect the installation (see 445.6). On scales larger than 1:150 000, the international abbreviation '*Prod Well*' may be used instead of '*Well*'. On smaller scales they should be charted in the same way as suspended wellheads; they will normally be distinguishable from the latter by the charted pipelines leading to them.

L20

c. Single Well Oil Production Systems (SWOPS) are production wells from which oil is recovered by a tanker dynamically positioned over the well, lighted as an offshore installation. However, at times the tanker may be off-station leaving the well unattended, at which time it is similar to a suspended well. These should be charted as wellheads, with the abbreviation '*SWOPS*' in lieu of '*Well*'.

d. **An Injection Well** is drilled to inject fluids or gas into a geological trap to encourage the flow of oil from a production well. These should be charted as wellheads, but the legend '*Injection Well*' may be used in lieu of '*Well*'.

e. **Templates and Manifolds.** A number of wells may be drilled from one rig by using a structure, termed a 'template', placed on the seabed below the rig to guide the drill. A 'template' may stand as much as 15 metres above the seabed. The output from a number of wells may sometimes be collected in an **Underwater Manifold Centre (UMC)**, a large steel structure up to 20 metres in height above the seabed, for delivery to a production platform. A **Pipeline End Manifold (PLEM)** is, typically, a steel frame secured to the seabed with piles to anchor the end of a submarine pipeline. They are normally associated with those pipelines which terminate at offshore tanker berths, eg Single Buoy Mooring (see B-445.4). Flexible hoses, provided with buoyancy aids, rise vertically upwards from the PLEM and connect with the underside of the SBM, or directly to the tanker.

Supprimé : (or equivalent if any nation cannot accept Well as an international term) against it

Supprimé : at chart datum,

Supprimé : in the same way as for wrecks

Commentaire [c30] : There is also the symbol L21.3 to be considered. Although in INT 1, it has never been approved by CSC or CSPCWG, nor approved by IHO. During drafting of INT specs in 1975, the symbol was rejected, as it deviates from the usual practice of providing safe clearance, rather than the less useful height of an obstruction. Is the symbol necessary?

Supprimé : Whatever the legality and nature of such safety zones, i

Supprimé : 2

Commentaire [c31] : As prod wells are 'normally of no concern to surface navigation' and given the maintenance difficulty, is there any point in retaining the '*Prod. Well*' abbreviation?

Commentaire [c32] : If approved, this will need a new INT 1 number, eg L25.

A template or manifold that has a permanent (and charted) above-water structure over it should not be charted. If required, these installations should be charted as obstructions (see B-422.9) with the legends *'Template', 'Manifold'*, or equivalent, instead of *'Obstn'*. If it is required to chart a PLEM, it should be charted as a manifold. Swept (K2) or safe clearance (K3) symbols should be added if appropriate. Blue tint appropriate to the depth should be added. If no depth can be inserted, blue tint should be added if the surrounding depths are less than 100m (see B-411.6).

Commentaire [c33] : There is also the symbol L21.3 to be considered. Although in INT 1, it has never been approved by CSC or CSPCWG, nor approved by IHO. During drafting of INT specs in 1975, the symbol was rejected, as it deviates from the usual practice of providing safe clearance, rather than the less useful height of an obstruction. Is the symbol necessary?

f. Above-water wellheads. In shallow water, wells may sometimes project above the sea surface at some or all states of the tide. The structure of valves and pipes (known as a 'Christmas Tree') may then be visible as a 'dry tree'. When unlit, this feature must be charted by a small position circle and the legend 'Pipe' and, when lit, by a light star, light flare and light description. If it covers at some states of the tide, it should be enclosed in a danger line. A height, or drying height, should be added to the legend, in brackets, if known.

 Pipe **L23**

Commentaire [c34] : DID: Please add example with danger circle and drying height, sloping legend.

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 seabed by gravity. **Tension Leg Platforms** (TLP) consist of semi-submersible platforms secured to flooded caissons on the seabed 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 so that a single symbol represents more than one platform.

Supprimé : Production p

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 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:

Fla **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`. They are charted 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 (Q42). On smaller scale charts, a dashed magenta circle encompassing the anchors and other ground tackle with the 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).

