

Resolution A.711(17)
Adopted on 6 November 1991 1991
(Agenda item 10)

SHIPS' ROUTEING

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety,

FURTHER RECALLING resolution A.377(X) by which it established procedures for the adoption and amendment of routeing systems other than traffic separation schemes,

HAVING EXAMINED the reports of the Maritime Safety Committee on its fifty-eighth and fifty-ninth sessions,

CONFIRMS the adoption by the Organization of the new and amended routeing systems other than traffic separation schemes set out in the annex to the present resolution.

Annex

ROUTEING SYSTEMS OTHER THAN TRAFFIC SEPARATION SCHEMES

1 DEEP-WATER ROUTES

1.1 Deep-water routes in the routeing system "Off Friesland"*

(Reference charts: British Admiralty 1405, 1406, 1408, 1505, and 2182 A
Netherlands Hydrographic Office 1014, 1035, 1037 (INT 1043, 1046, 1045)
German Hydrographic Office 50, 53 (INT 1045).)

Note: These charts are based on European Datum (1950).

Descriptions of the deep-water routes

**DEEP-WATER ROUTE FROM NORTH HINDER TO THE TRAFFIC SEPARATION SCHEME
"OFF BROWN RIDGE"**

(a) The deep-water route is bounded by a line connecting the following geographical positions:

- | | | | |
|------------------|------------|------------------|------------|
| (1) 52°55'.75 N, | 3°14'.25 E | (4) 52°01'.23 N, | 2°42'.47 E |
| (2) 52°09'.92 N, | 2°35'.00 E | (5) 52°09'.58 N, | 2°43'.33 E |
| (3) 51°54'.88 N, | 2°33'.60 E | (6) 52°54'.17 N, | 3°22'.00 E |

(b) Geographical positions (1) and (6) to (12) form the traffic separation scheme "Off Brown Ridge".

* The routeing system "Off Friesland" replaces the "Deep-water route from North Hinder to TW/1 and TW/2 lightbuoy, via S2 lightbuoy" and the "Deep-water route from North Hinder to TW/1 and TW/2 lighthouse via DR1 lightbuoy" which were cancelled at 0000 hrs UTC on 1 December 1990.

DEEP-WATER ROUTE FROM THE TRAFFIC SEPARATION SCHEME "OFF BROWN RIDGE" TO THE TRAFFIC SEPARATION SCHEME "WEST FRIESLAND"

- (c) The deep-water route is bounded by a line connecting the following geographical positions:

(11) 53°02'.20 N, 3°26'.48 E	(13) 53°22'.94 N, 3°28'.40 E
(12) 53°03'.78 N, 3°18'.71 E	(14) 53°19'.89 N, 3°39'.74 E

- (d) Geographical positions (13) to (27) form the traffic separation scheme "West Friesland".

"FRIESLAND JUNCTION" PRECAUTIONARY AREA

- (e) The "Friesland Junction" precautionary area is bounded by a line connecting the following geographical positions.

(26) 53°57'.20 N, 4°10'.02 E	(29) 54°5'.59 N, 4°59'.32 E
(25) 54°00'.00 N, 4°46'.00 E	(30) 54°2'.57 N, 4°20'.92 E
(28) 54°01'.14 N, 5°00'.34 E	(31) 54°1'.91 N, 4°08'.96 E

- (f) Geographical positions (28) (29) and (32) to (40) form the traffic separation scheme "East Friesland".

DEEP-WATER ROUTE FROM THE TRAFFIC SEPARATION SCHEME "OFF BOTNEY GROUND" TO THE PRECAUTIONARY AREA "FRIESLAND JUNCTION"

- (g) The deep-water route is bounded by a line connecting the following geographical positions:

(26) 53°57'.20 N, 4°10'.02 E	(42) 54°00'.46 N, 3°43'.01 E
(41) 53°55'.24 N, 3°44'.88 E	(31) 54°01'.91 N, 4°08'.96 E

- (h) Geographical positions (41) to (56) form the traffic separation scheme "Off Botney Ground".

