



Royal Netherlands Navy

HP1 | EDITION 2026



The Netherlands Coast Pilot

Eastern part of North Sea from
Oostende (Belgium) to Emden (Germany)

The Netherlands Hydrographic Service



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[Content](#)

Record of amendments

The latest version can be downloaded from www.defensie.nl/hydro		
Version	Date	Changes
2026-1	12-03-2026	New edition

NAUTICAL PUBLICATIONS are to be used in conjunction with up-to-date nautical charts of the correct scale. The publication should be used with sound judgement and good seamanship, in combination with supplementary publications, safety messages of regional traffic centres and own observations.

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1

General

1.1 Hydrographic Service

The Hydrographic Service of the Royal Netherlands Navy is located at Den Haag;

Van Alkemadeaan 786, Building 32;

Telephone: +31 (0)88 95 16 728;

E-mail: hydro.admin@mindef.nl;

Website: www.defensie.nl/hydro

The Hydrographic Service of the Royal Netherlands Navy carries out hydrographic surveys, processes hydrographic and other data of maritime importance and compiles and issues Hydrographic Publications like charts, ENC's and other Nautical Publications. The area of responsibility for charting covers the Netherlands Continental Shelf and the waters in the Caribbean part of the Kingdom. Please refer to 'Catalogue of Nautical charts and Nautical Publications'- HP7 for an overview of the available products.

Publications are kept up to date as follows:

- ENC's are updated on a weekly basis and supplied by your ENC service provider.
- Paper charts can be updated using the Netherlands Notices to Mariners (Berichten aan Zeevarenden – BaZ), published on www.defensie.nl/hydro.
- Nautical Publications are published on www.defensie.nl/hydro as downloadable PDF's. They are updated on a regular basis. Updated versions are announced in the Netherlands Notices to Mariners.

New editions are announced in NtM and on www.defensie.nl/hydro.

The title for the director of the Service is 'Chef der Hydrografie' (Hydrographer of the Royal Netherlands Navy). The Hydrographic Service co-operates closely with foreign hydrographic authorities, the International Hydrographic Organization (IHO), scientific institutes, as well as maritime organisations.

1.2 Reporting of observed errors and omissions

Mariners are encouraged to inform the Hydrographer of the Royal Netherlands Navy of any corrections needed to products issued by the Netherlands Hydrographic Service.

It is helpful to give as much details as possible. When using GPS, record the geodetic datum of the observed position. When other means are used, the report preferably includes full details of all positions and how they were obtained, bearings (true), angles and distances, readings position fixing system, soundings (including the method by which they were obtained and reduced to chart datum) etc.

It is essential that reports include the number(s) of the applicable products and the date to which they are corrected (ENC update or NtM). When the information relates to publications of another hydrographic office the Netherlands Hydrographic Service will forward the reports and comments as required.

2

Navigation Traffic Safety

2.1 The Netherlands Coastguard

2.1.1 Introduction

The Coastguard is an organisation in which various government services co-operate. The Joint Rescue Coordination Centre (JRCC) is located at Den Helder.

2.1.2 Tasks

The tasks of the Coastguard can be summarised as follows:

Rendering service in case of:

- distress, urgent and safety traffic
- search and rescue
- contingency operations
- vessel traffic services (outside the direct approaches to the major ports)
- buoyage
- maritime assistance
- sea traffic research
- mine clearing operations

Surveillance and tracing:

- general police supervision
- environmental control
- fisheries inspection
- traffic control
- inspection of ship's equipment
- customs inspection
- border patrol

2.1.3 Operational area

The operational area of the Netherlands Coastguard consists of the North Sea from the coast to the boundaries of the Netherlands part of the Continental Shelf. The Waddenzee, the IJsselmeer including the Randmeren and the waters in the southwest of the Netherlands are also the responsibility of the Coastguard in case of search and rescue operations.

2.1.4 Co-ordination when rendering help and rescue at sea

The Netherlands Coastguard monitors the international maritime distress frequencies and handles the Distress, Urgency and Safety traffic.

For the execution of the tasks related to the safety at sea, the Coastguard can appeal to the following official bodies:

- The large regional traffic centres at Den Helder, IJmuiden, Scheveningen, Hoek van Holland and Vlissingen
- The sea traffic stations on the manned lighthouses along the Netherlands coast
- Police Aviation Department
- The Royal Netherlands Navy headquarters
- Rescue coordination centres world wide
- Security regions incident rooms
- The civil and military air traffic centres at Amsterdam and Nieuw Milligen
- The Departmental Coordination Centre Crisis Management of the Ministry of Infrastructure and Water Management
- The Royal Netherlands Sea Rescue Institution
- Private salvage company in waters in the southwest of the Netherlands

2.1.5**Communication**

Contacting the Joint Rescue Coordination Centre (JRCC) Den Helder from shore is possible in case of alerting or operational matters and can be made as follows:

Emergency telephone number: 0900 01 11 / +31(0)88 958 4040

Operational telephone number: +31(0)88 958 4000

E-mail: ccc@kustwacht.nl

Contact frequencies Coastguard

On the North Sea, the Netherlands coastal waters, Waddenzee, IJsselmeer including the Randmeren and waters in the southwest of the Netherlands

Frequency		Call sign
VHF Ch 16		Netherlands Coastguard
2187.5 kHz (MF/DSC)		002442000
VHF Ch 70 (VHF/DSC)		002442000
Inmarsat C		4471088 KUSTW NL
Traffic Centres / Traffic stations		Call sign
Schiermonnikoog	VHF Ch 05 (H24)	Traffic Station Schiermonnikoog
Terschelling	VHF Ch 02 (H24)	Traffic Station Brandaris
Den Helder	VHF Ch 62 (H24)	Traffic Centre Den Helder
IJmuiden	VHF Ch 61 (H24)	IJmuiden Port Control
Scheveningen	VHF Ch 21 (H24)	Traffic Centre Scheveningen
Hoek van Holland	VHF Ch 03 (H24)	Maas Entrance
Vlissingen	VHF Ch 64/14 (H24)	Traffic Centre Vlissingen
IJsselmeer/Markermeer	VHF Ch 01 (H24)	Traffic Station IJsselmeer
During search and rescue actions the call sign is 'Den Helder Rescue'		

2.2 Rescue at sea

2.2.1 Introduction

The following rescue organizations operate along the Netherlands and Belgian coasts:

- The Royal Netherlands Sea Rescue Institution
- Sea Rescue Organisation (Belgium)

An outline of the rescue stations is given in the illustration below.

2.2.2 Rescue by lifeboat

When rescued by lifeboat, attempt to remain in the position reported. Should this not be possible supply the time at the position, course and speed of the vessel. The crew of the lifeboat will then calculate the 'rendez-vous' position as not to cause unnecessary delay. Next listen out on VHF Ch 16. The lifeboat will attempt to make contact through this mobile operator channel.

When the lifeboat is approaching, draw attention with all available means.

One should think of:

- sound signals
- light signals
- smoke signals
- pyrotechnical means

Depending on the situation on the spot (weather, swell, wave height and depth of water) the lifeboat will come alongside.



2.2.3 Rescue by helicopter

General

See also the International Aeronautical and Maritime Search and Rescue Manual [IAMSAR]. Helicopters operating near ships always entail an increased risk (masts, rigging etc.). It is therefore of paramount importance that ship's crews are well-informed of the possibilities and limitations of the helicopter and the procedures to be followed. This is especially important when fast-acting is required when disembarking a casualty.

A helicopter is able to hover and is therefore suited for hoisting people and/or goods out of the water or from the ship.

For aerodynamical reasons the helicopter has to keep its nose in the wind during this operation. Should this not be possible for whatever reason, the whole hoisting operation is getting much more difficult or even impossible.

The helicopter is equipped with an aircraft radar and a doppler navigation system, making it possible to fly towards a position quickly and accurately.

The helicopter crew consists of five persons:

- Captain: seated in the right front and flies the helicopter
- Co-pilot: seated in the left front and takes care of communication and navigation and also serves as a safety pilot (checking the engine-instruments etc.)
- Mechanic (operates the hoisting-winch)
- Heli-rescuer (a specially trained frogman who a.o. assists the physician)
- Physician (with a complete first-aid-kit)

Procedure

With the example below it is assumed that the ship can manoeuvre and communicate through VHF.

In case helicopter assistance is needed for medical reasons, this should be reported to the Coastguard Centre.

Report position in latitude and longitude as accurately as possible, as well as the patient's medical indication. The latter is of importance to the physician in order for them to decide which equipment to take along.

Before the helicopter arrives

Remain in the reported position, or should this not be possible, indicate the time at position, the ship's course and her speed.

The helicopter crew will then calculate the position at the 'rendez-vous'-point, as not to cause unnecessary delay.

Next listen out on VHF Ch 16. Clear the deck of loose or hanging objects as they may be blown away as soon as the helicopter hovers above the vessel.

When the helicopter is approaching

Limit ship's movements as much as possible to enable safe and efficient hoisting. When the helicopter is approaching draw its attention by turning up all available ship's illumination and all other lights on board.

Never direct lights at the helicopter. You may dazzle the crew. Ensure that the wind is coming in at 30° on the portside. The helicopter can now hover steadily in the wind and her co-pilot has a good view on the ship.

Carrying out hoisting operations

- The helicopter arrives above the ship;
- Rope with sandbag is lowered: grab rope and hold tight. Never fasten.
- The helicopter moves to the left/right free from the ship and heli-rescuer comes down. Pull them steadily in board with the help of the rope. The heli-rescuer takes the rope now and takes control.
- The physician comes down.
- The stretcher and/or medical aidkits are lowered.
- When the patient is ready to be hoisted, the physician will be hoisted first followed by the patient with the stretcher.

- Finally the heli-rescuer is hoisted again. During this action a member of the ship's crew should lead the rope. Even when the rope is taken in by the helicopter the crew takes care that the rope does not get stuck somewhere and runs free from the ship.
- The duration of the operation depends mainly on the circumstances and the patient's condition. As a rule it can be assumed that the hoisting-operation will last between 15 and 45 minutes. Should the ship be rolling and cause danger for the rope to get stuck, the heli crew can advise to have the patient laid down on an inflatable raft.

2.3 Routeing measures

2.3.1 Definitions

The following terms are used in connection with matters related to ships' routeing:

Routeing system

Any system of one or more routes or routeing measures aimed at reducing the risk of casualties; it includes TSSs, two-way routes, recommended tracks, areas to be avoided, inshore traffic zones, roundabouts, precautionary areas and deep-water routes.

Mandatory routeing system

A routeing system adopted by IMO, in accordance with the requirements of regulation V/8 of the International Convention for the Safety of Life at Sea 1974, for mandatory use by all ships, for certain categories of ships or ships carrying certain dangerous cargoes.

Traffic separation scheme

A routeing measure aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes.

Separation zone or line

A zone or line separating the traffic lanes in which ships are proceeding in opposite or nearly opposite directions, or separating a traffic lane from the adjacent sea area, or separating traffic lanes designated for particular classes of ships proceeding in the same direction.

Traffic lane

An area within defined limits in which one-way traffic is established. Natural obstacles, including those forming separation zones, may constitute a boundary.

Roundabout

A routeing measure comprising a separation point or circular separation zone and a circular traffic lane within defined limits. Traffic within the roundabout is separated by moving in a counterclockwise direction around the separation point or zone.

Inshore traffic zone

A routeing measure comprising a designated area between the landward boundary of a traffic separation scheme and the adjacent coast, to be used in accordance with the provisions of Rule 10(d), as amended, of the International Regulations for Preventing Collisions at Sea, 1972.

Two-way route

A route within defined limits inside which two-way traffic is established, aimed at providing safe passage of ships through waters where navigation is difficult or dangerous.

Recommended route

A route of undefined width, for the convenience of ships in transit, which is often marked by centreline buoys.

Recommended track

A route which has been specially examined to ensure, as far as possible, that it is free of dangers and along which ships are advised to navigate.

Deep-water route

A route within defined limits which has been accurately surveyed for clearance of the bottom and submerged obstacles as indicated on the chart.

Precautionary area

A routeing measure comprising an area within defined limits where ships must navigate with particular caution and within which the direction of the traffic flow may be recommended.

Area to be avoided

A routeing measure comprising an area within defined limits in which either navigation is particularly hazardous or where it is extraordinary important to avoid casualties. These areas should be avoided by all ships or certain classes of ships.

Established direction of traffic flow

A traffic flow pattern indicating the directional movement of traffic as established within a traffic separation scheme.

Recommended direction of traffic flow

A traffic flow pattern indicating a recommended directional movement of traffic where it is impractical or unnecessary to adopt an established direction of traffic flow.

2.3.2**Use of routeing systems**

- routeing systems are recommended for ships and may be made mandatory for all ships, certain categories of ships or ships carrying certain cargoes, unless stated otherwise;
- routeing systems are meant to be used by day and by night in all weather conditions, in ice free water or with light drift ice when no extraordinary manoeuvres are required, and when no icebreaker assistance will be required.
- bearing in mind the need for adequate under keel clearance, a decision to use a routeing system must take into account the charted depth, the possibility of changes in seabed since the time of the last survey, and effects of meteorological and tidal conditions on water depths.
- a ship navigating in or near a traffic separation scheme adopted by the IMO should act strictly in accordance with Rule 10 of the International Regulations for Preventing Collisions at Sea, 1972, in order to reduce the risk of collision with other ships. The other rules of the International Regulations for Preventing Collisions at Sea, 1972, remain in force in all respects, particularly when a risk of collision with another ship exist.
- at junction points where traffic from various directions meets, a true separation of traffic is not really possible, as ships may need to cross routes or change to another route. Ships should therefore navigate with great caution in such areas and be aware that the mere fact that a ship is proceeding along a through-going route gives that ship no special privilege or right of way.
- a deep-water route is primarily intended for use by ships which, because of their draught in relation to the available depth of water, require the use of such a route. Through-going traffic to which the above does not apply should, as far as practicable, avoid using deep-water routes.
- precautionary areas should be avoided, if practicable, by passing ships not making use of the associated traffic separation schemes or deep-water routes, or entering or leaving adjacent ports.
- in two-way routes, including two-way deep-water routes, ships should, as far as practicable, keep to the starboard side.
- arrows printed on charts in connection with routeing systems merely indicate the general direction of established or recommended traffic flow; ships need not set their courses strictly along the arrows.
- the signal 'YG', meaning: 'You appear not to be complying with the traffic separation scheme', is provided in the International Code of Signals for appropriate use.

Traffic Separation Schemes (TSS) have been established in certain parts of the world, to promote safety at sea, in converging areas and in areas where the density of traffic is great. In the interest of safe navigation vessels are advised to make use of these schemes, both by day and at night in all weather conditions, as far as circumstances permit.

The International Maritime Organization (IMO) is recognised as the only international body for establishing and adopting measures on an international level concerning ships' routeing systems for use by all ships, certain categories of ships or ships carrying certain cargoes.

In deciding whether or not to adopt or amend a traffic separation scheme, IMO will consider whether:

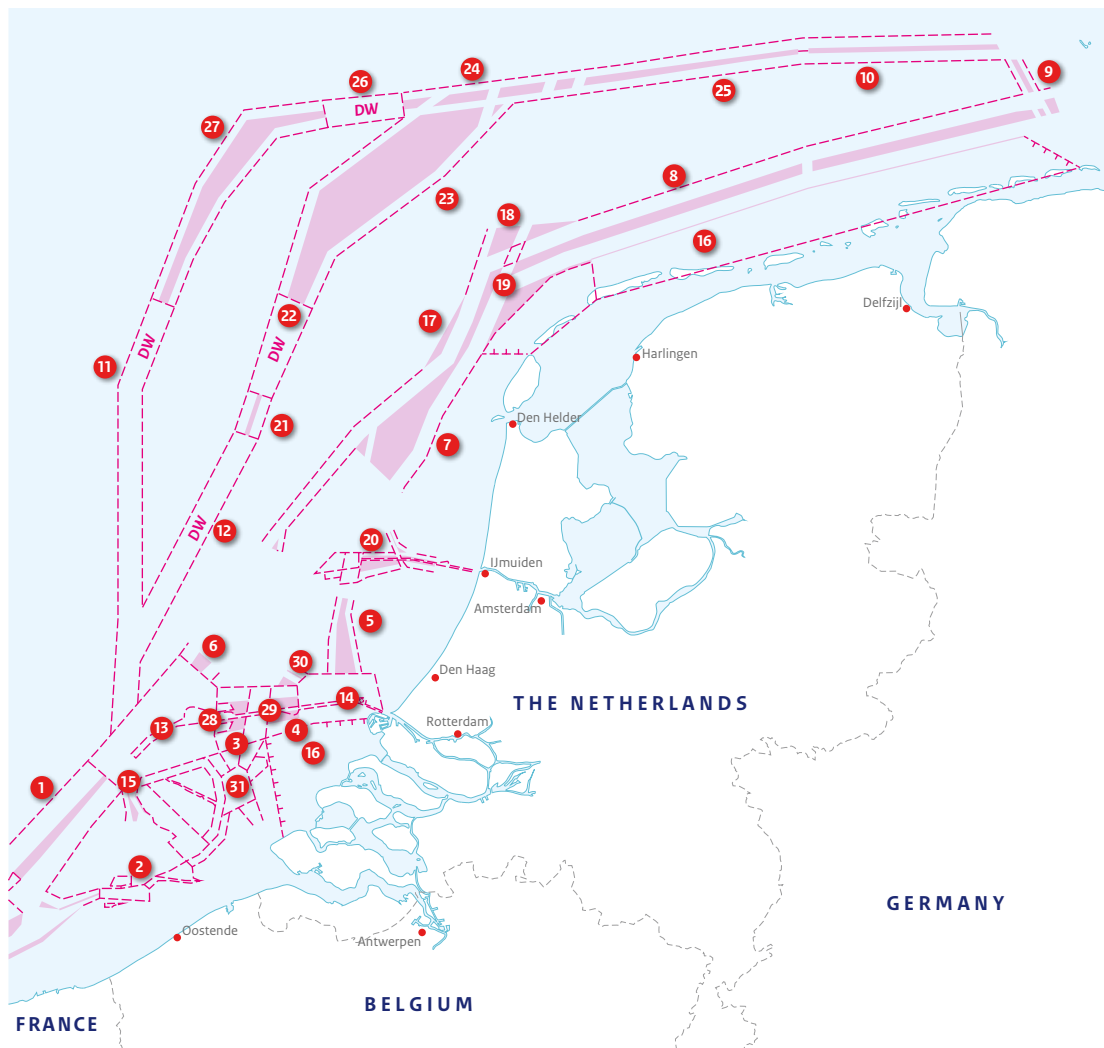
- the aids to navigation proposed will enable mariners to determine their position with sufficient accuracy to navigate in the scheme in accordance with Rule 10 of the International Regulations for Preventing Collisions at Sea, 1972, as amended.
- the state of hydrographic surveys in the area is adequate
- the scheme takes account of the accepted planning considerations and complies with the design criteria for traffic separation schemes and with established methods of routeing.

2.3.3

Routeing measures

Off the Netherlands coast a large number of routeing measures are in force. The chartlet provides a guide to their lay-out. The numbers on the small chart correspond with the list of names.

As indicated a number of Traffic Separation Schemes are mandatory for some classes of vessels. For the descriptions of classes see [section 2.3.4](#)



1 – TSS North Hinder South

Mariners are warned for merging and crossing traffic streams on both extremities of this TSS. Vessels navigating in the NE-going lane should also be aware of vessels constrained by their draught (VLCC's) which follow the 'Selected Route' on their way to Europoort (Hoek van Holland).