B-445.3 **Names of oil- and gas-fields and associated features.** Offshore production generates a large number of shipping movements concerned with supplies, construction, inspection, repair and maintenance, safety, and sometimes including tankers. Not all this traffic will be familiar with platform and field locations. The **field names** should be inserted on the chart, in black, as soon as a cluster of wells indicates that a field is being developed and the name is notified, eg:

EKOFISK
OILFIELD **L1**

On smaller scale charts, this may be shortened to Ekofisk, ie omitting 'Oilfield'. Where the limits of the fields have been designated, the symbol N1.1 (black maritime limit implying permanent physical obstructions) should be used.

Identification panels usually display the registered name or other designation of platforms and associated structures in black lettering on a yellow background. They are so arranged that at least

Commentaire [c35] : Noting there are no INT symbols, it is not considered necessary to develop specifications for L13, L14 & L15. The entries in INT 1 are candidates for removal in due course.

Supprimé : ¶
¶
In the North Sea, the lighting of platforms is governed by schedules specifying white and red lights of certain minimum ranges which flash the Morse letter "U" ("You are standing into danger") and fog signals of the same character. On charts which include, or are likely to include, many platforms it is recommended that a cautionary note be given on the chart describing the lights and fog signal instead of individual legends at each platform. Where different (distinctive) lights are used, the light descriptions must be inserted individually against the platform symbols.¶
¶
By international law, platforms may be surrounded by safety zones, extending 500 metres from the outermost points of the installations, in which navigation is restricted to certain classes of vessels, or vessels in particular circumstances. On the largest scales 'if space permits), these safety zones shall be shown delimited by T-shaped dashed lines in magenta. On al scales on which the platforms are charted a cautionary note shall be given explaining the meaning of the safety zone.¶
¶

IL3¶
¶
Buoyant structures, such as articulated towers pivoted on the sea bed, and buoyant oil terminals, eg Brent SPAR, too large to be classed as buoys, shall be charted by the platform symbol because they carry lights and fog signals similar to platforms and, to the mariner, are virtually as "fixed" as true fixed platforms. See also B-445.4.¶
¶
SPM **IL12**¶
¶
It is recommended that a single cautionary note relating to production platforms is used in a form similar to the following:¶
¶
"PRODUCTION PLATFORMS¶
¶
Platforms exhibit white lights Mo(U) (range), red lights Mo(U) and red obstruction lights, and sound for horns Mo(U). Unauthorised navigation with 500 metres of any platform is prohibited".¶

Supprimé : assigned to particular exploitation areas shall be charted on all scales on which the platforms are shown

one panel is visible from any direction, the panels being illuminated or the background being retro-reflective. These **platform designations** may be charted on the larger scales where space permits, eg:

L2

B-445.4 **Mooring systems.** Although the oil and gas from some fields are sent ashore by submarine pipeline (see B-444), a variety of mooring systems have been developed for use in deep water and in the vicinity of certain ports, to allow the loading of large vessels and the permanent mooring of floating storage vessels or units (see B-445.5). These offshore systems include large mooring buoys, designed for mooring vessels up to 500,000 tonnes, and platforms on structures fixed at their lower ends to the seabed. They allow a vessel to moor forward or aft to them, and to swing to the wind or stream. They are termed **Single Point Moorings** (SPM). Those which are a form of mooring buoy are termed **Single Buoy Moorings** (SBM). Like production platforms, SPM and SBM normally have lights and fog signals.

a. Fixed moorings (SPM).

A **Mooring Tower** is secured to the seabed and summounted by a turntable to which ships moor. At some mooring towers, a floating hose connects a fluid swivel-assembly in the turntable to the vessel; at others an underwater loading arm carries a pipe from the turntable to the vessel's midship manifold.

A **Single Anchor Leg Mooring** (SALM) consists of a rigid frame or tube with a buoyancy device at its upper end, secured at its lower end to a universal joint on a large steel or concrete base resting on the seabed, and at its upper end to a mooring buoy by a chain or wire span. Oil flows into the frame through the universal joint at its lower end and out of the frame through a cargo hose connected to a fluid swivel-assembly at its upper end. When the pull of a vessel is taken by the mooring buoy, the frame inclines towards the vessel and the buoy may dip. When the vessel swings, to wind or stream, the frame swings with her on the articulated joint at its foot. This type of mooring is particularly suited to loading from deep water subsea wellheads.