DEEP-WATER ROUTE "FROM NORTH HINDER TO INDEFATIGABLE BANK VIA DR1 LIGHTBUOY"

- (i) The deep-water route is bounded by a line connecting the following geographical positions:

(53) 53°36'.81 N, 2°56'.50 E	(59) 52°18'.20 N, 2°44'.00 E
(57) 53°04'.80 N, 2°36'.00 E	(60) 53°04'.00 N, 2°44'.00 E
(58) 52°18'.20 N, 2°36'.00 E	(61) 53°29'.54 N, 3°00'.67 E
(3) 51°54'.88 N, 2°33'.60 E	(54) 53°34'.76 N, 3°05'.49 E
(4) 52°01'.23 N, 2°42'.47 E	

Notes:

1 *Least water depths*

The deep-water routes from North Hinder to the traffic separation scheme "Off Brown Ridge" and from the traffic separation scheme "Off Brown Ridge" to the traffic separation scheme "West Friesland" and the traffic lanes of the traffic separation schemes "Off Brown Ridge" and "West Friesland" were closely surveyed in the period 1981 to 1986. The least water depth found in these areas was more than 23 m at LLWS except for one wreck in geographical position 52°46'.17 N, 3°13'.83 E. The least water depth over that wreck found by wire-sweeping was 20.0 m at LLWS.

(See also the note pertaining to the traffic separation scheme "Deutsche Bucht Lightvessel, western approach".)

2 *Least water depths*

The deep-water routes from the traffic separation scheme "Off Botney Ground" to the precautionary area "Friesland Junction" and "From North Hinder to Indefatigable Bank via DR1 lightbuoy", the traffic lanes of the traffic separation scheme "Off Botney Ground", the precautionary area "Friesland Junction", and the traffic separation scheme "East Friesland" were closely surveyed in the period 1981 to 1986. The least water depth found in these areas was more than 29 m at LLWS except for a few patches just north of the parallel 52° N, which have a depth of 26.5 m at LLWS.

1.2 Deep-water route "In the Southern Approach to Chesapeake Bay"

(Reference chart: United States 12221, 57th edition, 1989.)

Note: This chart is based on North American (1983) datum.)

Description of the deep-water route

A deep-water route is established in the southern approach of the traffic separation scheme "In the Approaches to Chesapeake Bay" between the separation lines which connect the following geographical positions of the traffic separation scheme:

(6) 36°55'.11 N,	75°55'.23 W	(9) 36°49'.52 N,	75°46'.94 W
(7) 36°52'.35 N,	75°52'.12 W	(10) 36°52'.18 N,	75°52'.29 W
(8) 36°49'.70 N,	75°46'.80 W	(11) 36°54'.97 N,	75°55'.43 W

Notes:

- 1 It is recommended that the following ships use the deep-water route when bound for Chesapeake Bay from sea or to sea from Chesapeake Bay: Deep-draught ships (draughts defined as greater than 13.5 m/45 ft in fresh water) and naval aircraft carriers;
- 2 It is recommended that a ship using the deep-water route:
 - .1 announces its intention on VHF-FM channel 16 as it approaches Chesapeake Bay Southern Approach Lighted Whistle Buoy CB on the south end or Chesapeake Bay Junction Lighted Buoy CBJ, on the north end of the route;
 - .2 avoids, as far as practicable, overtaking other ships operating in the deep-water route;
 - .3 keeps as near to the outer limit of the route which lies on the starboard side as is safe and practicable.
- 3 All other ships approaching the Chesapeake Bay traffic separation scheme should use the appropriate inbound or outbound traffic lane of the traffic separation scheme "In the Approaches to Chesapeake Bay".

2 AREAS TO BE AVOIDED

2.1 "Off the California Coast"

(Reference chart: United States 18720, 1990 edition.)

Note: These charts are based on North American (1983) datum.)