2 – TSS At West Hinder + DWR in the approaches to river Scheldt

Off the west end the TSS converges with TSS 'In the strait of Dover and adjacent waters' and TSS 'North Hinder South'. Mariners are warned that in this area traffic streams are merging and crossing.

Vessels with a draught > 13.1m are considered as channel-bound and therefore obliged to make use of the DW-route.

3 – TSS Maas West outer

Mariners are warned that off the end of the eastgoing traffic lane traffic streams, e.g. from the routes Texel to River Scheldt and Maas West to River Scheldt are merging or crossing.

4 – TSS Maas West inner

Mariners are warned that in this area traffic streams, e.g. from the routes Texel to River Scheldt and Maas West to River Scheldt, are merging or crossing. (Off the seaward entrance to 'Maas West inner' traffic separation scheme).

Off the seaward entrance to 'Maas West inner' traffic separation scheme – The precautionary area 'In the approaches to Hook of Holland' should be avoided by passing traffic which is not entering or leaving the adjacent ports.

5 – TSS Maas North

Off the seaward entrance to TSS Maas North: The precautionary area 'In the approaches to Hook of Holland' should be avoided by passing traffic which is not entering or leaving the adjacent ports.

6 – TSS North Hinder North

Off the end of the southwestgoing traffic lane, traffic lanes merge.

7 – TSS Off Texel

Prohibited for certain classes of vessels (see [section 2.3.4](#)). VTS in force (see section 2.19.2)

8 – TSS Terschelling - German Bight

Masters of containerships, when planning their passage through the waters north of the Wadden Islands, either eastbound or westbound, and making use of the traffic separation schemes (TSSs) located in this area, should be aware of the risk of loss of containers to the sea under unfavourable weather conditions. This risk becomes particularly imminent during heavy sea conditions and high waves from a west-north-west to north-east direction.

The most probable phenomena leading to the loss of containers are extreme ship motions and accelerations due to roll resonance, ship contact with the sea bottom, impulsive loading on containers due to green water and slamming-induced impulsive loading on the hull. In this respect, masters should ensure that there is an adequate under-keel clearance at the time of passage.

In particular, the following classes of containerships risk losing containers to the sea under the following unfavourable circumstances:

- Containerships with a length between 100 and 200m when predicted significant wave heights exceed 3.0m. Masters of these ships are recommended to take appropriate measures and alter course and/or speed if necessary, to avoid the above mentioned phenomena (typically occurring when coming transverse to the wave direction).
- Containerships with a length of 200m or more, or with a beam of 32m or more, when predicted significant wave heights exceed 4.0m. These ships are recommended to take the northern route (The TSS East Friesland and TSS German Bight western approach) in order to retain an adequate under-keel clearance and avoid bottom contact, and take appropriate measures and alter course and/or speed if necessary, to avoid the above mentioned phenomena (typically occurring when coming transverse to the wave direction).

Vessels approaching the eastern part of this TSS should, in particular, keep an efficient look-out for vessels restricted in their ability to manoeuvre heading south from TSS Jade Approach.

9 – TSS Jade approach

Within the territorial sea (i.e. the three-mile zone including the buoyed fairways of rivers Jade, Weser and Elbe beyond the three-mile zone) the Traffic Regulations for Navigable Waterways applies completely. The main point of divergence from the 1972 COLREG is the provision that vessels navigating in a fairway have the right-of-way over vessels entering or crossing that fairway, turning within that fairway, or leaving an anchorage or berth. Within the area between the seaward border of the territorial waters (i.e. the twelve-mile zone) and the area mentioned above the Traffic Regulations for Navigable Waterways applies partly (e.g. regulations for vessels carrying dangerous goods obligation to certain vessels to take part in the reporting systems, etc).

Vessels navigating in TSS Jade Approach and bound for the inner German Bight shall be deemed to be right-of-way vessels provided that they must ride the tide while en-route from Lt vessel GB or from the deep-water anchorage to rivers Jade, Weser or Elbe and must exercise the right of way on account of draught constraints on the navigable waterway they are heading for. Such vessels shall inform the VTS-centre German Bight via German Bight Traffic accordingly. They shall be deemed 'vessels restricted in their ability to manoeuvre' in terms of COLREG 1972 rule 3(g) and shall exhibit the lights and shapes prescribed by COLREG rule 27(b). Navigation on tidal waterways shall not be commenced unless an understanding has been reached with the competent VTS Centre to the effect that it will be possible to keep to the tidal navigation schedule drawn up by the competent Waterways and Shipping Office. Safety broadcasts will be transmitted by German Bight Traffic in 15 minutes intervals when such right-of-way vessels are underway in TSS Jade Approach. These vessels will be accompanied by a shipping police vessel exhibiting a blue flashing light.

10 – TSS German Bight western approach

Certain categories of vessels shall only be boarded or disembarked by pilots near GW-TG buoy (when en-route to or from river Ems) or near Lt vessel GB (when en-route to or from rivers Elbe, Jade or Weser). This applies to:

- tankers exceeding 150m in length or 23m in beam, en route to or from any of the above mentioned rivers, when carrying gas/chemicals/petroleum/petroleum products in bulk or unloaded tankers, if not cleaned, degassed or completely inerted after having carried petroleum/petroleum products or chemicals with a flashpoint below 350C.
- bulk carriers other than oil, gas and chemical tankers exceeding 220m in length or 32m in beam, when en route to or from the river Elbe;
- bulk carriers other than oil, gas and chemical tankers exceeding 250m in length or 40m in beam or 13.5m in draught, en route to or from the rivers Weser or Jade.
- other vessels exceeding 350m in length or 45m in beam, en route to or from the rivers Jade or Weser.
- other vessels exceeding 350m in length or 55m in beam, en route to or from the river Elbe.

The safest and fastest way to reach these pilot stations is by using the routeing systems 'Off Friesland' and TSS 'German Bight Western Approach'. For additional information on compulsory pilotage for certain vessels see the 'Mariners Routeing Guide German Bight' (DE2910).

11 – DWR from North Hinder to Indefatigable Bank via DR1 Lt buoy

No particular information available.

12 – DWR from North Hinder to TSS Off Brown Ridge

Mandatory route for some classes of vessels (see [section 2.3.4](#)).

13 – North Hinder Junction precautionary area

For ships which have to cross the deep-water route, attention is drawn to Rule 18(d)(i) of the 1972 Collision Regulations. Mariners are, however, reminded that when a risk of collision is deemed to exist the 1972 Collision Regulations fully apply, in particular the rules of Part B, Sections II and III, are of specific relevance in the crossing situation.

Ships should proceed with caution in the area where the traffic lanes merge. Ships should, if practicable, not enter a circular area of one mile diameter around the North Hinder buoy. All ships should keep the circular area on their port side unless the density of traffic, the pilotage (helicopter operations) or the weather conditions warrant otherwise.

14 – Maas precautionary area

Ships should proceed with caution in the area where the traffic lanes merge. Any ship which is not compelled to adhere to the deep-water route should, if practicable not enter a circular area of about one mile diameter, centred around a position half a mile north of the Maas Center buoy. All ships should keep the circular area on their port side unless the available water depth, the density of traffic, the pilotage or the weather conditions warrant otherwise.

15 – TSS Off North Hinder

No particular information available.

16 – Inshore traffic zone

According to Rule 10 of the International regulations for preventing collisions at sea (1972): A vessel shall not use an inshore traffic zone when she can safely use the appropriate traffic lane within the adjacent traffic separation scheme. However, vessels of less than 20m in length, sailing vessels and vessels engaged in fishing may use the inshore traffic zone. A vessel may use an inshore traffic zone when en route to or from a port, offshore installation or structure, pilot station or any other place situated within the inshore traffic zone, or to avoid immediate danger.

17 – TSS Off Vlieland

VTs in force (see section 2.19.2)

18 – TSS Vlieland Noord

Off the south end of the northeast going traffic lane, traffic streams are crossing.
VTs in force (see section 2.19.2)

19 – Precautionary area Vlieland Junction

Mariners should navigate with great caution because traffic lanes are merging in this area.
VTs in force (see section 2.19.2)

20 – TSS In the approaches to IJmuiden

Vessels with a draught over 14.1m should make use of this DWR if bound for IJmuiden.

21 – TSS Off Brown Ridge

Mandatory route for some classes of vessels (see [section 2.3.4](#)).

22 – DWR from TSS ‘Off Brown Ridge’ to TSS ‘West Friesland’

Mandatory route for some classes of vessels (see [section 2.3.4](#)).

23 – TSS West Friesland

Mandatory route for some classes of vessels (see [section 2.3.4](#)).

24 – TSS North Friesland

Mandatory route for some classes of vessels (see [section 2.3.4](#)).

25 – TSS East Friesland

Mandatory route for some classes of vessels (see [section 2.3.4](#)).

26 – DWR from TSS ‘Off Botney Ground’ to the TSS North Friesland’

No particular information available.

27 – TSS Off Botney Ground

No particular information available.

28 – DWR Europoort

Vessels with a draught over 17.4m should make use of this DWR if bound for Hoek van Holland. A concentration of crossing traffic can be expected between the E3 and E7 buoys. Extra care should be taken between E13 buoy and Maas Center buoy, where crossing traffic from the north will be frequent.

29 – Precautionary area Maas Junction

Mariners are warned that in this precautionary area, vessels on routes to and from TSS Off Texel, the Westerschelde and Europoort are merging or crossing.

30 – TSS Maas Northwest

Off the seaward entrance to TSS Maas North West: The precautionary area in the approaches to Hoek van Holland should be avoided by passing traffic which is not entering or leaving the adjacent ports.

31 – Approaches to the Schelde estuary

Mariners are warned for crossing traffic in the precautionary area "Schouwenbank Junction" from the 4 connecting two-way routes.

The "In the vicinity of Thornton and Bligh Banks" and "Windfarm Borssele" precautionary areas surround wind farms. Vessels, other than those that are engaged in the maintenance of these sites, should avoid these areas as much as possible.

In view of the limited width of the area to be avoided "Windfarm Borssele Pass" the following ships are recommended to avoid the area:

- ships exceeding 45m LOA
- ships carrying dangerous goods

Ships engaged in the construction and maintenance of wind turbines and their associated electrical infrastructure are permitted in this area.

Note

The Netherlands Hydrographic Service will only publish information (Netherlands NtM) concerning routeing measures within their own charting area. World wide information concerning routeing measures will be published in a digital newspaper ('Staatscourant') issued by the Netherlands Government.

2.3.4

Mandatory route for some classes of vessels from North Hinder to the German Bight and v.v.

The route is mandatory for use by the following classes of vessels:

- Tankers of 10 000 tons gross tonnage and upwards, carrying oil as defined under Annex I to MARPOL convention.
- Chemical tankers of 5 000 tons gross tonnage and upwards, carrying noxious liquid substances in bulk as assessed or provisionally assessed as Categories X or Y of Annex II to the MARPOL convention.
- Chemical tankers and NLS tankers of 10 000 tons gross tonnage and upwards, carrying noxious liquid substances in bulk assessed or provisionally assessed as Category Z of Annex II to the MARPOL convention.
- Vessels of 10 000 tons gross tonnage and upwards, carrying liquefied gases in bulk.

These vessels shall avoid the sea area between the mandatory route and the adjacent Frisian Islands' coast, except when joining or leaving the route at the nearest point of the route to the port of departure or destination which permits a safe passage to or from that port.

The classes of vessels referred to above shall use the mandatory route or part of it:

- When sailing from North Hinder to the Baltic or North Sea ports of Norway, Sweden, Denmark, Germany or the Netherlands north of latitude 53° north and vice versa.
- When sailing between North Sea ports of the Netherlands north and/or Germany, except in cases of adjacent port areas.
- When sailing between United Kingdom or Continental North Sea ports south of latitude 53° north and Scandinavian or Baltic ports.
- When sailing between North Hinder, United Kingdom or Continental ports south of latitude 53° north and offshore and offshore-based oil-loading facilities in the North Sea area. However this provisions does not apply to ships sailing between ports on the east coast of the United Kingdom, including Orkney and Shetland Islands.

These vessels shall use the appropriate traffic lanes of the traffic separation schemes forming part of the route, should follow the recommended direction of traffic flow in the precautionary area (indicated by dashed open-outlined arrows in the charts) and shall, as far as practicable, keep to the starboard side of the deep-water routes forming part of the mandatory route. Vessels which, because of their draught, cannot safely navigate the mandatory route - in particular the southern part of it are exempted from the requirement to use the southern part of the mandatory route and are strongly recommended to use the western route of the routeing system 'Off Friesland' or part of it, as appropriate, instead. This alternative western route is formed by the following routeing measures:

- DWR from North Hinder to Indefatigable Bank via DR1 Lt buoy
- 'TSS Off Botney Ground'
- DWR from 'TSS Off Botney Ground' to the TSS North Friesland'

Shipmasters should enter this deviation in the ships' log.

Joining or leaving the route

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

- Shall do so at the nearest point of the route to the port of departure or destination which permits a safe passage to or from that port
- 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 500m (0.27 nm) radius are established around all offshore structures.

Pilotage

Ships required to use the 'Mandatory route for some classes of vessels from North Hinder to the German Bight and vice versa' are referred to IMO resolution A.1080(28), adopted in December 2013, concerning the 'Recommendation on the use of adequately qualified Deep Sea pilots in the North Sea, English Channel and Skagerrak'. See also [section 2.7 'Deep sea pilotage'](#).

Note:

- 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 or AIS-beacons.

Special publications (the Netherlands Hydrographic Service)

- Chart 1970: Mariners' Routeing Guide. Southern North Sea (Passage planning chart).



2.4 Buoyage systems

2.4.1 Purpose of buoyage systems

The purpose of buoyage systems is to promote safe navigation with the help of fixed and floating marks, to indicate certain areas and/or protect certain objects.

2.4.2 Areas in which buoyage systems are in force

The **IALA-system** is in force in the following areas:

- North Sea
- Netherlands entrances to the sea (zeegaten)
- Waddenzee
- Westerschelde
- Eemsmonding

The **CEVNI-system (SIGNI)** is in force in the following areas:

All inland waters among which the IJsselmeer and streams in Zuid-Holland and Zeeland. In cases where the border between the two systems runs across harbours and harbour entrances, it lies across the seaward heads and breakwaters.

2.4.3

Direction of buoyage

Between the two systems mentioned, there is only a difference in the used terms. In the IALA-system the direction of buoyage is generally along the Netherlands coast and Waddenzee NE or E-ward, and from seaward into the harbours (from outwards towards the inside). This means that when travelling in the direction of buoyage red, can-shaped buoys are left on the port side and green and conical buoys on the starboard side.

In places where the direction deviates from this general rule, as established by the authority in charge of fairway marking, the direction will be shown on the chart.

In accordance with the regulations which are designed to provide conformity in all European inland regulations, marks are placed relative to the right or left bank. These are defined as on the right or left of an observer looking in the direction indicated below:

- In rivers both free-flowing and canalized: in a downstreams direction and in tidal areas in the direction of the flow of the ebb stream.
- In canals: generally considered from up to down, i.e. in the direction of the lower lying terrain.
- In branch fairways and channels: in the direction of the main fairway or main channel;
- In lakes, closed arms of the sea etc., including channels which are no part of a through route: in the direction of the outlet to sea or open water.
- In the border lakes of Flevoland away from Amsterdam.

In case where the direction is not clear the Administrator of the Fairway will determine which bank is to be considered right and which left. The terms starboard/port (related to the direction of buoyage) and right/left (related to the banks) apparently contradict each other. In both systems however, the location of the red and can-shaped markings and the green conical ones is the same. The numbers of the red and green markings is done in both systems from seaward.

2.4.4

Winter buoyage

During winter months Lt buoys and buoys may be replaced by buoys, spar buoys or floating beacons painted in similar colours which may be without topmarks. Some fairways are changed to winter buoyage, as a precaution, between November and March.

During freezing conditions when ice is expected to form or when drift ice (ice fields braking away from shallows under the influence of the tide, current or wind) may be encountered, waterways are changed to winter buoyage; this will be recovered after the freezing period and the original buoyage will be replaced. During these periods, in such waters, navigation at night is limited or may be totally impracticable.

2.5

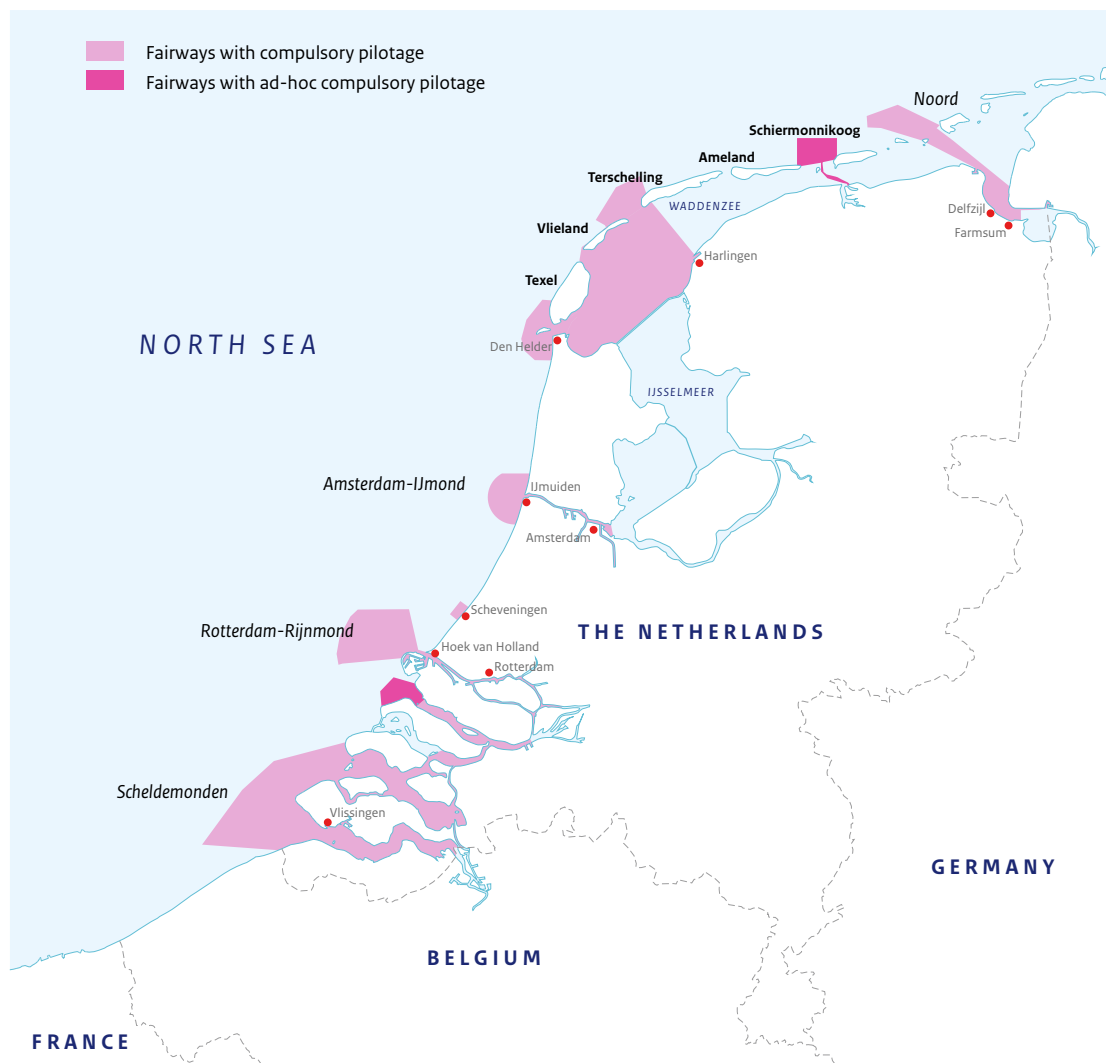
Pilotage (The Netherlands)

2.5.1

General

Pilotage is compulsory for the following regions:

- Region Noord: Delfzijl (incl. Oosterhornkanaal and Oosterhornhaven), Eemshaven and Eems Estuary, Terschelling estuary (Lauwersoog, Harlingen, West-Terschelling, Vlieland, Kornwerderzand and Den Oever).
- Region Amsterdam-IJmond: Approach IJmuiden, IJmuiden, Noordzeekanaal, Amsterdam and estuary of Texel (Den Helder, Den Oever, Oudeschild, Kornwerderzand).
- Region Rotterdam-Rijnmond: Scheveningen, Approach Nieuwe Waterweg; Maasmond, Nieuwe Waterweg, Breeddiep, Beerkanaal, Yangtzekanaal, Calandkanaal, Hartelkanaal, Nieuwe Maas, Koningshaven, Zuiddiepje, Noord, Rietbaan, Oude Maas, Spui, Beningen, Hollandsche IJssel up to the barrage at Krimpen aan de IJssel, Beneden Merwede up to Hardinxveld-Giessendam and Wantij, Dordtsche Kil, Krabbengeul, Mallegat, Hollandsche Diep west of Moerdijkbrug, Haringvliet, Vuile Gat, Krammer north of Krammersluizen, Zuid Vlije, Volkerak.
- Region Scheldemonden: Approaches to and River Scheldt, Ghent - Terneuzen Canal, Oosterschelde, Keeten, Mastgat, Zijpe, Krammer south of Krammer locks, Walcheren Canal, Zuid-Beveland Canal, Veerse Meer.