An **Articulated Loading Column** (ALC) is a development of a SALM, with the anchor span and buoyant frame or tube replaced by a metal tower, buoyant at one end and attached at the other by a universal joint to a concrete-filled base on the seabed. Some are surmounted by a platform which may carry a helicopter deck, a turntable with reels for lifting hawsers and hoses clear of the water, and emergency accommodation. These may be termed **Articulated Loading Platforms** (ALP).

Mooring towers and all buoyant structures, such as SALMs or ALCs, which are connected to the seabed by rigid, pivoted or articulated structures, must be charted by the platform symbol with legend 'SPM' (L12) (because they carry lights and fog signals similar to platforms and, to the mariner, are virtually as 'fixed' as true platforms).

L12

b. Floating moorings (SBM).

A floating mooring, such as a SBM or a **Catenary Anchor Leg Mooring (CALM)**, generally incorporates a large buoy which remains on the surface at all times. In the case of a CALM, the buoy is moored by four or more anchors which may lie up to 400 metres from the buoy. A Pipeline End Manifold (PLEM) (see B-445.1e) is often found under the buoy, and mooring hawsers and cargo hoses lead from a turntable on the top of the buoy, so that the buoy does not turn as the ship swings to wind or stream.

An **Exposed Location Single Buoy Mooring (ELSBM)** is a development of CALM, designed for use in deep water where bad weather is common. The buoy is replaced by a large floating structure,

Supprimé : ¶
Platform "names" are displayed prominently on the structures giving the operating company, licence block number, and identifying letter(s) within the block - eg Conoco 49-17-B.

Supprimé : are to

Supprimé : , and where the information is available

Supprimé : **Offshore tanker loading**

summounted by a helicopter platform and emergency accommodation. Its anchors may lie up to half a mile from the structure. A **Spar** mooring is similar to an ELSBM but even larger and incorporates storage facilities and is permanently manned.

All these moorings must be charted by the symbol for a tanker mooring of superbuoy size.

L16

Mooring tackle associated with any of these moorings may also be charted on large-scale charts, using Q42, or by an enclosing dashed magenta line (N1.2) and the legend '*Chains and Anchors*'.

B-445.5 Moored Vessels.

a. Floating Storage Unit (FSU). A simple hulk providing storage for fully-processed oil awaiting export, usually through a SBM or similar. They will normally be un-manned.

b. **Floating Storage and Offtake** (FSO). A vessel which stores fully-processed oil and provides facilities for loading export tankers. It will normally be moored in such a way as to allow it to swing to wind or stream. It is always manned.

c. **Floating Production, Storage and Offtake (FPSO).** FPSO are used to produce oil and gas from fields which are located in water that is too deep for fixed production platforms. These are highly specialized vessels which are part ship, part oil and gas processing plant, and part storage unit. The finished product is exported to shore by pipeline or tanker. Older versions of FPSO (usually converted tankers) may be moored to SPM or SBM. Modern versions incorporate a turret, through which pipelines connect to the sub surface facilities. The turret is anchored to the seabed and incorporates a swivel which allows the vessels to rotate through 360° under the influence of wind and tide.

FSU, FSO and FPSO should be charted by the symbol for a moored storage tanker, L17, with the appropriate legend '*Storage Tanker*', '*FSU*', '*FSO*','*FPSO*' (or equivalent) adjacent, eg:

L17

If the vessel is moored to a SPM or SBM, and the chart scale does not permit charting the mooring and the vessel, the legend should be placed adjacent to the symbol L12 or L16, as appropriate, and the symbol L17 omitted.

For Single Well Oil Production Systems (SWOPS), at which tankers are intermittently moored, see B-445.1.

B-445.6 Safety Zones.

Under UNCLOS, a coastal state may establish safety zones around artificial islands, installations and structures in their EEZ and on their continental shelf. These installations include drilling rigs, production platforms, wellheads, moorings and other associated structures. Safety zones normally extend 500m from the outermost points of the installations. Within these zones, appropriate measures can be taken to ensure the safety of navigation and of the installations.