Description of the areas to be avoided

In order to avoid risk of pollution in the area designated as the Channel Islands National Marine Sanctuary, all ships, except those bound to and from ports on one of the islands within the area, engaged in the trade of carrying cargo, including but not limited to tankers and other bulk carriers and barges, should avoid the following areas:

- (a) In the region of San Miguel, Santa Rosa, Santa Cruz and Anacapa Islands off the coast of southern California

The area bounded by a line connecting the following geographical positions is designated as an area to be avoided:

(1) 33°58'.7 N,	119°12'.8 W,	(5) 34°10'.4 N,	120°39'.5 W,
(2) 33°54'.0 N,	119°17'.0 W,	(6) 34°14'.0 N,	120°31'.3 W,
(3) 33°46'.3 N,	120°07'.8 W,	(7) 34°10'.0 N,	119°56'.4 W,
(4) 33°59'.0 N,	120°39'.5 W,	(8) 34°01'.4 N,	119°18'.6 W,

- (b) In the region of the Santa Barbara Island off the coast of southern California

The area contained within a circle of radius 7.5 nautical miles, centred on the following geographical position, is designated as an area to be avoided:

(9) 33°28'.6 N,	119°02'.2 W
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2.2 “Off the Florida Coast”

(Reference charts: United States 11420, 1988 edition, 11460, 1988 edition.)

Note: These charts are based on North American (1983) datum.)

Description of the areas to be avoided

In order to avoid risk of pollution and damage to the environment of these sensitive areas, all ships carrying cargoes of oil and hazardous materials and all other ships greater than 50 m in length should avoid the following areas:

(a) In the vicinity of the Florida Keys

The area bounded by a line connecting the following geographical positions is designated as an area to be avoided:

(1) 25°45'.00 N, 80°06'.10 W	(12) 24°33'.60 N, 81°26'.00 W
(2) 25°38'.70 N, 80°02'.70 W	(13) 24°38'.20 N, 81°07'.00 W
(3) 25°22'.00 N, 80°03'.00 W	(14) 24°43'.20 N, 80°53'.20 W
(4) 25°00'.20 N, 80°13'.40 W	(15) 24°46'.10 N, 80°46'.15 W
(5) 24°37'.90 N, 80°47'.30 W	(16) 24°51'.10 N, 80°37'.10 W
(6) 24°29'.20 N, 81°17'.30 W	(17) 24°57'.50 N, 80°27'.50 W
(7) 24°22'.30 N, 81°43'.17 W	(18) 25°09'.90 N, 80°16'.20 W
(8) 24°28'.00 N, 81°43'.17 W	(19) 25°24'.00 N, 80°09'.10 W
(9) 24°28'.70 N, 81°43'.50 W	(20) 25°31'.50 N, 80°07'.00 W
(10) 24°29'.80 N, 81°43'.17 W	(21) 25°39'.70 N, 80°06'.85 W
(11) 24°33'.10 N, 81°35'.15 W	(22) 25°45'.00 N, 80°06'.10 W

(b) In the vicinity of Key West Harbour

The area bounded by a line connecting the following geographical positions is designated as an area to be avoided:

(23) 24°27'.95 N, 81°48'.65 W	(27) 24°29'.35 N, 81°53'.40 W
(24) 24°23'.00 N, 81°53'.50 W	(28) 24°29'.35 N, 81°50'.00 W
(25) 24°26'.60 N, 81°58'.50 W	(29) 24°27'.95 N, 81°48'.65 W
(26) 24°27'.75 N, 81°55'.70 W	

(c) Surrounding the Marquesas Keys

The area bounded by a line connecting the following geographical positions is designated as an area to be avoided:

(30) 24°26'.60 N, 81°59'.55 W	(37) 24°36'.15 N, 81°51'.78 W
(31) 24°23'.00 N, 82°03'.50 W	(38) 24°34'.40 N, 81°50'.60 W
(32) 24°23'.00 N, 82°27'.80 W	(39) 24°33'.44 N, 81°49'.73 W
(33) 24°34'.50 N, 82°37'.50 W	(40) 24°31'.20 N, 81°52'.10 W
(34) 24°43'.00 N, 82°26'.50 W	(41) 24°28'.70 N, 81°56'.80 W
(35) 24°38'.31 N, 81°54'.06 W	(42) 24°26'.60 N, 81°59'.55 W
(36) 24°37'.91 N, 81°53'.40 W	