2.5.2

Exemptions compulsory pilotage

The following general exemptions to compulsory pilotage regulations are in force:

- Vessels performing maintenance or services such as tugs, dredgers, sludge-vessels and barges of up to a specific length, beam and draught. Unless these vessels are being used for different purposes when navigating on a designated fairway.
- Vessels passing through territorial waters without entering a Netherlands port
- Vessels under the pilotage of an officer with a Pilot Exemption Certificate (PEC)
- Navy vessels
- Pilot vessels, unless they are not being used for pilotage
- Vessels of up to a length, beam and draught mentioned in the table on the next page

Fairway	maximum length	maximum beam	maximum draught
Northern part of the Netherlands			
Westereems - Borkum	155m	25m	7m
Borkum - Eemshaven	95m	13m	7m
Delfzijl - Eemshaven/Borkum	95m	13m	6m
Approach Den Helder - Den Oever	75m		7m
Approach Den Helder - Kornwerderzand	75m		4m
Kornwerderzand - Harlingen	75m		2.5m
Harlingen - Vlierede	75m		6m
Remaining Waddenzee	65m		2.5m
Amsterdam - IJmond			
All fairways compulsory to pilotage	75m		
Rotterdam - Rijnmond			
All fairways compulsory to pilotage	75m		
Scheveningen			
All fairways compulsory to pilotage	100m		
Scheldemonden			
All fairways compulsory to pilotage	80m		

2.5.3 Ad-hoc compulsory pilotage

Vessels with exemption to compulsory pilotage can be ordered by the authorities to make use of a pilot due to weather conditions or when special circumstances apply to the vessel, passengers and/or crew, cargo, traffic or fairway do occur.

2.5.4 Shore based pilotage (SBP)

General information

As a rule a pilot will board a vessel to perform his duties. In some cases, however this may not be possible, e.g.:

- Due to bad weather conditions
- If the design of the vessel does not allow the pilot to embark offshore
- Other extraordinary circumstances

Unless the Harbour Master (Government) prohibits it, shore based pilotage will take place – in the above mentioned circumstances – by VHF but only on the sea-route (open water). In general a pilot will be able to embark the vessel once the vessel is inside. Mariners and Ship's Agents are advised to check Notices to Mariners and other publications on pilotage regularly to ensure that they have the latest possible information.

Masters of vessels compulsory to pilotage will be informed about alternative pilotage when 'normal' pilotage is suspended, as:

- Pilotage by helicopter
- Pilotage from an alternative pilot platform (e.g. Swath vessel)
- Shore based pilotage
- Waiting offshore (keep going, anchoring)

Masters obligations

- For the assessment of the request the master is asked by radio a number of questions regarding the manoeuvrability of his vessel, the equipment, means of communication and any details
- During SBP all communication is held in the English or Netherlands language according to the IMO Standard Marine Communication Phrases
- The master of a vessel which is not compulsory to pilotage can use the service of SBP on his own request when his vessel meets the admission policy
- The master of a vessel must acknowledge all advice immediately, repeating all courses and speeds passed, and any other details on request

- The master of a vessel must report immediately to the SBP-pilot when and in what way he deviates from advice given by the SBP-pilot
- SBP is given until the pilot embarks the vessel and he takes over the advice on navigation
- The masters acceptance of SBP is regarded as satisfying the requirements of pilotage

2.5.5 Pilot Exemption Certificate (PEC)

General PEC

Pilotage is always compulsory for vessels carrying dangerous cargo. Exemption to compulsory pilotage depends on special qualifications of crew members on board as defined by the National authorities.

Upon the completion of a specialised training programme, a Pilotage Exemption Certificate may be granted to a master or mate. Normally this exemption is valid only for a specific vessel and route. A PEC can be limited depending on training and examination, as defined by the National authorities.

Category	Requirements	Modules*
PEC A	3 port calls or 6 one-way voyages per year	1,2 and 3
PEC B	6 port calls or 12 one-way voyages per year	1,2, 3, 4 and 5
PEC C	12 port calls or 24 one-way voyages per year	1,2, 3, 4 and 5
PEC D	18 port calls or 36 one-way voyages per year	1,2, 3, 4 and 5
Note	*Modules: Module 1: National and International rules and regulations Module 2: Language requirements Module 3: Training voyages and familiarisation Module 4: Local rules, communication procedures, regional topography, etc. Module 5: Practical examination (8 trips)	

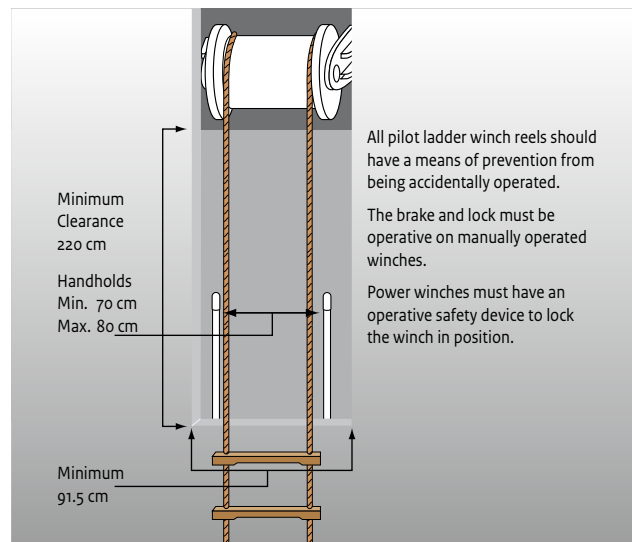
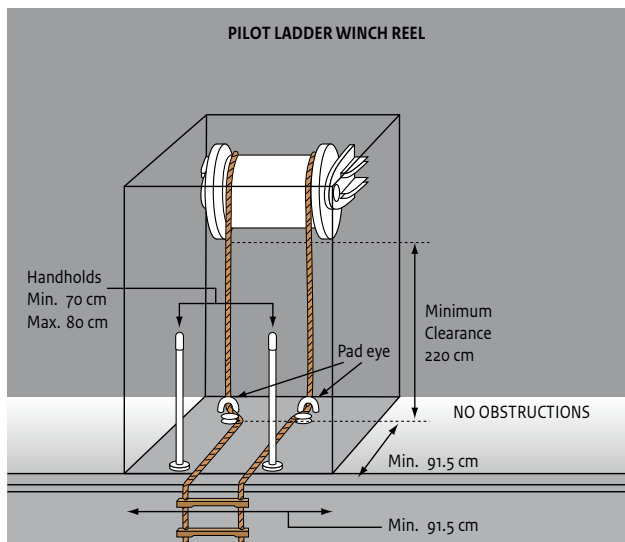
Every region has its own specialist training tailored to the needs of the port.

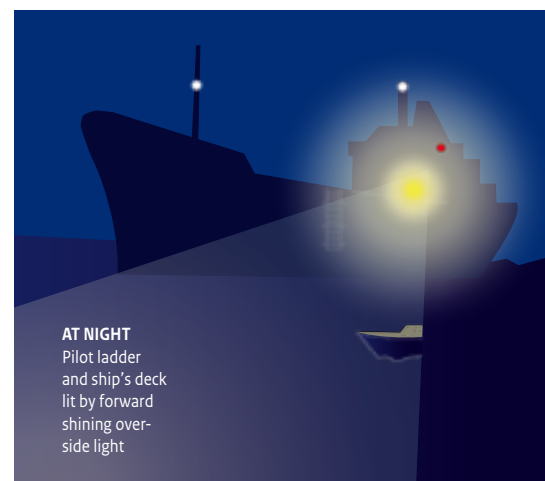
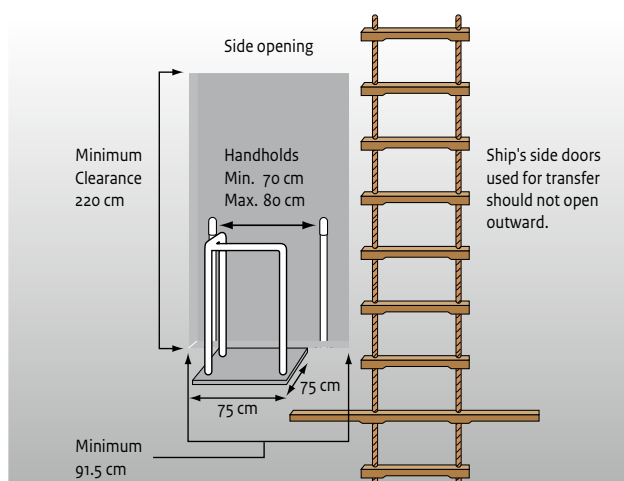
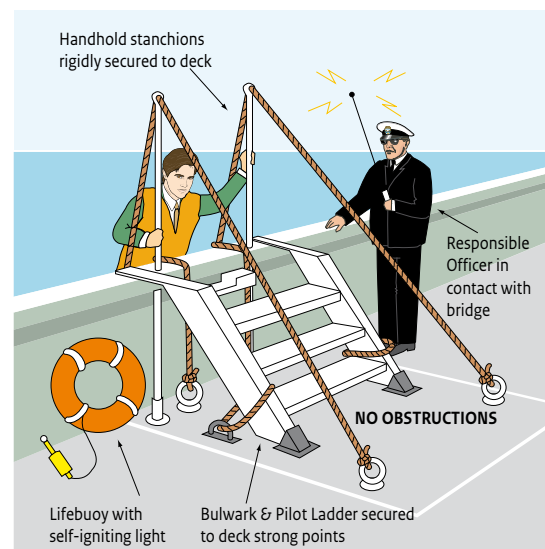
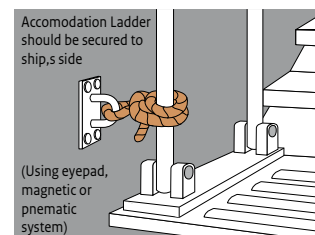
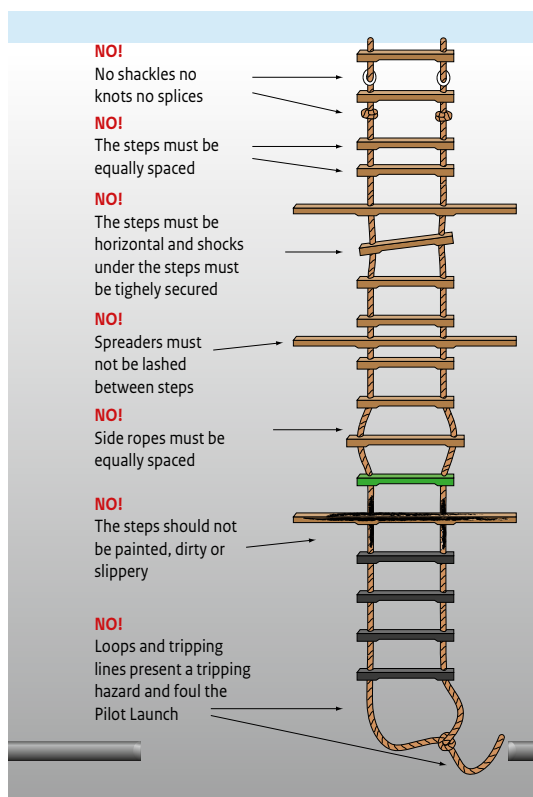
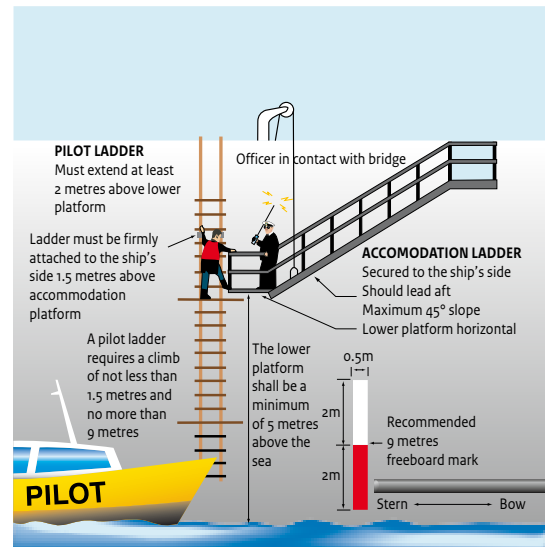
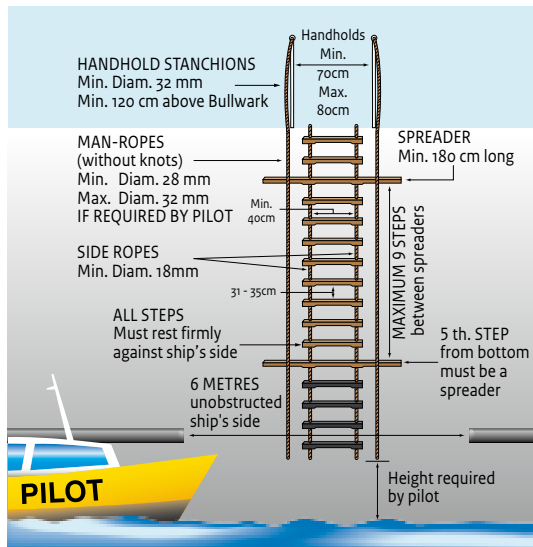
Special PEC

Smaller sea-going vessels: These vessels, with a maximum LOA of 115 metres and a height (keel to highest fixed point) of 18 metres are exempted from pilotage for the inland parts (river parts) of the designated fairways and up to 200NM from the coast. To obtain a PEC for a smaller sea-going vessel, modules 1 and 2 must be completed. There are no further requirements to maintain this licence.

LNG ship: tanker used for bunkering LNG.

2.5.6 Pilot boarding arrangements





2.5.7 Addresses Pilot Services

Addresses Pilot Services	
Nederlandse Loodsencorporatie	Berghaven 16, 3151 HB Hoek van Holland 3000 AV Rotterdam Telephone: +31 (0)88 900 25 00 E-mail: info@loodswezen.nl
Loodswezen Regio Scheldemonden	Boulevard de Ruyter 8, 4381 KA Vlissingen Telephone: +31 (0)118 48 95 00 E-mail: scheldemonden@loodswezen.nl
Loodswezen Regio Rotterdam-Rijnmond	Markweg 200, 3198 NB Europoort - Rotterdam Havennummer 6335 Telephone: +31 (0)88 900 30 00 E-mail: rotterdam-rijnmond@loodswezen.nl
Loodswezen Regio Amsterdam-IJmond	Kanaaldijk 242 1975 AJ IJmuiden Telephone: +31 (0)255 56 45 45 E-mail: amsterdam-ijmond@loodswezen.nl
Loodswezen Regio Noord	Schildweg 16A 9979 XR Eemshaven Telephone: +31 (0)596 61 81 88 E-mail: regionoord@loodswezen.nl

2.6 Pilotage (Belgium)

2.6.1 General information

Pilotage is provided jointly by Belgium and the Netherlands from open sea in the Westerschelde estuary to the Belgian ports on the Scheldt and on the Kanaal van Terneuzen to Gent and vice versa. For seagoing ships navigating these waters pilotage is compulsory, except for ships in ballast having draughts of less than 22dm. Only the Belgian Government pilots and the Netherlands Chartered pilots are authorized to render assistance. Pilot service to the coastal ports of Oostende, Zeebrugge and Nieuwpoort is exclusively carried out by Belgian Government pilots.

The request for pilot assistance is compulsory in the channels between the cruising stations of pilot boats and adjoining roads, except for ships having a draught of less than 22dm and in ballast.

2.7 Deep sea pilotage

2.7.1 Introduction

Vessels bound for ports in NW Europe may wish to embark deep sea pilots before reaching the complex traffic separation schemes in Dover Strait and the North Sea. Several other reasons like not fully updated charts, language problems and not being fully informed about port approach procedures, might warrant such request. Such properly licenced pilots, should be requested directly through the pilotage agencies or via the local agent. ETA's are normally to be given 48h and 24h in advance.

When a pilot is required in port, notice is depending upon which agency is preferred by the master or his company.

Vessels required to use the 'mandatory routes for tankers from North Hinder to the German Bight and vice versa' are referred to IMO resolution A.1080(28), adopted in December 2013, concerning the 'Recommendation on the use of adequately qualified Deep Sea pilots in the North Sea, English Channel and Skagerrak'.

2.7.2 Where to order deep sea pilots

Vessels requiring a deep sea pilot for the English Channel, North Sea and Skagerrak should send a request to a Deep Sea Pilot agency in one of the countries bordering the North Sea. For details regarding the procedures, see ALRS-Volume 6 (1) or contact one of the Deep Sea Pilot services below:

- <https://deepnorthseapilot.com> (France)
- <https://georgehammond.com> (United Kingdom)
- <https://www.dscp.net> (United Kingdom)
- <https://www.redwise-dcp.com> (Netherlands)
- germannorthseapilot@t-online.de (Email only, Germany)

2.8 Military exercise and detonation areas

2.8.1 On open sea

North Sea. North of Waddeneilanden

Firing exercises regularly take place from sunrise to sunset. Aircraft use targets in an area bound by a line connecting the position below:

- a 53°59,96'N 4°45,92'E
- b 53°59,96'N 6°06,35'E
- c 53°51,06'N 6°13,89'E
- d 53°37,59'N 5°05,92'E
- e 53°35,96'N 4°45,92'E
- f position sub (a)

North Sea. West of Haaksgronden

West of Haaksgronden an area has been designated as exercise area for The Royal Netherlands Navy. This anti-aircraft exercise area is bounded by the parallels of 53°05,0'N and 53°13,0'N, and the meridians of 3°45,0'E and 4°10,0'E.

Westerschelde approach. NW Zeebrugge

Exercise area naval shipping

Exercises will take place all through the year (day and night) within an area bound by a line joining the following positions:

- a 51°26,77'N 2°33,90'E
- b 51°35,37'N 2°35,88'E
- c 51°42,00'N 2°37,42'E
- d 51°42,00'N 2°39,20'E
- e 51°26,75'N 3°00,50'E
- f 51°26,77'N 2°49,86'E
- g 51°24,40'N 2°44,83'E
- h 51°24,04'N 2°40,30'E
- i 51°26,71'N 2°40,29'E

Shipping will be informed.