On the largest scales charts (if space permits), these safety zones must be shown by T-shaped dashed lines in magenta. They are not usually charted around wellheads.

L3

On all charts on which platforms are charted, a cautionary note should be inserted explaining the

Supprimé : forms of "super buoy" or buoyant towers for loading tankers is used at other fields, or in addition to pipelines.¶
¶
Very large tanker loading buoys shall be shown:¶
¶
IL16¶
¶
They will always be lighted and the light character shall be charted in the same way as for other major floating lights.¶
Articulated towers, referred to in B-445.2 shall be shown:¶
¶
SPM IL12¶
¶
and treated generally as if they were production platforms. However, on charts on which it is useful to identify the functions of the towers or buoys, it is proposed to use the abbreviation "SPM" (for "single point mooring") as very widely used in maritime documents at present.¶
¶

Commentaire [c36] : DID: insert L17 symbol, with legend *FPSO* alongside

Mis en forme : Police :Times New Roman, 10.5 pt, Gras, Condensé de 0.1 pt

Supprimé : B-445.5 Submerged production systems. In relatively deep water it may be economically preferable for a production wellhead to be a seabed installation only, eliminating the need for a permanent production platform. Such installations are normally of no concern to surface navigation but it is obviously essential that they should be adequately charted. In the oil industry, they are known as "subsea completions".¶
¶
It is recommended that on scales of 1:150 000 or smaller, they should be charted in the same way as suspended wellheads (see B-445.1); they will normally be distinguishable from the latter by the charted pipelines leading to them. On larger scales, the international abbreviation "Prod. Well" shall be used instead of "Well".¶
¶
15 Prod Well Prod Well
IL20¶
Saut de section (continu)
B-445.6 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 shall be charted by:¶
¶
Fla IL11¶
¶
... [1]

meaning of the safety zone; see example at B-445.2.

B-445.7 Development Areas. The development of an oil or gas field involves the frequent movement of large structures and buoys and the laying of many miles of pipeline, both of which are dependent on the weather. Where such operations occur it is often impossible to give adequate notice of movements and to keep charts and publications completely up-to-date. Certain fields which are developing are designated Development Areas. Within these areas construction, maintenance and supply vessels (including submersibles), divers, obstructions (possibly marked by buoys), and manoeuvring tankers may be encountered. The mariner is strongly advised to keep outside Development Areas.

The limits of Development Areas should be charted. They must be charted by dashed magenta lines (N1.2) with the legend '*DEVELOPMENT AREA (see Note)*' inserted within or adjacent to the area and, if possible, under the field name. A note, in magenta, should be inserted under the chart title, eg:

DEVELOPMENT AREA
Within oil/gas field Development Areas, surface vessels, submersibles and divers may be engaged in constructing and servicing installations. Other vessels are strongly advised to keep outside the charted limits.

Where Development Areas are not designated, it may be appropriate to insert a note drawing attention to drilling activity.

B-445.8 **Wind turbines** are generally tall, multi-bladed structures, usually with two or three blades, often visible over long distances. Their purpose is to generate electricity for large communities, or to feed a national grid. They are often in groups (known as wind farms) and may be sited on-shore (see B-374.6). Individual wind turbines must be shown by the symbol:

 **L 5.1**

If a navigational light is attached to the wind turbine, a flare should be added to the base, and the light description placed alongside. Where vessels may navigate close to the structure, it is appropriate to show the minimum clearance height under the blade, using symbol ID 20.

B-445.9 **Wind farms** may be shown by groups of wind turbines in their actual positions (if scale and available information permits), or by a maritime limit with the centred symbol:

The symbol N 1.1 (black maritime limit implying permanent physical obstructions) should normally be used for the limit of a wind farm:

 **L 5.2**

However, this should be replaced by N 2.1 or 2.2 as appropriate, where restrictions on navigation apply, eg:

 **L 5.2**

Note: Individual wind turbines which have navigational lights attached should normally be charted, even within a wind farm, if scale permits.