(d) Surrounding the Tortugas Islands

The area bounded by a line connecting the following geographical positions is designated as an area to be avoided:

(43) 24°32'.00 N, 82°53'.50 W	(48) 24°42'.80 N, 82°43'.90 W
(44) 24°32'.00 N, 83°00'.05 W	(49) 24°39'.50 N, 82°43'.90 W
(45) 24°39'.70 N, 83°00'.05 W	(50) 24°35'.60 N, 82°46'.40 W
(46) 24°45'.60 N, 82°54'.40 W	(51) 24°32'.00 N, 82°53'.50 W
(47) 24°45'.60 N, 82°47'.20 W	

2.3 "In the region of the Shetland Islands"

(Reference charts: British Admiralty 1119, 1989 edition, 1233, 1989 edition and 3292, 1986 edition)

Note: These charts are based on Ordnance Survey of Great Britain (1936 datum.)

Description of the areas to be avoided and precautionary areas

In order to avoid the risk of oil pollution and severe damage to the environment and economy of Shetland, all ships of more than 5,000 gross tons should avoid the area bounded by lines connecting the following geographical positions:

(a) North of Shetland

- (1) 60°39'.5 N, 1°09'.3 W
- (2) 60°58'.2 N, 1°09'.3 W
- (3) 61°01'.5 N, 0°59'.5 W
- (4) 61°01'.5 N, 0°48'.0 W
- (5) 60°56'.5 N, 0°27'.0 W
- (6) 60°36'.8 N, 0°25'.5 W
- (7) 60°34'.2 N, 0°48'.0 W
- (8) 60°33'.8 N, 0°53'.5 W
- (9) Thence up to the eastern side of Colgrave Sound to
60°35'.8 N, 0°55'.4 W
- (10) 60°36'.8 N, 0°58'.0 W
- (11) 60°38'.4 N, 0°58'.8 W thence along the coastline to position (1)

(b) West of Shetland

In order to avoid the risk of oil pollution and severe damage to the environment and economy of Shetland, all ships of more than 5,000 gross tons should avoid the area bounded by lines connecting the following geographical positions:

- | | |
|----------------------------|----------------------------|
| (12) 59°51'.2 N, 1°16'.5 W | (16) 60°42'.5 N, 1°44'.0 W |
| (13) 59°42'.7 N, 1°26'.0 W | (17) 60°42'.5 N, 1°22'.0 W |
| (14) 60°00'.5 N, 2°20'.3 W | (18) 60°40'.0 N, 1°17'.0 W |
| (15) 60°08'.0 N, 2°32'.0 W | (19) 60°37'.3 N, 1°17'.9 W |

(c) Precautionary area in the northern approaches to Yell Sound

A precautionary area is established in the northern approaches to Yell Sound. The area is bounded by a line connecting the following geographical positions:

- | | |
|----------------------------|----------------------------|
| (20) 60°58'.2 N, 1°09'.3 W | (23) 60°42'.5 N, 1°22'.0 W |
| (21) 60°39'.5 N, 1°09'.3 W | (24) 60°42'.5 N, 1°44'.0 W |
| (22) 60°40'.0 N, 1°17'.0 W | |

(d) Precautionary area in the south-eastern approaches to Yell Sound

A precautionary area is established in the south-eastern approaches to Yell Sound. The area is bounded by a line connecting the following geographical positions:

- (25) 60°27'.4 N, 1°02'.4 W
- (26) 60°25'.5 N, 0°23'.0 W
- (27) 60°36'.8 N, 0°25'.5 W
- (28) 60°34'.2 N, 0°48'.0 W
- (29) 60°33'.8 N, 0°53'.5 W
- (30) Thence up to the eastern side of Colgrave Sound to
60°35'.8 N, 0°55'.4 W
- (31) 60°36'.8 N, 0°58'.0 W

3 RECOMMENDED ROUTE FOR TANKERS FROM NORTH HINDER TO THE GERMAN BIGHT AND VICE VERSA*

(Reference charts: British Admiralty 1405, 1406, 1408, 1505, and 2182 A
Netherlands Hydrographic Office 1014, 1035, 1037 (INT 1043, 1046, 1045)
German Hydrographic Office 50, 53 (INT 1045).