Detonation mines and munition

Incidentally, mines and munition will be detonated at 51°29.07'N 02°49.92'E with a safety radius of 3.2 nm. Shipping will be informed via VHF Ch 16 and are strongly requested to avoid the danger area from 2h before until just after the detonation.

2.8.2 On the seaward side

Near Petten. Sector 254° – 000°

Location of battery approximate 52°47.1'N 4°40.3'E (near beach pole No. 19). Firings will take place from the above location at the times promulgated in sectors 254° to 327°; or from 327° to 000° (measured from the battery) to a distance of 9 n miles. Minimum safe altitude for aircraft is 10 000 m (32 830ft). When firing is in progress two red flags will be hoisted as a warning signal, one near beach pole No. 19 and the other about 300m to the north.

Near Petten. Sector 225° – 345°

Location of battery: 4 possible deployments a the line between (a) approximate 52°47.7'N 4°40.3'E and (b) approximate. 52°47.8'N 4°41.0'E. Firings will take place as announced by the Royal Netherlands Army in the directions 225° and 345° (measured from the battery) to a maximum range of 14 n miles. Minimum safe altitude for aircraft is 10 000m (32 830ft). When firings are in progress the Netherlands flag will be flown from the flagstaff on the radar tower (approximate. 52°47.7'N 4°40.5'E) as a warning signal. In addition, red flags will be placed on the dunes north and south of the battery and on the beach.

Zeegat van Texel. West of Kaap Hoofd

Location of battery at fort 'Erfprins' approximate 52°57.7'N 4°44.2'E.

From the above battery, practice firing with machine guns takes place each working day from 0800 to 1200 and from 1400 to 1700.

The danger sector lies between the bearings 260° and 338° (from the battery) with a radius of 10 n miles. The minimum safe altitude for aircraft is 10 000m (32 830ft).

A red flag is hoisted on a radar signalling mast at fort Erfprins during firings. On completion of exercises the flag is lowered.

IJsselmeer. Breezanddijk

Location of battery approximate 53°01.1'N 5°12.5'E. From the above battery test firings with guns will take place at times promulgated within the area bound by a line joining the following positions:

- a 53°01.07'N 5°12.47'E
- b 52°53.70'N 5°15.92'E
- c 52°53.42'N 5°11.10'E
- d 52°48.60'N 5°10.19'E
- e 52°48.74'N 5°07.47'E
- f 52°50.84'N 5°07.74'E
- g 52°55.95'N 5°03.47'E
- h position (a)

Minimum safe altitude for aircraft is maximum 10 000m (32 830ft).

During firings the Netherlands flag is hoisted on a mast near the battery.

Warnings are transmitted via the following VHF Chs:

- West-Terschelling: VHF Ch 25
- Wieringerwerf: VHF Ch 27
- Lelystad: VHF Ch 83

During test firings the battery can be contacted on VHF Ch 71 with call sign 'Schietterrein Breezanddijk', or via VHF Ch 01 Reporting point 'IJsselmeergebied'.

Vlieland. Vliehors range

Location of observation post: 53°14.4'N 4°55.3'E.

Live firing is conducted from aircraft and helicopters on ground targets at the Vliehors land area. These exercises are conducted daily from 0830 until 2230, on Saturday and Sunday the range is closed. The use of this area is indicated by a white flashing light (red flashing at night) and a red flag hoisted on the observation post. When active, shipping and fishery should avoid the area and should not remain in the unsafe sector any longer than necessary for direct passage.

The unsafe sector covers the Westside of Vlieland, a North sea sector covering up to 7 nm to the west and an Waddenzee sector covering up to 7 nm to the east.

The area consists of sub areas which are only active when conducting certain exercises.

Passing vessels should contact "Vliehors Range Control" on VHF Ch 74 before entering the unsafe area to receive information about the actual exercises.

Lauwersmeer. Marnewaard

At the artillery range Marnewaard, firing exercises may be held daily from 0800 to 2300. The unsafe zone is bounded by 10 Lt poles, numbered SMW 1 up to and including 10, at the following positions:

- a 53°25,15'N 6°14,58'E (SMW1)
- b 53°25,48'N 6°15,15'E (SMW2)
- c 53°25,55'N 6°15,98'E (SMW3)
- d 53°25,68'N 6°16,87'E (SMW4)
- e 53°25,77'N 6°17,70'E (SMW5)
- f 53°25,78'N 6°18,55'E (SMW6)
- g 53°25,90'N 6°19,13'E (SMW7)
- h 53°25,95'N 6°19,88'E (SMW8)
- i 53°25,45'N 6°19,97'E (SMW9)
- j 53°25,03'N 6°20,07'E (SMW10)

Belgian coast. Nieuwpoort

Kleine sector – From the battery, practice firing with anti-aircraft artillery and naval artillery takes place. Location of danger sector: between the bearings 114° (Nieuwpoort Lt) and 191° (former water tower located at Westende 51°10,14'N 2°46,62'E); with a radius of 2.5 nm and its centre at Nieuwpoort Lt. During exercises a square red flag with above it a red spherical sign is hoisted at masthead 350m WSW of the water tower of Nieuwpoort. On completion of the exercises the sign will be lowered.

Midden sector – From the battery practice firing with anti-aircraft artillery and naval artillery takes place. Location of danger sector: Between the bearings 114° (Nieuwpoort Lt) and 191° (former water tower located at Westende 51°10,14'N 2°46,62'E); with a radius of 7,5 nm and its centre at 51°08,62'N 2°46,15'E. During exercises a square red flag with above it two red spherical signs is hoisted at masthead 350m WSW of the water tower of Nieuwpoort. On completion of the exercises the sign will be lowered.

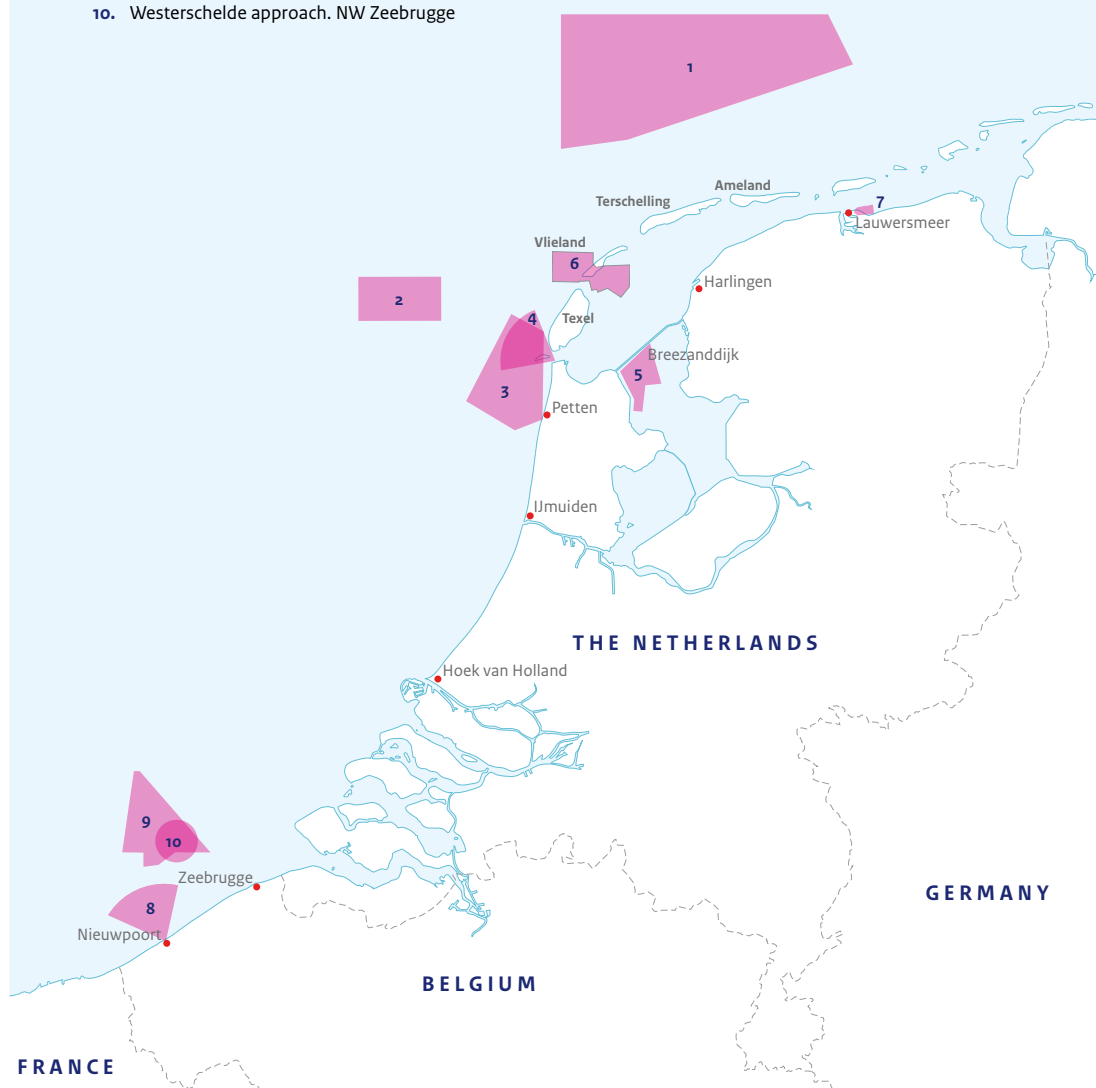
Grote sector – From the battery practice firing with anti-aircraft artillery and naval artillery takes place. Location of danger sector: Between the bearings 114° (Nieuwpoort Lt) and 191° (former water tower located at Westende 51°10,14'N 2°46,62'E); with a radius of 12 nm and its centre at 51°08.62'N 02°46.15'E. During exercises a square red flag with above it three red spherical signs is hoisted at masthead 350m WSW of the water tower of Nieuwpoort. On completion of the exercises the sign will be lowered. During exercises all batteries can be contacted on VHF Ch 74: Call sign = Sierra November (SN).

2.8.3**Announcement of firing exercises**

Firing exercises will be announced, as far as possible, in Belgian Notices to Mariners (BaZ), via MSI from MRCC and/or firing signals or by navy vessels in the area concerned. All shipping is prohibited in the danger area during the exercise. If one of the warning signals, indicating that firings are going to take place, is shown, vessels should not remain in the danger area any longer than is necessary for a direct passage. Further details on the planning of the exercises may be obtained via www.mil.be/nl/agenda/militaire-oefeningen/ or by telephone +32 (0)58 23 64 60.

MILITARY EXERCISE AND DETONATION AREAS

1. North Sea. North of Waddeneilanden
2. North Sea. West of Haaksgronden
3. Near Petten.
4. Zeegat van Texel. West of Kaap Hoofd
5. IJsselmeer. Breezanddijk
6. Vlieland. Vliehors
7. Lauwersmeer. Marnewaard
8. Belgian Coast. Nieuwpoort
9. Westerschelde approach. NW Zeebrugge
10. Westerschelde approach. NW Zeebrugge



2.9 Exercises with mine countermeasure vessels

Mine hunting, mine sweeping and mine laying exercises will take place in one or more areas as mentioned in the table. Just before starting the exercises, shipping will be informed via a Navarea I warning and/or local navigational warning. The areas concerned will be indicated by means of their serial number.

Mine laying and mine hunting exercise areas		
Serial number	Area	Boundary
NB 1	West Hinder	a. 51°28.850'N 02°44.919'E b. 51°26.750'N 02°44.919'E c. 51°26.750'N 02°35.519'E d. 51°28.850'N 02°35.519'E
NB 4	Schouwenbank	Circular area Centre 51°48.018'N 03°14.289'E Radius: 2.0 n miles
NB 6	Westgat	Circular area Centre: 51°39.951'N 03°34.920'E Radius 1.5 n miles
NB 8	Molengat	Circular area Centre: 53°05.954'N 04°36.419'E Radius 1.5 n miles
NB 9	Goeree	Circular area centre: 51°54.451'N 03°43.590'E radius 1.0 n miles
NBH 10	Wenduine	a. 51°18.53'N 02°53.00'E b. 51°21.00'N 02°53.00'E c. 51°21.00'N 02°59.49'E
NB 12	Callantsoog	a. 52°53.954'N 04°22.919'E b. 52°53.954'N 04°29.919'E c. 52°49.954'N 04°29.919'E d. 52°49.954'N 04°22.919'E
QZR 040	Buiten Ratel	a. 51°15.12'N 02°27.61'E b. 51°17.21'N 02°29.23'E c. 51°18.51'N 02°31.83'E d. 51°19.60'N 02°33.60'E e. 51°19.60'N 02°36.09'E f. 51°19.34'N 02°34.72'E g. 51°18.13'N 02°32.43'E h. 51°16.79'N 02°29.77'E i. 51°14.89'N 02°28.39'E
QZR	Buiten Ratel	a. 51°16.20'N 02°30.40'E b. 51°17.00'N 02°29.50'E c. 51°18.30'N 02°32.10'E d. 51°17.50'N 02°33.10'E

Notes

- Vessels engaged in minehunting display the signals prescribed in Rule 27(f) of the International Regulations for Preventing Collisions at sea (1972). Other vessels should not approach within 1 000m. Small boats or inflatable dinghies, from which divers may be operating or controlling a wire guide submersible, may be used in conjunction with mine hunters. These may be up to 1 000m from the minehunter.
- When operating divers, small boats or dinghies show flag 'A' of the International Code by day, or exhibit the lights prescribed in Rule 23(c) or Rule 25(d)(ii) of the International Regulations for Preventing Collisions at sea (1972), at night. Mariners should navigate with caution in the proximity of a mineclearance vessel, or any small boat or inflatable dinghy operating in the vicinity, and avoid passing within 1 000m whenever practicable.
- Mineclearance operations may require the vessel engaged to lay small buoys which normally carry a radar reflector and a flag. By night these buoys exhibit a white, red or green flashing light, visible all round the horizon for a distance of 1 n mile.

MINE LAYING AND MINE HUNTING EXERCISE AREAS

NB1	Westhinder
NB4	Schouwenbank
NB6	Westgat
NB8	Molengat
NB9	Goeree
NBH10	Wenduinebank
NB12	Callantsoog
QZR040	Buiten Ratel
BUITEN RATEL	



2.10 Warning for mines and explosives

Explosive ordnances are regularly reported and/or recovered within the North Sea area. The danger to surface navigation is regarded as no greater than the normal dangers to shipping. Explosives ordnances on or below the seabed still present a hazard to vessels fishing, anchoring or carrying out submerged operations.

2.11 Offshore operations

2.11.1 Oil and gas operations

Oil and gasfields are exploited in many parts of the North Sea.

Though the basic methods used for exploiting oil and gas have become established, details of systems and structures used vary with the requirements of the different fields and are continually being developed. Navigation in the vicinity of shipping routes is often restricted by offshore installations which are used to explore and exploit offshore oil and gasfields. These installations are usually protected by Safety Zones. Submarine pipelines and cables, and sub-sea structures also usually exist on the seabed in the vicinity of oil and gasfields. Vessels should navigate with particular care near areas of offshore activity.

2.11.2 Offshore wind farms

Wind farms continue to be built in the North Sea. New wind farm areas are announced by NtM. During construction, these areas are closed. The areas open for passage and shared-use activities when construction is complete and the area is operational.

For more information about wind farms in general, see The Mariner's Handbook (NP 100).

Dutch wind farms

Passage through wind farm areas comes with potential hazards and associated risks, that must be taken into account. Significant risks could be the turbine towers, the moving rotor blades and various high-voltage cables that run between individual wind turbines and between turbines and the transformer station. Passing through a wind farm area increases the likelihood of damage to the valuable installations. Moreover, mariners should be aware that it is more difficult for emergency services to operate within a wind farm area.

Rules for shipping in wind farm Egmond aan Zee and Prinses Amalia

- An AIS transponder (at least Class B) and a marine VHF radio (tuned to Ch 16) must be in operation. You are obliged to take action when you receive instructions.
- Wind farms may be entered during day time only, entry after sunset is prohibited and penalties will be enforced. The times of sunrise and sunset as determined by the Royal Netherlands Meteorological Institute (KNMI) are decisive in this.
- Wind farms may only be entered by vessels with a length overall (LOA) of up to 24m.
- It is not permitted to alight on structures within the wind farm area. Keep at least a 50m distance from wind turbine towers and 500m from a transformer station. This also applies to objects extending from the vessel, such as lines, floats and hooks.
- It is not permitted to make contact with the sea bed in wind farm areas, for example, by dropping anchor or trawling over the sea bed with nets.
- Other fishing gear must be fastened so that it cannot be used at short notice. Fishing gear must be visible on deck in its entirety so that it is clear there is nothing trawling along the sea bed.

Rules for shipping in wind farm Borssele

- Vessels may only pass through wind farm Borssele by using the designated Borssele Wind Farm Pass (corridor).
- IMO-enforced routing measures apply in the corridor and an 'area to be avoided' (ATBA), see chapter 16, has been created.
- Vessels with a length of up to 45m, not carrying hazardous cargo, are permitted to use the corridor.
- Outside the corridor, safety zones with a radius of 500m around the platforms and 500m around the outer limits of the wind farm have been set up. Passage through these safety zones is not permitted. This also applies to objects extending from the vessel, such as lines, floats and hooks.
- It is recommended that you have an AIS transponder (at least Class B) and a marine VHF radio (tuned to Ch 16) in operation. You are obliged to take action when you receive instructions.
- A number of cables and pipelines are situated on the seabed of the corridor. As a consequence, it is strongly recommended that you do not make contact with the sea bed, for example, by dropping anchor or trawling over the sea bed with nets.

Wind farm Hollandse Kust (Zuid)

- Passage is solely permitted when using the specially designated corridor. A distance of at least 150 meters must be maintained from the wind turbines at all times. This also applies to objects extending from the vessel, such as lines, floats and hooks.
- Vessels with a length of up to 46 meters are permitted to use the corridor, both during the day and at night.
- It is mandatory that you have an AIS transponder (at least class B) in operation and listen to VHF channel 16 to receive any instructions. You must take action if the instructions are addressed to you.
- It is not permitted to enter any structures located inside the wind farm.
- Several cables lie on the seabed of the corridor. It is therefore not permitted to make contact with the seabed when using the corridor, for example by anchoring or trawling nets.
- Fishing with a fishing rod is permitted in the corridor, provided this does not cause any nuisance or dangerous situations for other shipping. Other fishing gear is secured in such a way that it cannot be used immediately. Fishing vessels using the corridor must ensure that the fishing gear is fully visible on the deck so that it is always clear that nothing drags on the bottom.

Wind farm Fryslân

Passage through the wind farm is permitted. But within the wind farm, a mandatory safety distance of 50 meters to a wind turbine applies.