B-445.10 **Underwater turbines,** for generating electricity from tidal currents, must be represented:

 L 24

Where the depth of water over the turbine is known, it may be inserted within the danger circle. The rules for blue tint, swept and safe clearance depths must be applied as for wrecks and other obstructions (see B-411.6, 415, 422.5 and 422.9), eg:

Where part of the structure is above water, and marked (e.g. with a beacon or light), the appropriate symbols must be used. On small-scale charts, where it may not be practicable to show the danger circle, the legend '*Underwater Turbine*' should be used, eg:

B-445.11 **Current Farm (or Turbine Field).** Where groups of underwater turbines exist they should preferably be charted individually. Where scale or available information does not permit this, then the symbol N 1.1 (black maritime limit implying permanent physical obstructions) should normally be used for the limit of a current farm:

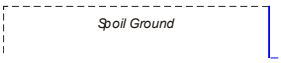
However, this should be replaced by N 2.1 or 2.2 as appropriate, where restrictions on navigation apply. A legend should be inserted within the boundary, eg:

B-446 SPOIL GROUNDS; DREDGING AREAS

a. Spoil grounds are areas set aside, clear of shipping channels and in deep water where possible, for the disposal of material (spoil) generally obtained by dredging. Their significance to the mariner is that very large quantities of material may be dumped, decreasing the depth of water available. In contrast, dumping of harmful materials (see B-442.1-5) is unlikely to affect depths substantially and such dumping grounds are charted primarily as a warning against anchoring, trawling or other submarine operations.

b. Dredging areas are those areas where a concentration of dredging vessels may be encountered, taking up sand or shingle to be brought ashore (eg for construction purposes). Their significance is primarily as a collision hazard, although they also indicate the likelihood of finding a greater depth of water than charted. Channels dredged to provide an adequate depth of water for navigation are not to be considered as 'Dredging Areas'.

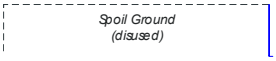
B-446.1 **Spoil Grounds.** The limits of spoil grounds must be charted by a black dashed line, normally on the largest scale charts of an area only. If the depths within the area are liable to be very much less than charted after the discharge of spoil, they may be treated as unsurveyed areas (see B-418.1); soundings may be omitted from the area, provided adequate warning is given by the use of blue tint (or omitting blue tint), and/or a cautionary note accompanying the legend.



Commentaire [c37] : DID Please improve text

The legend '*Spoil ground*', or equivalent, must be charted within, or adjacent to, the limits. In some cases, where no precise limits have been designated, the grounds can be represented only by a legend.

B-446.2 **Disused spoil grounds** should be labelled '*(disused)*', or equivalent, until the area has been re-surveyed, after which the limit and legend should be removed from the chart.



N62.2

Commentaire [c38] : DID Please improve text

B-446.3 **Buoys marking spoil grounds** should be charted on all appropriate scales. (These will normally be Special Marks in the IALA System).

Q56

B-446.4 **Dredging Areas.** The limits of dredging areas, where in regular use over long periods, must be charted by a magenta dashed line, normally on the largest scale charts of the area only.

N63

Supprimé : *Dredging Area*

The legend 'Dredging area', or equivalent, must be charted within, or adjacent to, the limits, in magenta. If considered necessary, a cautionary note may be inserted in magenta near the title, warning mariners that vessels engaged in dredging are frequently at work in the area shown.

Supprimé : B-446.5

Supprimé : ¶

Dredging Area
(see Note) ¶
IN63¶

Supprimé : AND

B-447 **AQUACULTURE: FISH TRAPS, SHELLFISH BEDS, FISH HAVENS, MARINE FARMS**

Aquaculture is the term used to describe the cultivation of fish and marine vegetation. Differing methods are used; those of particular significance to the mariner are outlined below:

a. **Fish traps,** stakes and nets are sited in shallow water. They can be very large and extend up to several miles offshore and form an obstruction to navigation.

Supprimé : and s

Supprimé : , and obstruct navigation

b. **Shellfish beds** are found in shallow water. Dependant on vessel draught and tidal range, it is usually possible to navigate over them, at high water, but they are damaged by vessels anchoring or grounding on them.