Note: These charts are based on European Datum.)

Description of the recommended route

DEEP-WATER ROUTE FROM NORTH HINDER TO THE TRAFFIC SEPARATION SCHEME "OFF BROWN RIDGE"

(a) The deep-water route is bounded by a line connecting the following geographical positions:

- | | | | |
|------------------|------------|------------------|------------|
| (1) 52°55'.75 N, | 3°14'.25 E | (4) 52°01'.23 N, | 2°42'.47 E |
| (2) 52°09'.92 N, | 2°35'.00 E | (5) 52°09'.58 N, | 2°43'.33 E |
| (3) 51°54'.88 N, | 2°33'.60 E | (6) 52°54'.17 N, | 3°22'.00 E |

TRAFFIC SEPARATION SCHEME "OFF BROWN RIDGE"

(b) A separation zone is bounded by a line connecting the following geographical positions:

- | | | | |
|------------------|------------|-------------------|------------|
| (7) 53°03'.14 N, | 3°21'.85 E | (9) 52°54'.81 N, | 3°18'.87 E |
| (8) 52°55'.11 N, | 3°17'.38 E | (10) 53°02'.84 N, | 3°23'.34 E |

(c) A traffic lane for northbound traffic is established between the separation zone in paragraph (b) above and a line connecting the following geographical positions:

- | | | | |
|------------------|------------|-------------------|------------|
| (6) 52°54'.17 N, | 3°22'.00 E | (11) 53°02'.20 N, | 3°26'.48 E |
|------------------|------------|-------------------|------------|

(d) A traffic lane for southbound traffic is established between the separation zone in paragraph (b) above and a line connecting the following geographical positions:

- | | | | |
|-------------------|------------|------------------|------------|
| (12) 53°03'.78 N, | 3°18'.71 E | (1) 52°55'.75 N, | 3°14'.25 E |
|-------------------|------------|------------------|------------|

DEEP-WATER ROUTE FROM THE TRAFFIC SEPARATION SCHEME "OFF BROWN RIDGE" TO THE TRAFFIC SEPARATION SCHEME "WEST FRIESLAND"

(e) The deep-water route is bounded by a line connecting the following geographical positions:

- | | | | |
|-------------------|------------|-------------------|------------|
| (11) 53°02'.20 N, | 3°26'.48 E | (13) 53°22'.94 N, | 3°28'.40 E |
| (12) 53°03'.78 N, | 3°18'.71 E | (14) 53°19'.89 N, | 3°39'.74 E |

TRAFFIC SEPARATION SCHEME "WEST FRIESLAND"

(f) A separation zone is bounded by a line connecting the following geographical positions:

- | | | | |
|-------------------|------------|-------------------|------------|
| (15) 53°42'.99 N, | 3°42'.12 E | (19) 53°46'.73 N, | 4°20'.00 E |
| (16) 53°22'.12 N, | 3°31'.47 E | (20) 53°56'.69 N, | 4°36'.00 E |
| (17) 53°20'.67 N, | 3°36'.85 E | (21) 53°59'.22 N, | 4°36'.00 E |
| (18) 53°31'.12 N, | 3°44'.72 E | (22) 53°57'.60 N, | 4°15'.17 E |

(g) A traffic lane for north-eastbound traffic is established between the separation zone in paragraph (f) above and a line connecting the following geographical positions:

- | | | | |
|-------------------|------------|-------------------|------------|
| (14) 53°19'.89 N, | 3°39'.74 E | (24) 53°45'.90 N, | 4°23'.32 E |
| (23) 53°30'.00 N, | 3°47'.37 E | (25) 54°00'.00 N, | 4°46'.00 E |

* This recommended route for tankers coincides with the eastern route of the routing system "Off Friesland" and replaces the "Two-way route for tankers from North Hinder to the German Bight" which was cancelled at 0000 hrs UTC on 1 December 1990.