Other Dutch wind farms on the North Sea

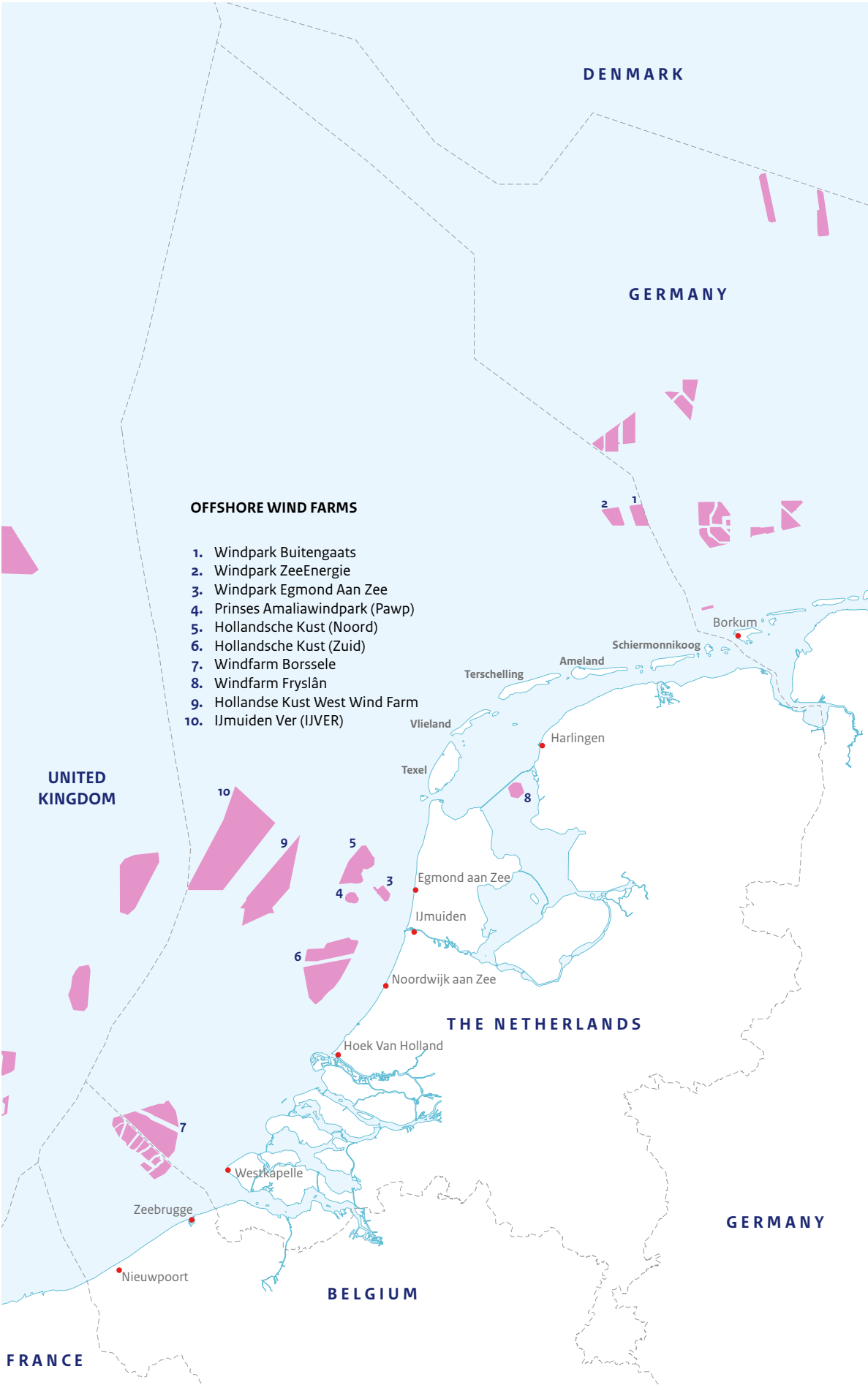
Passage through the other wind farms is not allowed.

Belgian wind farms

Passage through the Belgian wind farms is not allowed.

German wind farms

Passage through some wind farms is permitted under certain conditions. See Nordsee Handbuch, südöstlicher Teil, BSH 20061 for more information. Passage through wind farms under construction is always prohibited.



2.11.3 Safety zones

Introduction

Safety zones prohibit unauthorised entry thereby protecting mariners and fishermen by reducing the risk of collision, but they also protect the lives and equipment of those working in the zones (divers and submersibles are particularly vulnerable).

International law

Under international law a coastal state may establish safety zones around installation and other devices on the continental shelf necessary for the exploration and exploitation of its natural resources. These installations include movable drilling rigs, production platforms, wellheads, wind farms, etc.

Safety zones normally extend to a distance of 500m around installations measured from their outer edges. Within these zones measures can be taken to protect installations. Vessels of all nationalities are required to respect these safety zones.

IMO recommends vessels which are passing close to offshore installations or structures to:

- Navigate with care when passing near offshore installations or structures giving consideration to safe speed and safe passing distances taking into account the prevailing weather conditions and the presence of other vessels or dangers.
- Where appropriate, take early and substantial avoiding action when approaching such installations or structures to facilitate the installation's or structure's awareness of the vessel's closest point of approach and provide information on any possible safety concerns, particularly where the offshore installation or structure may be used as a navigational aid.
- Use any designated routing system established in the area
- Maintain a continuous listening watch on the navigating bridge on VHF Ch 16 when navigation near offshore installations or structures to allow radio contact to be established between such installations or structures, standby vessels, vessel traffic services and other vessels so that any uncertainty as to a vessel maintaining an adequate passing distance from installations or structures can be alleviated.

National laws

Many coastal states (including The Netherlands) have made entry by unauthorised vessels into declared safety zones a criminal offence. As the type of installation subject to safety zones varies from state to state, mariners are advised always to assume the existence of a safety zone unless they have information to the contrary.

Some coastal states have declared prohibitions on entry into, or on fishing and anchoring within areas extending beyond 500m from installations. Publication of details of such wider areas are solely for the safety and convenience of shipping, and implies no recognition of the international validity of such restrictions.

2.12 Submarine pipelines and cables

2.12.1 Submarine pipelines

Introduction

Submarine pipelines are laid on the seabed for the conveyance of water, oil or gas and may extend many miles into the open sea, and between offshore platforms and production wells. They may be buried, trenched, or stand as much as 2m above the seabed. Pipelines which were originally buried may have become exposed with time. Some pipelines have associated joints (known as sub-sea tees), valves and manifolds, which are often protected by guard domes of steel or concrete rising up to 10m above the seabed. These structures are shown on charts, if known, by a danger circle with the least depth over the structure, if known, and an appropriate legend.

Where pipelines are close together, only one may be charted. They may span across seabed undulations; the size and positions of such spans are not constant and may vary due to tide and wave action.

Caution

Pipelines may contain flammable oil or gas under high pressure. A vessel causing damage to a pipeline could face an immediate hazard by loss of buoyancy due to gas aereated water or fire/explosion, and result in an environmental hazard. Additionally, damage to the pipeline could lead to prosecution where it could be shown to have been done wilfully or through neglect.

Every care should therefore be taken to avoid anchoring, trawling, fishing, dredging, drilling or carrying out any activity close to submarine pipelines.

It is possible for fishing gear to become snagged under a pipeline so that it is irrecoverable, which could present a serious hazard to the fishing vessel. In the event that masters or skippers suspect that they have fouled a pipeline with gear or anchors, they should not place excessive weight on their gear, which could damage the pipeline and endanger their vessel and crew.

On charts, pipelines carry an appropriate legend (Water, Gas or Oil), where known, and in the case of oil or gas pipelines, there will be a cautionary chartnote.

2.12.2**Submarine cables****General information**

Certain submarine cables are used for telecommunications functions while others are used for power transmission. All power cables and most telecommunications cables carry dangerous high voltages. Damaging or severing a submarine cable, whether a telecommunications cable or a power cable, may, in some circumstances be considered as a national disaster and very severe criminal penalties may apply. Electrocution, with injury or loss of life, could occur if any cables carrying high voltage are breached. Depending on whether the cable is primarily for power or telecommunications, damage may result in power cuts, loss of voice, data transfer or internet connectivity. In these circumstances cables are considered to be critical infrastructure.

In view of the serious consequences resulting from damage to submarine cables, vessel operators should take special care when anchoring, fishing, mining, dredging, or engaging in underwater operations near areas where these cables may exist or have been reported to exist. In order to minimize the risk of such damage as much as possible, vessels should avoid any such activity at a minimum distance of 0.25 nm on either side of submarine cables.

Mariners are also warned that the seafloor where cables were originally buried may have changed and cables become exposed; therefore particular caution should be taken when operating vessels in areas where submarine cables exist especially where the depth of water means that there is a limited underkeel clearance.

Vessels fouling a submarine cable should not attempt to clear or raise the cable due to the high possibility of damaging the cable. No attempt should be made to cut a cable and anchors or gear that cannot be cleared should be slipped. Before any attempt to slip or cut gear from the cable is made, the cable should first be lowered to the seafloor. Note that there is a risk of capsizing smaller vessels (primarily fishing vessels) if they attempt to bring a cable to the surface. Following an incident of fouling a cable, a vessel should immediately notify the local responsible authority of the position, type, and amount of gear remaining on the seafloor. In inland areas or along the coast, warning signs or marker beacons are often erected to warn the mariner of the existence of submarine cables.

Charting

The majority of cables shown on navigational charts are active. However, not all such cables may be depicted, as hydrographic authorities may not consider it necessary to chart every cable, or the relevant source data may not be available.

2.12.3**Incidents with submarine cables or pipelines**

Incidents involving the fouling of submarine cables or pipelines should be reported at the shortest possible notice to the responsible authorities, e.g. Coastguard, who should be advised as to the nature of the problem and the position of the vessel (see also section 2.19 'Incident reporting').

2.13 Shipping regulations

The illustration below gives an overview of the main shipping regulations which are in force in the North Sea, the Westerschelde, the Eems Estuary and the inland waterways of the Netherlands. For a safe navigation shipping should consult the concerning regulations.



2.14 World-Wide Navigational Warning Service (WWNWS)

2.14.1 Introduction

The objective of the World-Wide Navigational Warning Service, jointly established by the IHO and IMO, is to inform the international shipping about important navigational hazards by means of Radio Navigational Warnings (RNW).

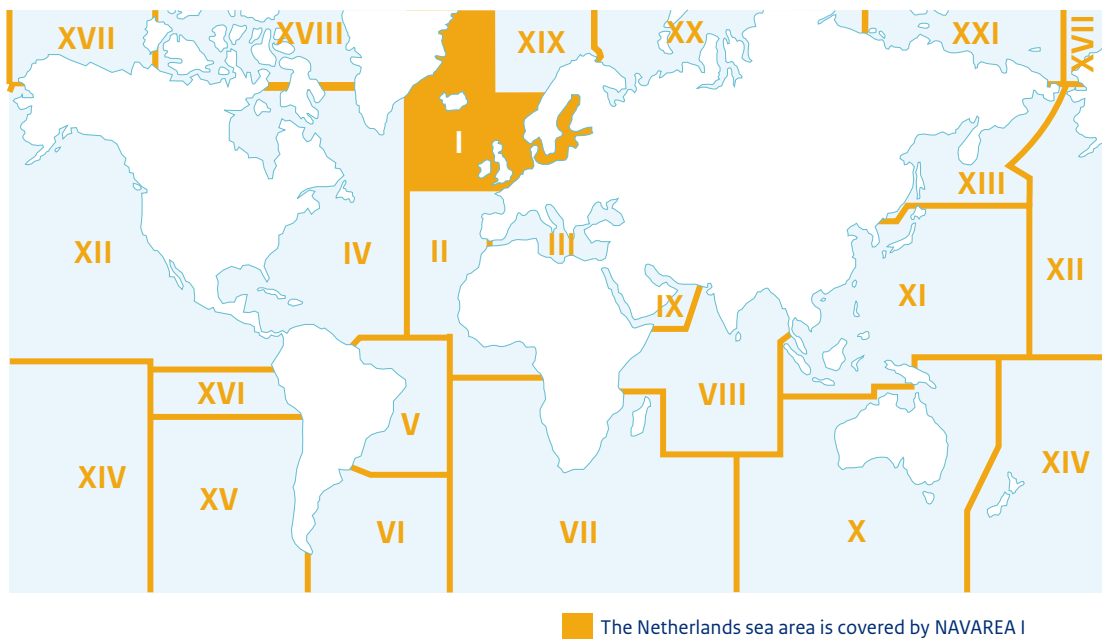
2.14.2 Kinds of RNW

Navarea warnings

The following map shows the limits of the 21 NAVAREAs, identified by Roman numerals. Each area is under the authority of an Area Coordinator, to whom National Coordinators pass navigational warnings originated by their own countries, deemed suitable for promulgation in the appropriate NAVAREA.

NAVAREA warnings are issued when immediate notification of new dangers and changes in navigation aids is essential.

The Netherlands sea area (National Coordinator = The Netherlands Coastguard) is covered by NAVAREA I.
NAVAREA I warnings can be received by a Navtex receiver and are transmitted by radio stations at fixed times (UTC) as shown in the table.
All warnings will also be published in the weekly Notices to Mariners (NtM) of the United Kingdom Hydrographic Office.



The table on the next page shows the operational stations in NAVAREA I with transmissions at fixed times (UTC).

Transmission times NAVAREA I stations						
Stations	ID	Transmission times				
Sweden						
Bjuröklubb [64°28'N 21°35'E]	H	01.10 (N)	05.10 (S,N)	09.10 (W,N)	13.10 (N,I)	17.10 (W,N)
Grimeton [57°06'N 12°23'E]	I	01.20 (N)	05.20 (S,N)	09.20 (W,N)	13.20 (N,I)	17.20 (W,N)
Gisöshammar [55°29'N 14°19'E]	J	01.30 (N)	05.30 (S,N)	09.30 (W,N)	13.30 (N,I)	17.30 (W,N)
Norway						
Jeløya [59°26'N 10°36'E]	M	02.00 (W,N)	06.00 (N)	10.00 (N)	14.00 (W,N)	18.00 (N)
Ørlandet [63°40'N 9°33'E]	N	02.10 (W,N)	06.10 (N)	10.10 (N)	14.10 (W,N)	18.10 (N)
Rogaland [58°39'N 5°36'E]	L	01.50 (W,N)	05.50 (N)	09.50 (N)	13.50 (W,N)	17.50 (N)
United Kingdom						
Niton [50°35'N 1°15'W]	E	00.40 (W,N)	04.40 (N)	08.40 (W,N)	12.40 (N)	16.40 (N)
Cullercoats [55°04'N 1°28'W]	G	01.00 (W,N)	05.00 (N)	09.00 (W,N)	13.00 (N)	17.00 (N)
Niton (N France) [50°35'N 1°15'W]	K	01.40 (N)	05.40 (N)	09.40 (N)	13.40 (N)	17.40 (N)
Portpatrick [54°51'N 5°07'W]	O	02.20 (W,N)	06.20 (W,N)	10.20 (N)	14.20 (N)	18.20 (W,N)
Ireland						
Malin Head [55°22'N 7°21'W]	Q	02.40 (N)	06.40 (W,N)	10.40 (W,N)	14.40 (N)	18.40 (W,N)
Valentia [51°56'N 10°21'W]	W	03.40 (N)	07.40 (W,N)	11.40 (W, N)	15.40 (N)	19.40 (W,N)
Estonia						
Tallinn [59°27'N 24°21'E]	U	03.20 (N)	07.20 (W,N)	11.20 (N,I)	15.20 (N)	19.20 (W,N)
Belgium						
Oostende (Thames) [51°11'N 2°48'E]	V	03.30 (N)	07.30 (N)	11.30 (N)	15.30 (N)	19.30 (N)
Oostende [51°11'N 2°48'E]	T	03.10 (N,I)	07.10 (W,N,I)	11.10 (N,I)	15.10 (N,I)	19.10 (N,W,I)
Iceland						
Grindavik [63°50'N 22°27'W]	X	03.50 (W,N)	07.50 (W,N)	11.50 W,N)	15.50 (W,N)	19.50 (W,N)
Saudanes [66°11'N 18°57'W]	R	02.50 (W,N)	06.50 (W,N)	10.50 (W,N)	14.50 (S,N,I)	18.50 (W,N)
Germany						
Pinneberg [53°40'N 9°48'E]	S	03.00 (N)	07.00 (W)	11.00 (W,I)	15.00 (W)	19.00 (N)
The Netherlands						
Den Helder [52°55'N 4°44'E]	P	02.30 (N,W)	06.30 (N)	10.30 (N,I)	14.30 (N,W)	18.30 (N)
Faroe Islands						
Tórshavn [48°29'N 5°03'W]	D	00.30 (W,N)	04.30 (N)	08.30 (N)	12.30 (W,N)	16.30 (N)
(W) = weather forecast; (N)= navigational warnings; (I) = ice messages						

Coastal Warnings

Coastal warnings are issued by the National Coordinator of the country of origin and give information which is of importance only in a particular region. They often supplement the information in NAVAREA Warnings. The messages are issued in the English language, but may also be in the local language.

Local warnings

Local warnings are issued by port authorities. They give information which normally is not required by oceangoing ships. The message may be issued in the local language.

2.14.3**Types of messages**

- malfunctioning of lights, fog signals and buoys affecting the main shipping lanes
- the presence of dangerous wrecks in or near main shipping lanes and if relevant, their marking
- establishment of major new aids to navigation or significant changes to existing ones when such establishment or change might be misleading to shipping
- the presence of large unwieldy tows in congested waters
- drifting mines
- areas where search and rescue (SAR) and anti-pollution operations are being carried out (for avoidance of such areas)
- unexpected alterations or suspension of established routes
- establishment of offshore structures in or near shipping lanes
- significant malfunctioning of radio-navigation services
- cable-laying activities, pipeline construction or other underwater operations constituting potential dangers in or near shipping lanes or special operations which might affect the safety of shipping, sometimes over wide areas, e.g. naval exercises, missile firings, space missions, nuclear tests, etc. It is important that where the degree of hazard is known, this information is included in the relevant warning. The warning would be in force until the event is completed.
- ice reports
- storm warnings

2.14.4**Ships' reports**

Ships which run across a navigational hazard should report this to the nearest radio station and to ships in the vicinity. This messages should be preceded by the safety sign Sécurité, repeated (3x) with short intervals.

2.15**Global Maritime Distress and Safety System (GMDSS)****2.15.1****General**

Distress and safety messages are part of GMDSS radio communication. This chapter will discuss the following items:

- announcement of broadcasting safety messages on VHF and MF DSC
- safety messages and weather forecast for the Southern North Sea and the Netherlands coastal waters
- ice messages
- Radio Medical Assistance
- procedures with regard to actions to be taken after receiving a DSC distress alert
- flow charts with regards to distress alerts

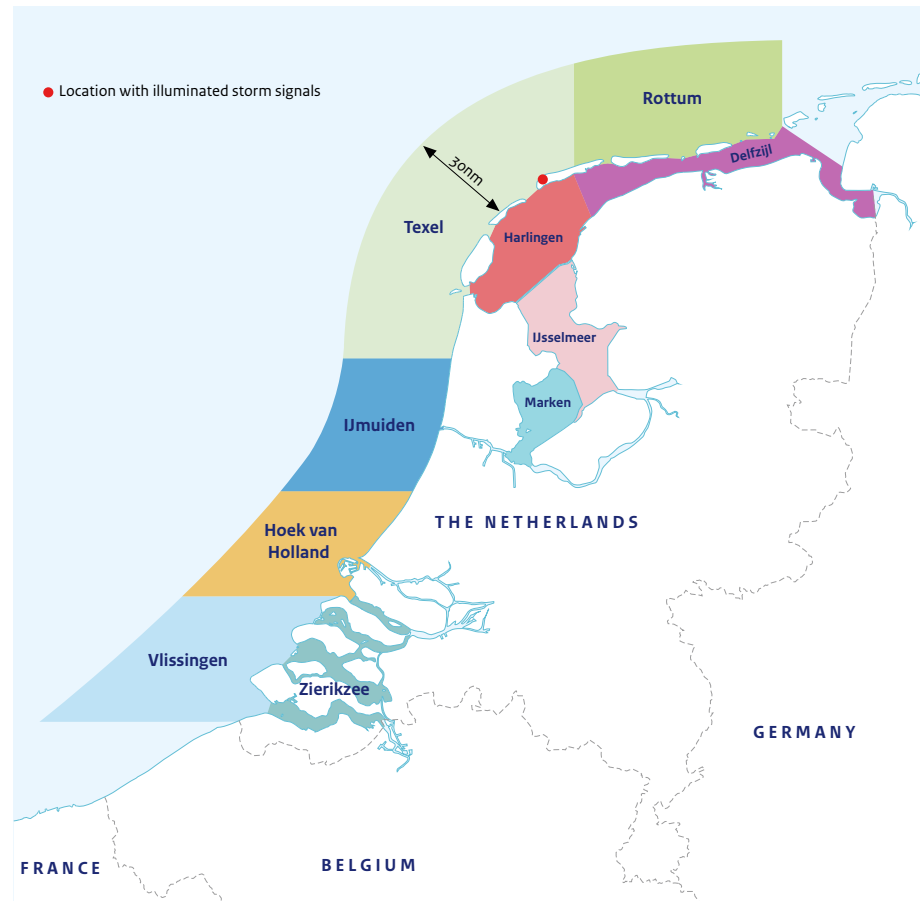
2.15.2**Announcement of broadcasting safety messages on VHF and MF DSC**

The Netherlands has been taking measures to avoid unnecessary and multiple use of the DSC system for announcements of safety messages on VHF Chs and MF frequencies. The broadcasting of safety messages and weather forecast will take place on fixed times. Only very important messages will be announced on DSC.