Supprimé : fairly

c. **Fish havens** are formed by dumping rocks, concrete blocks, old cars, etc in varying depths of water. Vessels may navigate over seabed fish havens, if draught permits, but they are hazards to anchoring or seabed operations.

Supprimé : Draught permitting v

d. **Marine farms** are collections of cages, nets, rafts and floats, or posts, where fish, including shellfish, are reared. They obstruct navigation, and are likely to be marked by buoys and, possibly, lights. They are not always confined to inshore locations.

Supprimé : assemblages

e. Some aquaculture structures are in place only for limited periods of the year. This may be charted by the use of a chart legend, eg: *(Apr-Nov)*, or be explained in an accompanying note or associated publication.

B-447.1 **Fishing stakes** should, where their position is known, be charted thus:

K44.1

B-447.2 **Fish traps, weirs and tunny nets** should, where their position is known, be charted thus:

K44.2

B-447.3 **Extensive areas** of fish traps or tunny nets may be charted by legends and dashed limits in lieu of symbols. Legends are also preferable if the positions of the traps are liable to considerable change.

K45

Details may be given in a chart note, or in an associated publication, eg:

TUNNY NETS
Tunny nets exist off the coast of [*name*] extending as much as seven miles from the shore. Mariners are warned to keep a good lookout for these nets which may be marked by day and night.

B-447.4 **Shellfish beds that do not contain physical obstructions** should be charted by a legend in magenta, '*Shellfish Beds (see Note)*', or equivalent, with limits (if known) charted by dashed magenta lines (N1.2). A note may be inserted warning against anchoring or grounding in the area, or giving details of any local regulations.

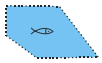
K47

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

B-447.5 **Fish havens (or fishery reefs)** are artificial shelters of stones, concrete, scrap vehicles, etc, intended to attract fish and crustaceans. A single haven must be charted by the symbol:

K46.1

A group of havens may be shown by an enclosing danger line with one or more fish symbols:



K46.1

The minimum depth or maximum authorized draught (see B-432.4), over any haven or group of havens, must be charted, if known:

K46.2

Maximum authorized draught must be indicated between arrowheads, eg:

<7,3m>

Blue shallow water tint must be applied to fish havens as appropriate to the depth and, where the minimum depth is not known, in accordance with the practice for obstructions (see B-411.6). However, exceptionally, for large areas of fish havens where no depth data is available, if the surrounding water area is coloured the tint may be omitted to draw attention to the areas (as for unsurveyed areas, see B-418.1).

If considered necessary, explanatory notes may be inserted on charts.

B-447.6 **Marine farms**, including shellfish farms, must be shown by the symbol:

K48.2

Supprimé : (in black)

Commentaire [c39] : DID: please improve text

Supprimé : **protected by local regulations (**

Supprimé : **but not**

Supprimé : **obstructions to navigation**

Supprimé : all

Supprimé : cautionary note

Supprimé : For shellfish farms, see B-447.6.

Commentaire [c40] : DID: add *(see Note)* to graphic

Supprimé : small

Supprimé : , in black,

Supprimé : an enclosing danger line with a fish symbol

Supprimé : within it

Supprimé : The general limits of

Supprimé : shall

Supprimé : s,

Supprimé : minimum

Supprimé : depths

Supprimé : No distinction need be made on charts between surveyed minimum depths and authorized minimum depths.

Supprimé : and to others where the depths are appropriate

Supprimé : legends

Supprimé : **A m**

The symbol is not intended to represent a plan outline of the actual farm limits. The larger symbol (size 4 X 4mm) should normally be used, but in locations close inshore where it is too large, the smaller symbol (size 2 X 2mm) may be used. The nature of the obstructions may be explained in a cautionary note.

On large-scale charts, the actual limits within which obstructions may be found should be shown by dashed lines (N1.1). The larger symbol must be inserted in the area and may be repeated if required.

K48.1

Buoys or beacons marking a farm may be charted where chart scale permits. Lights on cages, rafts, etc, must be shown by a description against the symbol, in sloping lettering, eg *(Q.Y Lts)* or may be described in a note.

B-448 DEGAUSSING RANGES

A degaussing (or demagnetising) range is an area, usually of about 0.2M diameter, within which ships' magnetic fields may be measured. Sensing instruments and cables are installed on the sea bed in the range and there are cables leading from the range to a control position ashore. The range is usually marked by distinctive buoys.