- (h) A traffic lane for south-westbound traffic is established between the separation zone in paragraph (f) above and a line connecting the following geographical positions:
- | | |
|------------------------------|------------------------------|
| (26) 53°57'.20 N, 4°10'.02 E | (13) 53°22'.94 N, 3°28'.40 E |
| (27) 53°43'.39 N, 3°38'.81 E | |

PRECAUTIONARY AREA "FRIESLAND JUNCTION"

- (i) A precautionary area is established directly to the north of the traffic separation scheme "West Friesland". The area is bounded by a line connecting the following geographical positions:
- | | |
|------------------------------|------------------------------|
| (26) 53°57'.20 N, 4°10'.02 E | (29) 54°05'.59 N, 4°59'.32 E |
| (25) 54°00'.00 N, 4°46'.00 E | (30) 54°02'.57 N, 4°20'.92 E |
| (28) 54°01'.14 N, 5°00'.34 E | (31) 54°01'.91 N, 4°08'.96 E |

TRAFFIC SEPARATION SCHEME "EAST FRIESLAND"

- (j) A separation zone is bounded by a line connecting the following geographical positions:
- | | |
|------------------------------|------------------------------|
| (32) 54°02'.62 N, 5°00'.00 E | (35) 54°08'.97 N, 6°01'.33 E |
| (33) 54°04'.21 N, 5°20'.00 E | (36) 54°05'.69 N, 5°19'.66 E |
| (34) 54°08'.00 N, 6°01'.90 E | (37) 54°04'.11 N, 4°59'.66 E |
- (k) A traffic lane for north-eastbound traffic is established between the separation zone in paragraph (j) above and a line connecting the following geographical positions:
- | | |
|------------------------------|----------------------------|
| (28) 54°01'.14 N, 5°00'.34 E | (38) 54°6'.10 N, 6°3'.00 E |
|------------------------------|----------------------------|
- (l) A traffic lane for south-westbound traffic is established between the separation zone in paragraph (j) above and a line connecting the following geographical positions:
- | | |
|------------------------------|-----------------------------|
| (39) 54°10'.90 N, 6°00'.20 E | (29) 54°5'.59 N, 4°59'.32 E |
| (40) 54°07'.17 N, 5°19'.32 E | |

Note: The positions (38), (34), (35) and (39) coincide with the positions (15), (11), (8) and (14) of the traffic separation scheme "Deutsche Bucht Lightvessel, western approach".

Application

The route is recommended for use by the following classes of ships of 10,000 tons gross tonnage and upwards:

- (a) tankers carrying oils mentioned in appendix I, annex I to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78); and
- (b) ships carrying in bulk liquid substances classed in categories A and B mentioned in appendices I and II, annex II, to MARPOL 73/78.

Use of the route

- (a) The classes of ships referred to above are recommended to use the route or part of it:
 - (i) when sailing from North Hinder to North Sea ports of Germany and of the Netherlands northwards of latitude 53° N and vice versa;
 - (ii) when sailing between North Sea ports of the Netherlands and/or Germany, except in the case of adjacent port areas;
- (b) The traffic separation scheme "Deutsche Bucht Lightvessel, western approach" should be used in continuation of the route.
- (c) Ships should use the appropriate traffic lanes of the traffic separation schemes forming part of the route; ships should follow the recommended direction of traffic flow in the precautionary areas (indicated by dashed open-outlined arrows in the charts) and ships should, as far as practicable, keep to the starboard side of the deep-water routes forming part of the route.

Joining and leaving the route

The classes of ships referred to above when joining or leaving the route:

- (a) should do so at the nearest point of the route to the port of destination or departure which permits a safe passage to or from that port;
- (b) should be aware that oil and gas production facilities and mobile offshore drilling units may be encountered in the proximity of the route; safety zones of 500 m (0.27 nautical mile) diameter are established around all offshore structures;
- (c) must adhere to the appropriate rules of the Collision Regulations.

Note: It is recommended that an efficient electronic position-fixing device appropriate for the area should be carried on board. Numerous offshore structures situated within the limits of the separation zones and/or situated in the proximity of the route are equipped with X- and S-band RACONs.