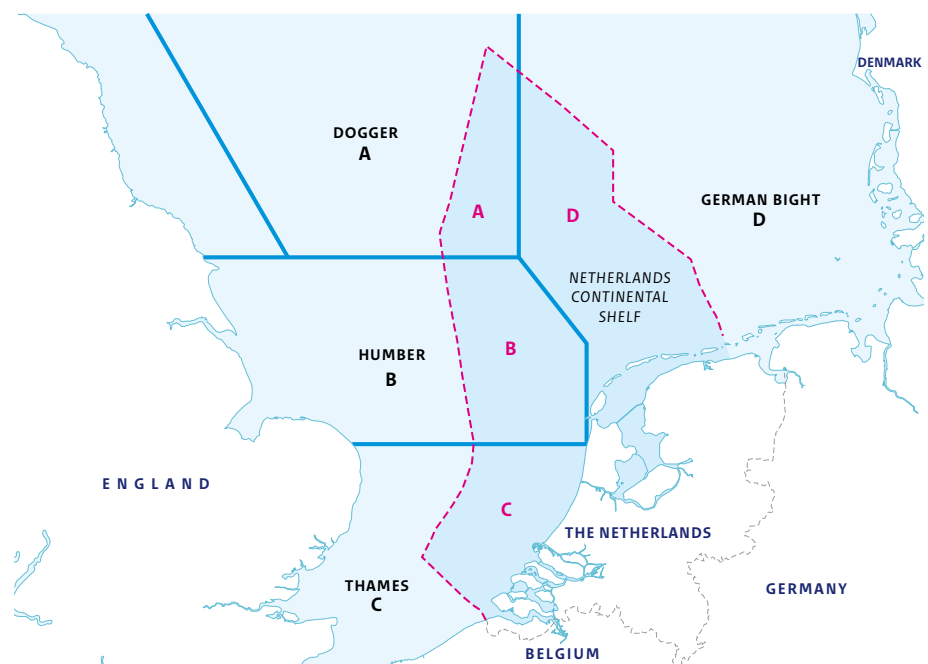
2.15.3

Broadcasting Netherlands part of southern North Sea and Netherlands coastal waters**Introduction**

The Joint Rescue Coordination Centre (JRCC) Den Helder is responsible for broadcasting safety messages and weather forecasts via Navtex, VHF en MF. The weather forecasts and storm warnings can also be found on: <https://www.knmi.nl/nederland-nu/maritiem>. Safety messages include navigational warnings, weather forecasts, warnings related to position fixing systems and ice messages.

Safety messages Netherlands Coastal waters and adjacent lakes and estuaries

Station	VHF Ch	Hours of transmission in UTC		Meteo forecast areas
		Navigational-/ Storm warnings	Weather forecast	
JRCC Den Helder	VHF Ch 23 and Ch 83	0333 – 0733 1133 – 1533 1933 – 2333 +On receipt (storm warnings of force 6 Bft)	0805 – 1305 1905 – 2305	NL coastal waters and adjacent lakes and estuaries
HCC Rotterdam	VHF Ch 19	H + 50 min.		Rijnmond
TC Vlissingen	VHF Ch 14 VHF Ch 21	H + 50 min. H + 55 min.		River Westerschelde
TC Zeebrugge	VHF Ch 69 VHF Ch 04	H + 10 min. H + 15 min.		
TC Zandvliet	VHF Ch 12	H + 30 min.		
TC Terneuzen	VHF Ch 11	H + 00 min.		
Note	Most warnings will be announced through DSC 2187.5 kHz and/or VHF Ch 70/16.			

Safety messages Netherlands Continental Shelf

Station	Frequency	Hours of transmission in UTC		Meteo forecast areas
		Navigational-/ Storm warnings	Weather forecast	
JRCC Den Helder	MF 3673	0333 – 0733 1133 – 1533 1933 – 2333 +On receipt (stormwarnings of force 7 Bft)	0940 – 2140	A – B – C – D
	MF 1890	0333 – 0733 1133 – 1533 1933 – 2333 +On receipt (stormwarnings of force 7 Bft)	–	A – B – C – D
	Navtex [P] 518 kHz	0230 – 0630 1030 – 1430 1830 – 2230 +On receipt (stormwarnings of force 7 Bft)	0230 – 1430	Netherlands Continental Shelf A – B – C – D
Note	Most warnings will be announced through DSC 2187.5 kHz and/or VHF Ch 70/16.			

Ice messages

Messages concerning ice formation on the North Sea and some harbours and their approaches in the Netherlands will be announced in concise form by the Netherlands Coastguard via NAVTEX (Baltic Sea Ice code). Detailed information for the areas concerned is given by the regional traffic centres or traffic stations.

2.15.4**Radio Medical Service**

Radio communication on behalf of Radio Medical Service will take place through the Netherlands Coastguard. JRCC Den Helder can be activated by using DSC 2187.5 kHz, DSC VHF Channel 70 or VHF Channel 16. After contact has been established the Coastguard will refer the vessel to a working frequency for consulting the physician of the Radio Medical Service.

When using INMARSAT satellite telephone, the connection with the Coastguard will take place automatically (via LES Burum) after using code 38 (medical assistance), code 32 (medical advice) or code 00 (non-urgent). After exchanging information the vessel will be connected with a physician of the Radio Medical Service.

When a request for Radio Medical Advice has been made via INMARSAT-C or Fleet broadband Data (via LES Burum) the request will be passed through automatically to the physician of the medical service.

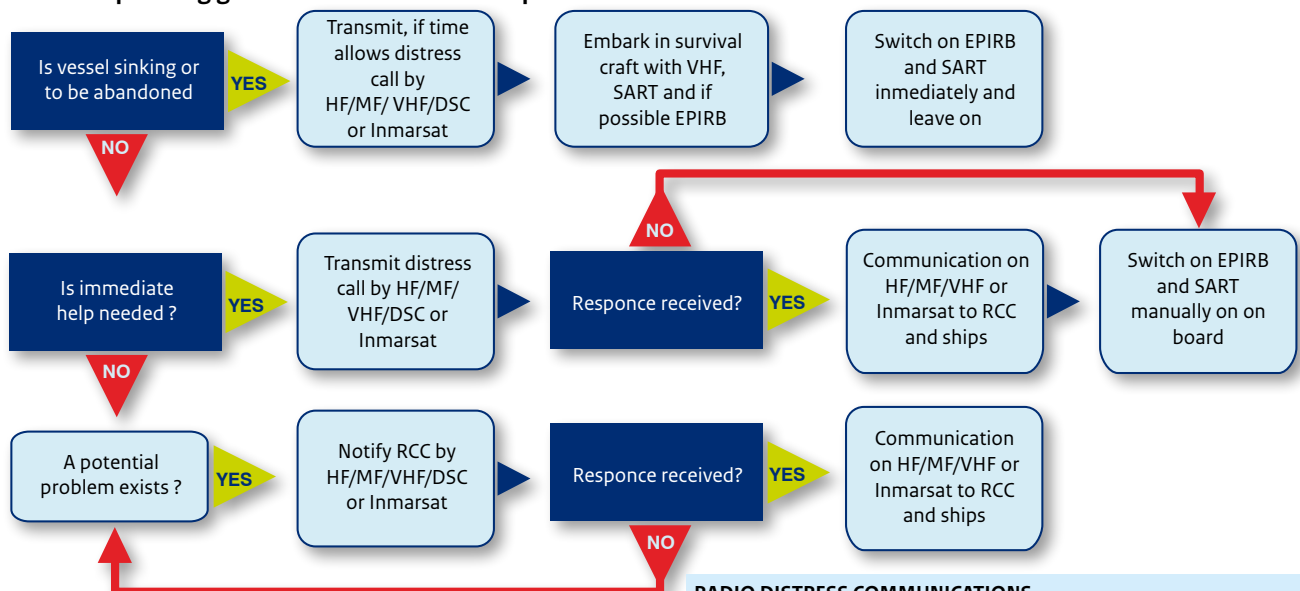
Provided an internet connection is available it is possible to exchange information by e-mail. Send the appropriate information to 38@rmd.knrm.nl (urgent/medical assistance), 32@rmd.knrm.nl (regular/medical advice) or 00@rmd.knrm.nl (non-urgent). When using e-mail there is no guarantee regarding reception and transmission of messages. If you do not receive a fairly prompt reply, you are advised to contact the Netherlands Coastguard. The Netherlands Coastguard can be contacted for Radio medical Advice by phone on +31(0)88 950 4020.

2.15.5

Flow charts with regard to distress alerts

Under the supervision of IMO some clearly structured flow charts have been developed which show the actions to be taken after the reception of a DSC distress alert. The main message of these flow charts is that one should not respond immediately upon receiving a distress alert but has to listen for 5 minutes in order to allow a CS or RCC to respond.

GMDSS operating guidance for masters of ships in distress situations

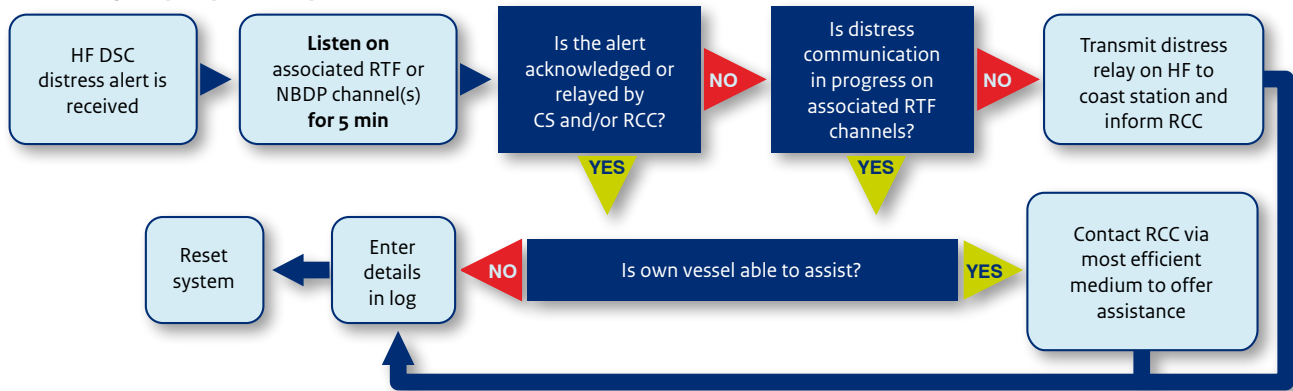


1. EPIRB should float free and activate automatically if it cannot be taken into survival craft.
2. Where necessary, ships should use any appropriate means to alert other ships.

RADIO DISTRESS COMMUNICATIONS

	Digital selective calling (DSC)	Radiotelephone	Radiotelex
VHF	Ch 70	Ch 16	
MF	2187.5 kHz	2182 kHz	2174.5 kHz
HF 4	4207.5 kHz	4125 kHz	4177.5 kHz
MF 6	6312.0 kHz	6215 kHz	6268.0 kHz
HF 8	8414.5 kHz	8291 kHz	8378.5 kHz
HF 12	1257.0 kHz	12290 kHz	12520.0 kHz
HF 16	16804.5 kHz	16420 kHz	16695.0 kHz

Actions by ships upon reception of HF DSC distress alert



DSC	RTF	NAVTEX/TOR (NBDP)
4207.5	4125	4177.5
6312.0	6215	6268.0
8414.5	8291	8376.5
12577.0	12290	12520.0
16804.5	16420	16695.0

REMARKS:

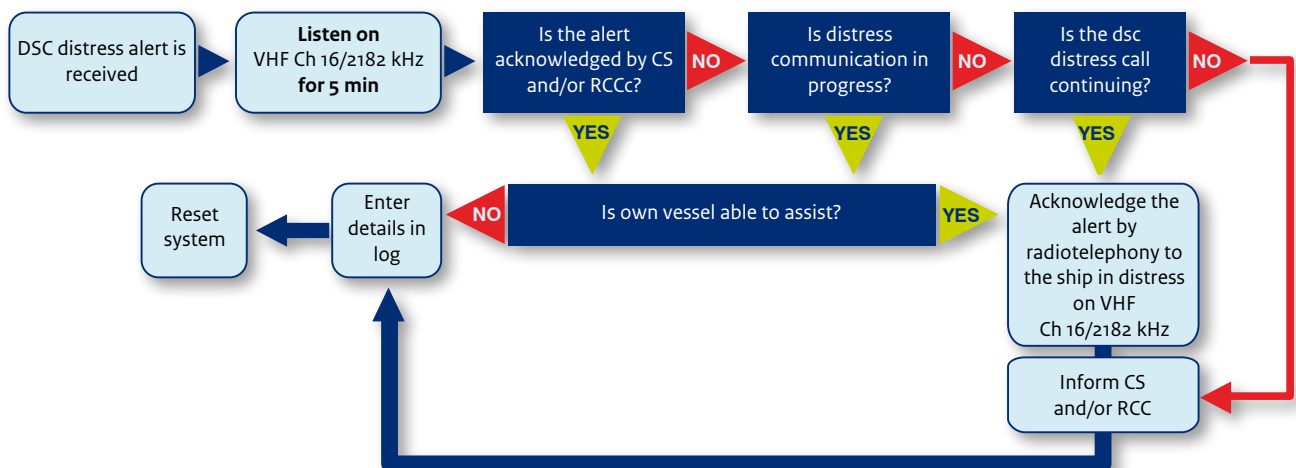
Note 1: If it is clear the ship or persons in distress are not in the vicinity and/or other crafts are better placed to assist, superfluous communications which could interfere with search and rescue activities are to be avoided. Details should be recorded in the appropriate logbook.

Note 2: The ship should establish communications with the station controlling the distress as directed and render such assistance as required and appropriate.

Note 3: Distress relay calls should be initiated manually.

CS = Coast Station RCC = Rescue Co-ordination Center

Actions by ships upon reception of VHF/MF DSC distress alert



REMARKS:

Note 1: Appropriate or relevant RCC and/or Coast Station shall be informed accordingly. If further DSC alerts are received from the same source and the ship in distress is beyond doubt in the vicinity, a DSC acknowledgement may, after consultation with an RCC or Coast Station, be sent to terminate the call.

Note 2: In no case a ship is permitted to transmit a DSC distress relay call on receipt of a DSC distress alert on either VHF channel 70 or MF frequency 2187.5 kHz.

CS = Coast Station RCC = Rescue Co-ordination Center

2.16 False alerts with GMDSS

2.16.1 Introduction

False alerts caused by the inadvertent or incorrect operation of GMDSS equipment can put a significant burden on Search and Rescue Centres.

The chances of false alerts coinciding with a real life distress situation are very real and as a consequence, search and rescue forces could be delayed in responding to a real distress.

Most false alerts are caused by human errors; the flow chart is intended as guidance for use in the event of either a known or suspected false alert having been transmitted.

The acknowledgement of a DSC distress alert on 2187,5 kHz can lead to the broadcast of a large number of unnecessary DSC calls. The following procedures should therefore be followed.

2.16.2 Procedures

MF

A vessel operating in an A2 Sea Area which receives a MF DSC distress alert on 2187,5 kHz should not transmit a DSC acknowledgement, notwithstanding any prompt on the DSC equipment; it can be assumed the alert will have been heard and acknowledged by a coast station (this might not be obvious to the receiving vessel if it is beyond the reception range of the coast station).

Therefore, following receipt of a DSC distress alert or distress relay, radio operators should listen on 2182 kHz for further distress traffic and acknowledge using radiotelephony. Assistance should then be rendered as required and appropriate.

A ship operating outside of an A2 Sea Area which receives a distress alert which is, beyond doubt, in its vicinity, should send an acknowledgement as soon as possible using radiotelephony on 2182 kHz. If further DSC distress alerts are heard from the same source, a DSC acknowledgement may be sent. Rescue Co-ordination Centers (RCC) should be informed through a coast station or Land Earth Station (LES) and assistance rendered as required and appropriate.

MF Sea areas	
Sea area	Information
A1	Within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available. Such an area could extend typically 25-50 nm from the coast station.
A2	An area, excluding sea area 1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available. In practice, satisfactory coverage may often be achieved out to around 200 nm offshore.
A3	An area, excluding sea areas A1 and A2, within the coverage of an Inmarsat geostationary satellite in which continuous alerting is available. This area lies between about 76° north and south, but excludes A1 and/or A2 designated areas
A4	An area outside sea areas A1, A2 and A3. This is essentially the polar regions, north and south of about 76° latitude, but excludes any other areas.