The significance of a degaussing range to mariners is that anchoring and trawling are prohibited and that the range may have to be avoided when vessels are seen to be using it.

B-448.1 **The limits of degaussing ranges** and any associated submarine cable areas should be represented by the symbol used for the limits of cable areas (L30.2, see B-443.2). If the size of the area does not permit use of this symbol, the T-shaped dashes alone should be used. The legend '*Degaussing range*', '*DG range*' or equivalent, should be inserted within the area in magenta.

N25

B-448.2 **Buoys marking** degaussing ranges should be charted on all appropriate scales. (These will be Special Marks in the IALA System and may be marked *'DG'*).

Q54

B-449 VARIOUS MARITIME AREAS

B-449.1 **Ice limits.** If required, the limits of sea ice (seasonal pack ice) must be shown by the magenta symbol

N60.2

Ice limits at the junction of land and sea, including the edges of glaciers intruding into the sea, must be shown by the symbol, in black and with no colour tint behind it:

N60.1

As ice fronts move, a date when the limit was surveyed should be included if possible, in parentheses and in the same colour as the ice limit, eg:

Supprimé : in black (size 4 X 4 mm) horizontally.

Supprimé : In

Supprimé : the normal symbol

Supprimé : to be used

Supprimé : an

Supprimé : alternative

Supprimé : should appear

Supprimé : : **IK48.2.**

Supprimé : may

Supprimé : (black)

Supprimé : may

Supprimé : within the area

Supprimé : The nature of the obstructions may be explained in a cautionary note.

Supprimé : only

Supprimé : charted

Supprimé : in general

Supprimé : , first,

Supprimé : , second,

Supprimé : (T-shaped dashes broken at intervals by a wary line

Supprimé : , in magenta:

Commentaire [c41] : UK abbreviation – extend to universal use?

Supprimé : ¶
B-448.2 The legend *"Degaussing range*", or equivalent, should be inserted within the area in magenta.¶
¶
¶

IN25¶
¶
¶
¶
Saut de page

Commentaire [c42] : DID: add *DG* to buoy (if agreed by WG)

Commentaire [c43] : Any suggestions for a more appropriate heading?

Supprimé : shown

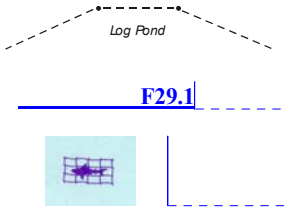
Supprimé : in magenta

Supprimé : same

Supprimé : in black (N60.1)

Commentaire [c44] : DID: please insert black version of symbol, with a date (2007), on the inside of the limit

B-449.2 **Floating barriers.** The limits of log ponds (timber pounds, log booms), oil barriers, security barriers and any other floating barriers must be charted as a black dashed line (N1.1) with small black (solid) circles (F22) where there are posts, piles or other supports. The legend '*Log pond*', '*Floating Barrier*', etc, or equivalent, should be inserted in the area or along the limit as appropriate.



N61

F29.1

B-449.3 **Incineration areas**. Certain offshore areas may have been officially designated as suitable for the burning of chemical waste by specially-equipped ships. Passing vessels may mistake the operation for a ship on fire, or for one making a distress signal. The depiction of incineration areas on charts (in conjunction with radio warnings) is necessary to prevent such mistakes. Incineration of wastes at sea was permitted under the 1972 IMO Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, but was later prohibited under amendments adopted in 1993. It is specifically prohibited by Article 5 of the 1996 Protocol.

If any incineration areas still exist, they must be charted by dashed magenta lines (N1.2), with the accompanying legend '*Incineration Area*', or equivalent. If required, explanatory or cautionary notes relating to the areas should be in associated publications but not on charts.

N65

B-449.4 **Cargo transhipment area.** Areas generally outside port limits may be specifically designated as suitable for the transhipment of oil or other materials from large ships to smaller ones. The areas selected are relatively sheltered locations and lie off main shipping routes. As the purpose of transhipment is usually to reduce the draught of the larger vessel to allow her to proceed to port, the operation is often known, as 'lightening' and the areas may be known as 'lightening areas' or 'cargo transfer areas'.