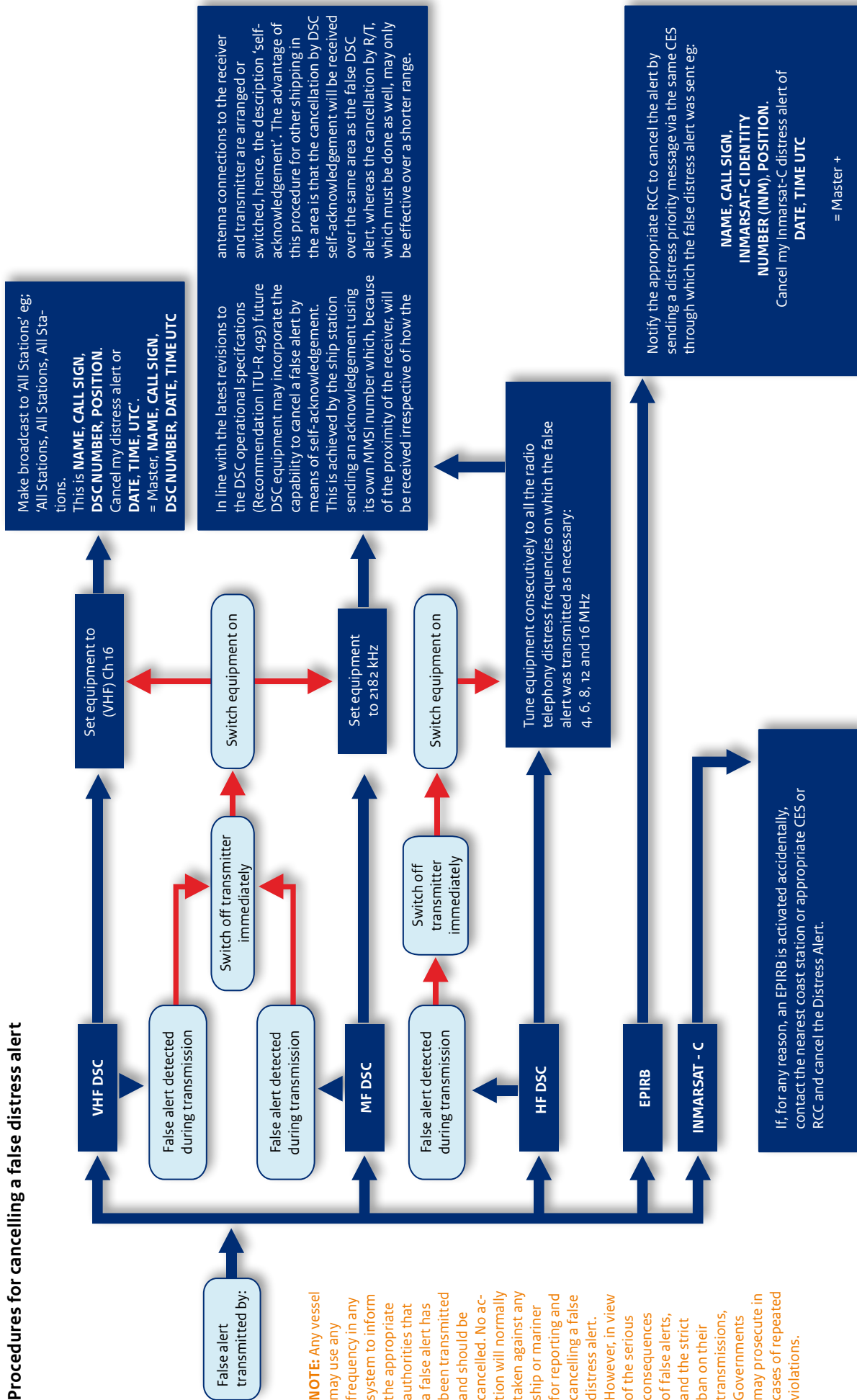
HF

On receipt of a HF DSC distress alert a vessel should not transmit an acknowledgement.

Radio operators must listen out on the Radio Telephony (RT) and Narrow Band Direct Printing (NBDP – Natex/TOR) distress and safety traffic frequencies associated with the distress and safety calling frequencies on which the alert was received.

If subsequent DSC distress alerts are received, or it is clear there has been no acknowledgement by a coast station, the vessel must relay the distress alert to the appropriate coast station or RCC, NOT TO ALL STATIONS!

Procedures for cancelling a false distress alert



2.17 Incident reporting

Masters of vessels have the obligation to report incidents which can effect the safety of life at sea, the safety of navigation or the risk of pollution.

Such situations may be related to:

- persons in distress at sea
- safety of the ship (e.g. collisions)
- navigational hazards
- (risk) of pollution
- loss of cargo, in particular dangerous cargo and containers
- discovery of pollution, lost cargo and uncharted obstructions

In general such incidents have to be reported to:

- the Coastguard Centre or Traffic Centre/Station of the area or
- the nearest coast radio station

For the Netherlands Coastguard reports can be transmitted on VHF Ch 16, or a MF Working Frequency after prior notice on 2187,5 kHz (MF DSC MMSI 002442000), or via satellite communication systems to:

telephone: +31(0)88 958 4000

E-mail: ccc@kustwacht.nl

All these communication links are monitored 24/7 by the Netherlands Coastguard Centre at Den Helder.

Reporting should be done in English in accordance with the Standard Marine Navigational Vocabulary of the IMO and the IMO reporting format as stated.

Full details about the IMO Standard Reporting Format can be found in the IMO resolution A.851 (20), dated 27 November 1997.

The Coastguard Centre co-ordinates the necessary measures for assistance and rescue when incidents occur.

2.18 Vessels constrained by their draught

A vessel constrained by her draught may display the signals prescribed in Rule 28 of the International Regulations for Preventing Collision at Sea (1972).

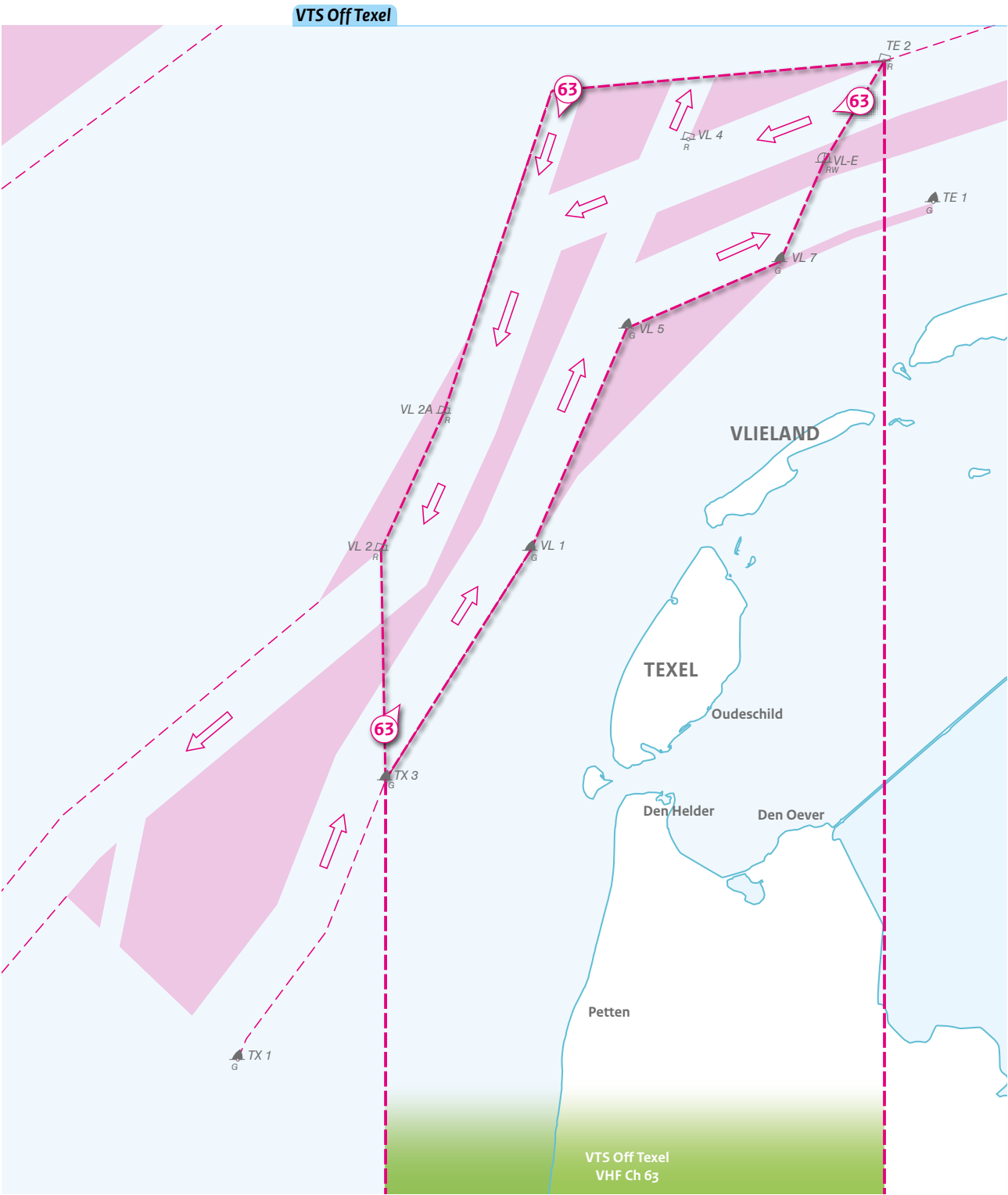
The term 'constrained by her draught' is defined in Rule 3(h). In certain harbours the dimensions or draught of a vessel which display the signals are described in local bye-laws.

2.19 Vessel Traffic Services

2.19.1 General rules

- Reporting and listening out are compulsory for incoming and outgoing seagoing vessels, inland shipping and ships with dangerous goods. The information supplied does not relieve the captain from his responsibility for safe navigation.
- Make your arrangements with other vessels directly and not via a traffic centre/station
- Limit expressions of courtesy
- Only give the information prescribed with compulsory reporting
- Do not report in or out if this is not prescribed
- Always call another vessel with the name of that vessel or with the position and course
- Only use the colour of the navigation lights for traffic arrangements
- Do not disturb VHF traffic with private conversations
- Use the IMO Standard Maritime Vocabulary as indicated in the regulations
- For non-traffic conversations the traffic centre/station will indicate the channels to be used for this purpose

2.19.2 Vessel Traffic Services associated with passing traffic



VTS-reports – all vessels navigating in the area

VHF Ch	Location	Message	To
63	TX-3 buoy	Name vessel – position – draught – destination	VTS Off Texel
63	TE-2 buoy	Name vessel – position – draught – destination	VTS Off Texel
63	Entering TSS Vlieland North from North	Name vessel – position – draught – destination	VTS Off Texel
63	Crossing TSS Off Vlieland	Name vessel – position – draught – destination	VTS Off Texel

3

Meteorology

3.1 Pressure

In general an area of high pressure is situated near the Azores and an area of low pressure near Iceland. These two pressure systems determine the general circulation in Western Europe and have a strong influence on the climate of the North Sea and surrounding areas. The actual pressure distribution and weather over the North Sea may vary markedly from this basic pattern. Nevertheless, both systems persist for the greater part of the year, although not necessarily in the same place, whilst great variations in magnitude may occur. The Azores high is normally more developed in summer than in winter. The low pressure area near Iceland is normally best developed in winter. During the winter another area of high pressure often extends from Siberia towards Russia, with a ridge towards the Alps. During the summer, low pressure systems follow each other over the mainland of Europe resulting in an area of mean low pressure.

Important parts of the circulation are the depressions that move in a south-westerly to north-westerly airstream over or near the North Sea, causing strong winds of a relatively short duration. The tracks of the depressions are mainly over Scotland towards the Baltic. Frontal disturbances in the westerly airflow, south of the stationary low near Iceland, often develop into secondary depressions over the British Isles and the North Sea.

3.2 Wind

The pattern of the winds over the North Sea is determined by the fact that it is situated in the zone between the Iceland low and the Azores high, in which depressions with their frontal systems move from west to east across the area. Occasionally a blocking area of high pressure will interfere with this pattern during which winds may blow from any direction. Predominant winds blow from a westerly direction; this also applies to gales. During the summer, winds from WNW to NW predominate and during the winter from SW. In April and May, however, winds from the north occur more often.





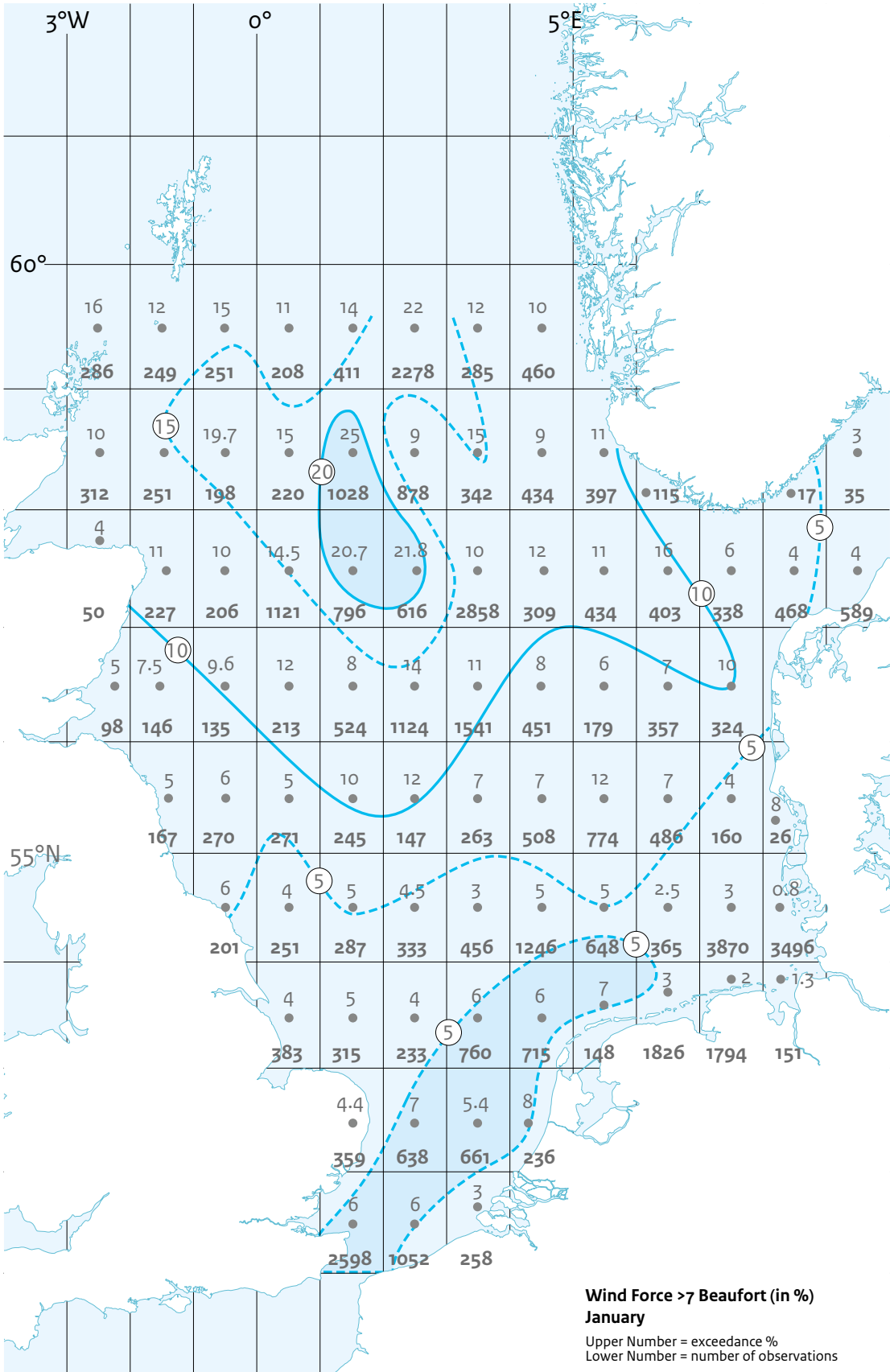
3.3 Gale frequencies

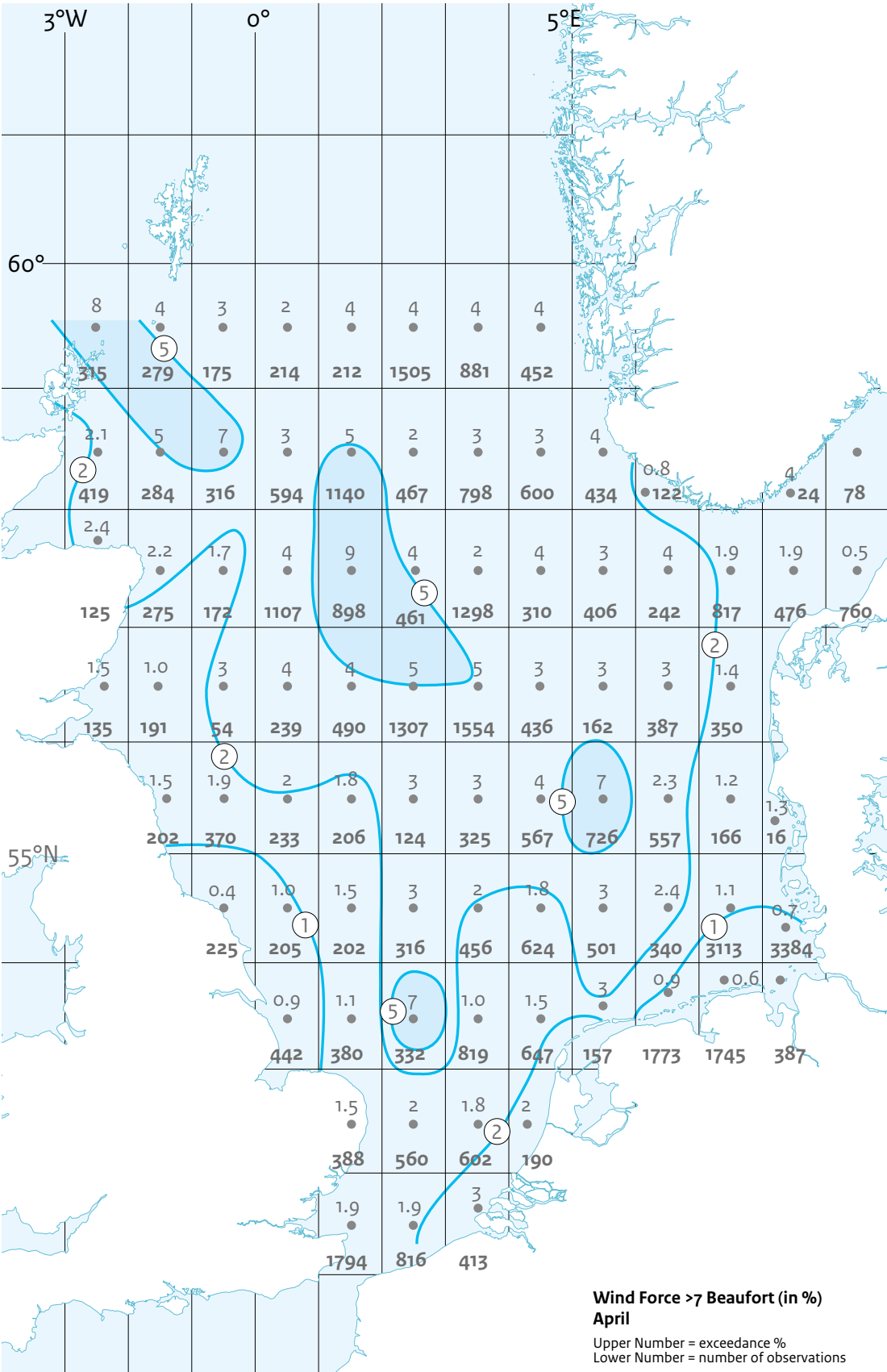
A climatological factor which is often used is the gale frequency. By gale here is meant wind force 8 or more of the Beaufort Scale. This corresponds with wind speeds of 34 kn or more (17.2m/s or more). The percentage of gale observations per one degree square for the month of January, April, July and October are shown in the illustrations.