The limits of officially designated transhipment areas must be charted by dashed magenta lines (N1.2) with the accompanying legend '*Cargo Transhipment Area*', or equivalent, and any known identifying letter or number.

N64

The depiction of the areas on charts should be adequate to warn other vessels of the likelihood of encountering ships restricted in their ability to manoeuvre, without the need for cautionary notes on charts. Regulations governing the use of such areas should be included in associated publications rather than on charts.

B-449.5 **Historic wrecks.** Many nations have designated areas around certain wrecks of historical or cultural (eg sea graves) importance to protect the wrecks from unauthorised interference (eg: by diving, salvage or anchoring). The limits of such areas may be shown on the largest scale charts by the symbol for a restricted area (N1.2) with a legend '*Historic Wreck*', or equivalent. Any wreck detail and associated buoyage must be shown in black.

Commentaire [c45] : DID: insert symbol N60.1, with date in parethesis.

Supprimé : : the limits shall

Supprimé : fine

Supprimé : , or where the limits change direction.

Supprimé : may be inserted where desirable

Commentaire [c46] : DID: insert symbol

Commentaire [c47] : ZA has a special, symbol for shark nets. Should this be adopted as an INT symbol? These are not 'aquaculture' nets, more barriers against intrusion. The symbol for the limit (N1.1) however would be the same.

Supprimé : (emission of dense smoke is a recognised distress signal)

Supprimé : The limits of incineration areas

Supprimé : are to

Supprimé : normally appear

Supprimé : Sailing Directions

Supprimé : preferably appear

Supprimé : Sailing Directions

Supprimé : deposition (including

Supprimé : T-shaped dashes in magenta

B-449.6 **Seaplane operating area:** limits must be represented, in magenta, by the symbol:

Supprimé : landing

N13

Commentaire [c48] : Revised symbol and point version. See CSPCWG 3 record (paragraph 8.10).

Seaplane operations may include landing, take-off, anchoring and drawing water for fire-fighting. On smaller scales where the limits cannot be charted, or where there are no specified limits, the point symbol may be used.

N13

If required, it may be placed alongside an anchorage symbol, to denote a seaplane anchorage.

N14

Commentaire [c49] : The existing N14 would be obsolescent

QUESTIONS ARISING FROM DRAFT REVISION OF B-400 TO B-429

Response form

(please return to CSPCWG Secretary by 23 March 2007)
andrew.coleman@ukho.gov.uk

Para	Specification	Question	YES	NO
2	B-440e	Should we amend the specifications to make magenta the preferred (or only) option for international boundaries and territorial limits? Clearly indicate which: PREFERRED/ONLY		
3	B-440.8	a. Do you agree with the proposed symbol for a continental shelf limit,		
		b. propose something different (please indicate details below)		
		c. or consider that no symbol is needed?		
4	B-441.5	Is it still valid to state that submarine exercise areas and transit lanes should not generally be charted?		
5	B-441.8	Do you agree that a small circle of line style N2.1 is appropriate for charting individual sunken mines?		
6	B-442.5	Does any other nation have a similar practice to France of designating small dumping grounds for explosives which are to be made safe in due course? If so, please explain below.		
		Is an INT number and specification necessary for a possible unique national practice?		
8	B-445.1	a. Is there a requirement for the symbol INT 1 L21.3, which has never been approved by IHO?		
		b. Is there a requirement for the abbreviation Prod Well?		
		c. Do you agree to the abbreviation SWOPS?		
9	B-445.5c	Do you agree with the proposed symbol for a moored storage tanker, L17?		
11	B-448	Do you agree with the abbreviation 'DG' for degaussing?		
12	B-449	Do you have any suggestions of a better title for this section? If YES, please state below.		
14	B-449.2	Do you agree to extend the specification for log ponds to include other physical barriers (as listed)?		
		Do you consider that the ZA shark net symbol should be adopted as an INT symbol?		
15	B-449.3	Are you aware of any requirement to retain the specification for incineration areas?		
		Do you agree to cancel IHO Technical Resolution B2.35?		

Comments: ……

Name...……

Member State……..……..