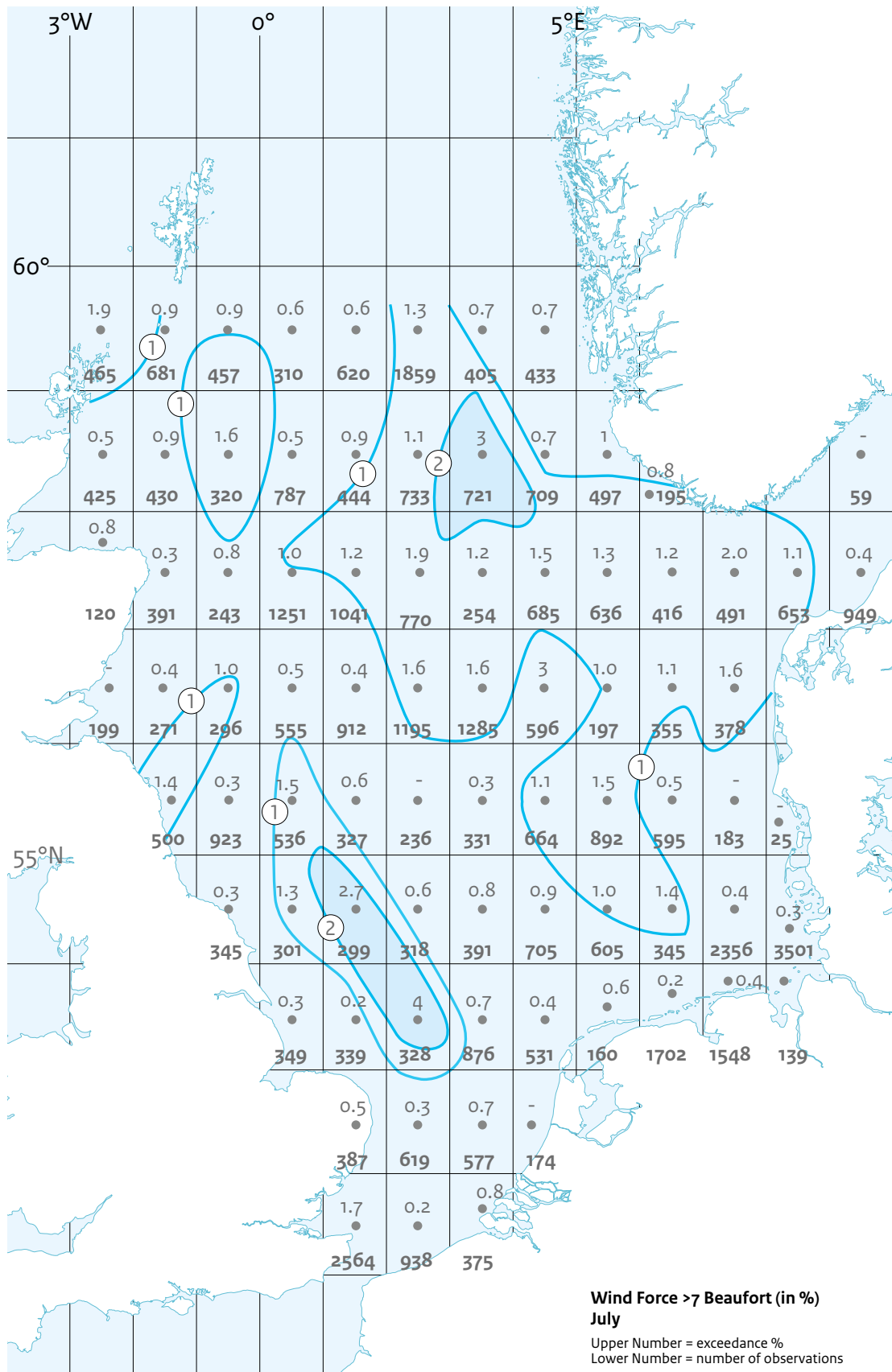
The upper figure in every one degree square shows the gale frequency and the lower figure the number of observations on which it is based. The observations should be used with care as there are sometimes considerable differences in the number of observations.

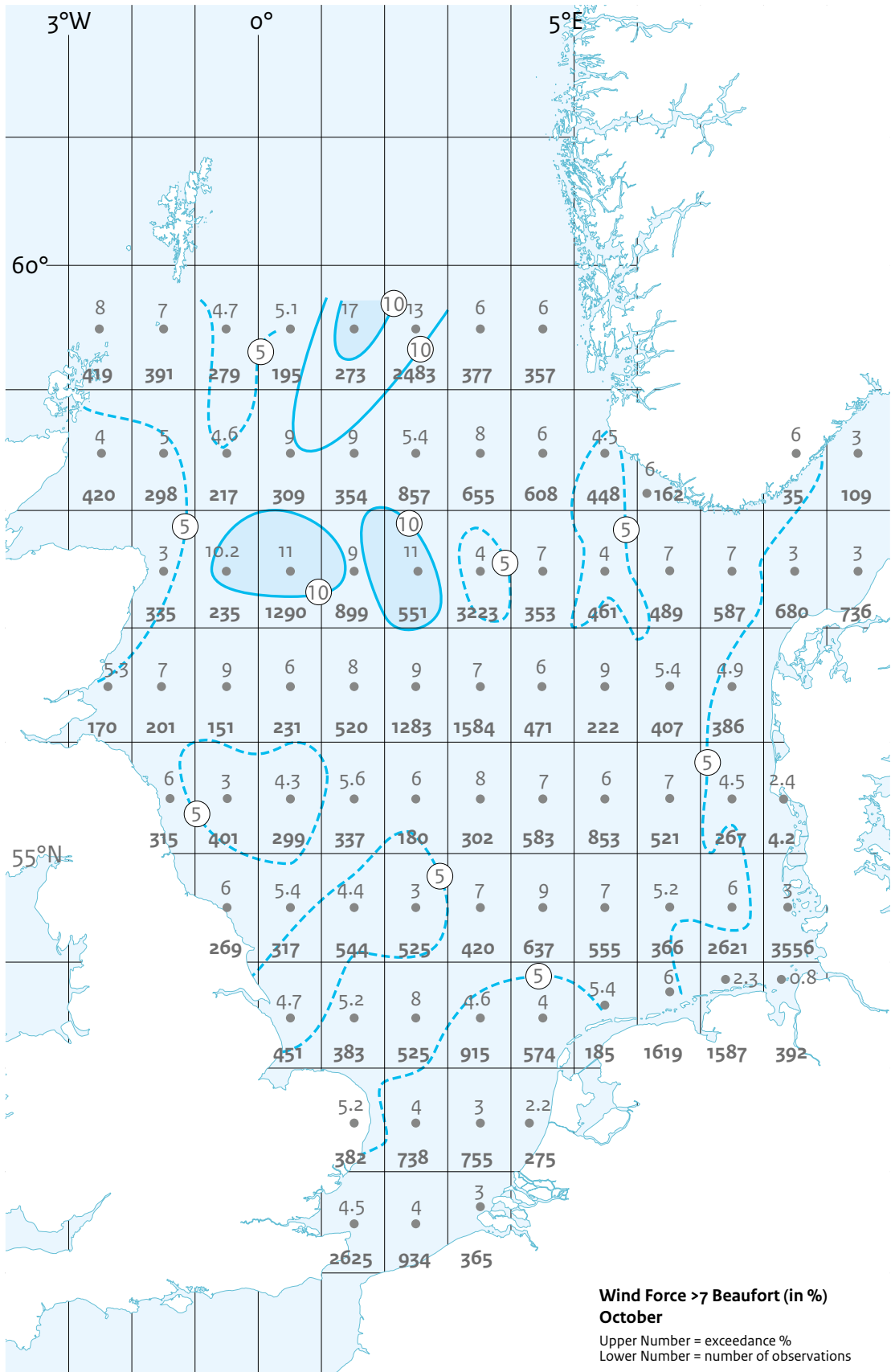
The influence of friction on the wind is greater over land than over sea. This is shown in the illustration > 7 Bft 'Wind force January', where the maximum frequency of over 20% occurs in the centre of the northern part of the North Sea, gradually decreasing to about 10% near the coasts.

Towards the southern part of the area the frequency decreases to below 5%. There appears, however, to be a secondary maximum of over 5% in the southern part of the North Sea. This probably results from the tongue of relative warm water that penetrates the North Sea from the English Channel, causing an increase of the instability of the air. Another factor may be the increased fetch which the wind experiences due to the predominant north-westerly wind direction in January. During the remainder of the year the gale frequency is the highest in the centre of the northern part of the area. In January the area of the highest percentage is 25%, in February 14%, in March 22%, in May 4%, whilst June is the quietest month with 2%, after which the percentage increases again up to 4% in July and August 3%, 11% in September, 17% in October, 18% in November and 23% in December. The secondary maximum in the southern part of the North Sea is only apparent in January and February.









3.4 Clouds and sunshine

December is the month with the greatest average of clouds. May and June are the months with the greatest average of sunshine. Throughout the year there are five times as many cloudy days (cover 8/10 or more) as there are cloudless days (cover 2/10 or less).

3.5 Precipitation

The average accumulated precipitation throughout the year is 735mm; more is falling in the north than in the south. The major part of the precipitation falls in November, December and January; May, June and July are the driest months.

The amount of precipitation in spring is half that of autumn. The number of days per month with significant rainfall varies from 11 to 15 during the period from August to February, and 7 to 10 for the other months.

Snow may fall during the period November until April with an average of 5 to 7 days per month; it is greater in the northern part and lesser in the southern part of the coastal area. In spring a north-westerly airflow, carrying maritime arctic air over the North Sea, often occurs, bringing showers of rain, hail and snow.

The number of thunderstorms over coastal areas is much higher than over sea areas. The average number of days per year with thunder at Vlissingen and Den Helder is 23 respectively 20, mainly during the summer. In autumn more thunderstorms occur than in spring; winter is the period with the lowest number of days with thunderstorms.

Over land most thunderstorms develop in the afternoon and evening whilst over the sea development occurs after midnight.

Waterspouts, sometimes observed with thunderstorms, occur mainly in the period July up to and including September.

3.6 Fog

There are two different kinds of fog which occur in the North Sea:

- Radiation fog, caused by cooling of the lower part of the atmosphere due to earth's loss of heat by radiation at night with clear sky and little wind;
- Advection fog resulting from cooling of warm moist air, as it passes over relatively cold water. This fog may spread over land.

Radiation fog occurs mainly in autumn and winter. The risk of advection fog is the greatest in spring and early summer when the temperature of the seawater is relatively low. Along the coast December, January and February are the months with the highest number of days with fog. From October to May, the frequency is 5 to 8 days per month.

3.7 Air temperature

The mean air temperature varies from 2.5°C in February up to 17°C in August. The northern part of the coastal area is about 0.5°C colder than the southern part. Along the coast there is an average of 10 to 12 days with a minimum temperature below zero in January. Days with a minimum temperature below 0°C normally occur in the period November up to and including April.

The average number of days with frost varies between 30 and 45. These numbers are considerable less over sea. In extreme circumstances the difference between the sea surface temperature and the air temperature may be up to 10°C, mainly occurring in November. In the period September up to and including March the seawater is warmer than the air just above it, and cooler in the period April up to and including June.

In the southern part the mean maximum daily temperature in summer is about 1°C higher than in the northern part; in winter it is about 0.5°C higher. The differences in the mean daily minimum temperature between the northern and southern parts are small. During periods with easterly winds in summer, the temperatures along the coast may reach high values and differ slightly from those inland.

3.8 Humidity

The monthly average mean relative humidity varies between 77 and 89%. December and January are the months with the highest humidity, May and June, however, are the months with the lowest humidity.

The relative humidity is greatest between 0200 and 0700 and lowest between 1200 and 1600 (local time).

3.9 Seastate

The height of the waves in the southern part of the North Sea is not only dependent on the wind velocity, but also on the length of the fetch, the depth of the water, and period of time that the wind blows.

The following table shows the height of the waves that may be expected for various values of fetch, water depth and wind velocity in kn.

Using this table, the 'Water depth' is the mean depth of the water of the last 30km of the fetch. The length of the fetch is the distance to the coast in the direction of the wind. If, in the southern part of the North Sea this distance is over 200km, this figure should be used.

Fetch		25km		50km		100km		150km			200km		
Water depth		20	30	20	30	20	30	20	30	40	20	30	40
Windspeed in kn	5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	10	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	15	0.8	0.8	1.0	1.0	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3
	20	1.0	1.0	1.4	1.4	1.7	1.8	1.9	2.0	2.0	2.0	2.1	2.2
	25	1.3	1.3	1.7	1.8	2.2	2.3	2.4	2.6	2.7	2.5	2.8	2.9
	30	1.6	1.6	2.1	2.2	2.6	2.8	2.8	3.2	3.3	2.9	3.4	3.6
	35	1.8	1.9	2.5	2.6	3.0	3.3	3.2	3.7	4.0	3.3	4.0	4.2
	40	2.0	2.1	2.7	2.9	3.3	3.7	3.5	4.2	4.5	3.5	4.5	4.8
	45	2.3	2.4	3.1	3.2	3.7	4.2	3.8	4.6	5.0	3.8	4.9	5.4
	50	2.6	2.7	3.4	3.6	4.0	4.7	4.1	5.1	5.5	4.1	5.3	5.9

3.10 Swell

In the southern part of the North Sea swell occurs fairly frequently, due to the waves generated by the wind in the northern part of the North Sea, in the sea area west of Norway. The direction of this swell is between northwest and north. The period varies from 6 to 15 seconds.

Swell coming from abeam with a period of more than 10 seconds may be inconvenient for ships with a deep draught that have to use the dredged fairway near Hoek of Holland. As a result of rolling, a considerable increase in draught may result for these ships. This kind of swell, which is not always apparent due to wind generated waves and swells with a shorter period, originates from the sea areas of the central and northern parts of the North Sea, with directions between NW and N and amplitude of 4m, or from sea areas north of 60°N and east of the Greenwich meridian, from directions between NNW and N with an amplitude of over 5m.

Deep draught vessels in the Eurogeul and Maasgeul fairways (approaches to Rotterdam) can listen to swell forecasts issued by the Hydro Meteorological Centre North Sea at Hoek of Holland for the benefit of safe navigation.

3.11 Salinity – Sea surface temperature

3.11.1 General information

The North Sea is a shallow sea bordering the Atlantic Ocean.

The water of the Atlantic Ocean enters into the North Sea through the broad gap between Scotland and Norway and in a lesser extent through the Strait of Dover.

This water, with its own salinity and temperature, is mixed with the low salinity water from the Baltic, entering through the Skagerrak, as well as with the fresh water from the big rivers which flow into the North Sea. This mixing is enhanced by the tidal streams.

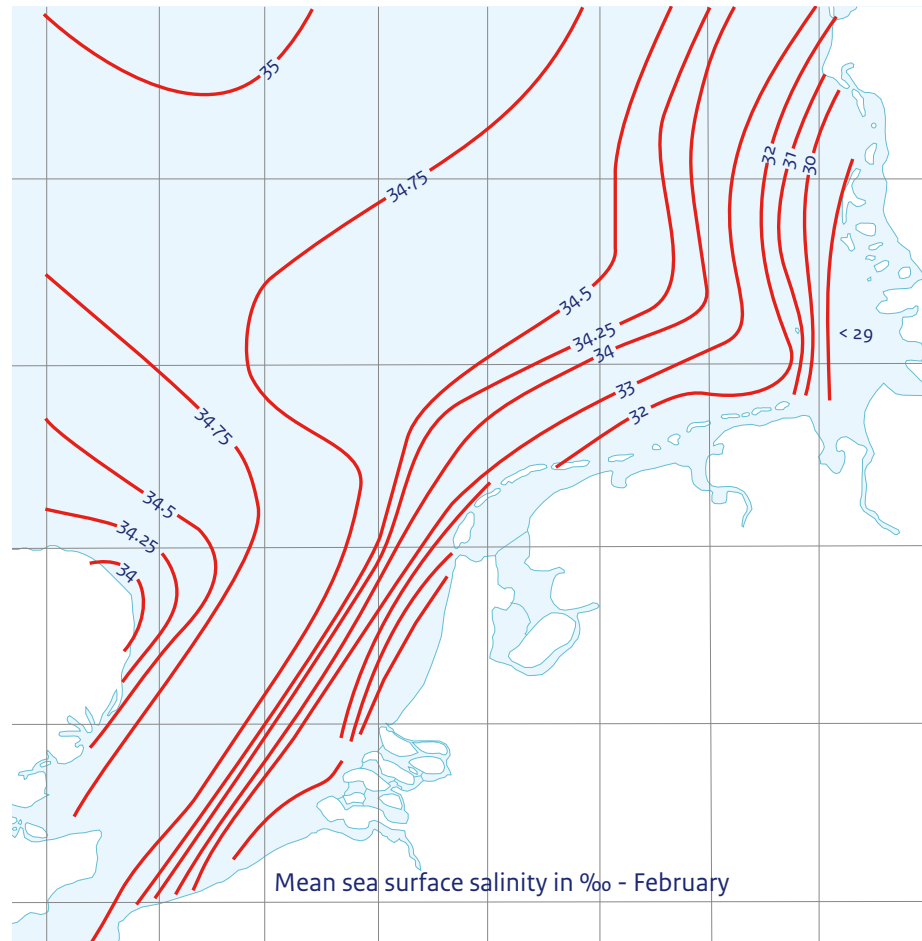
The salinity and temperature of the North Sea are, in addition to the mixing, dependant on evaporation and precipitation, from the heat exchange between air and water, and on the nature of the seabed.

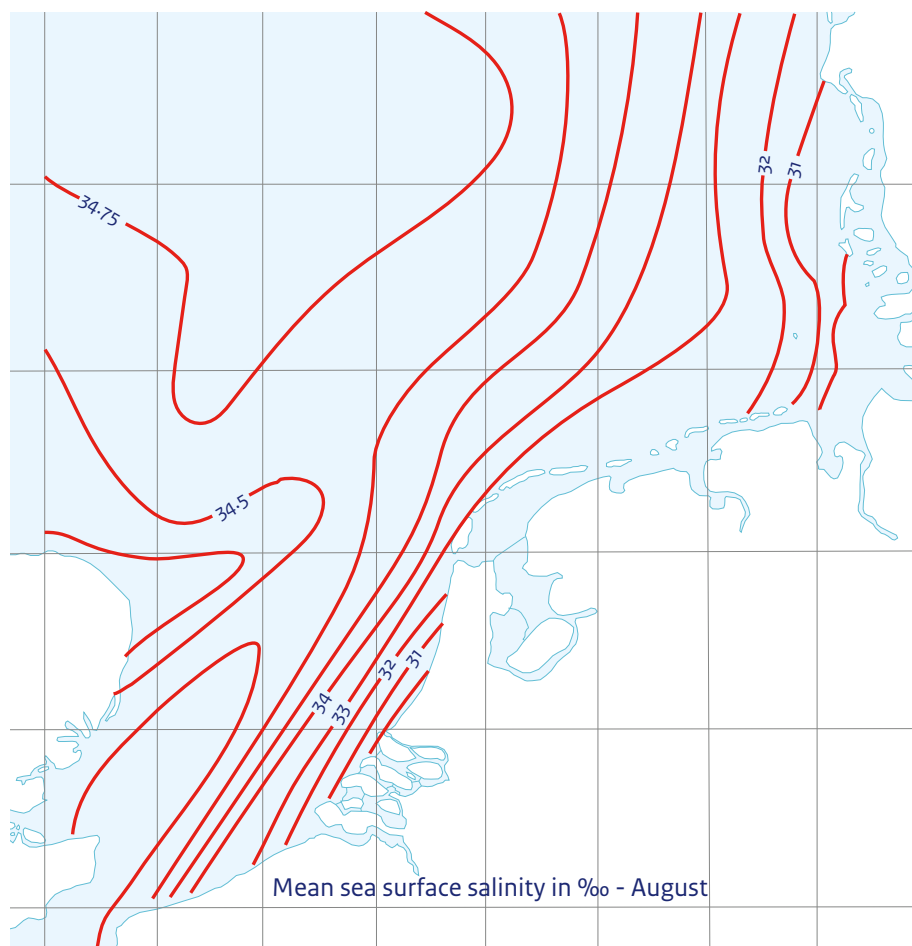
3.11.2

Salinity

The illustrations show the mean salinity of the surface water of the North Sea for the months of February and August respectively. The salinity of the water of the Atlantic Ocean is rather higher and changes little throughout the year.

In winter the salinity of the North Sea is higher than in summer and it decreases from north towards the Skagerrak and into the German Bight.



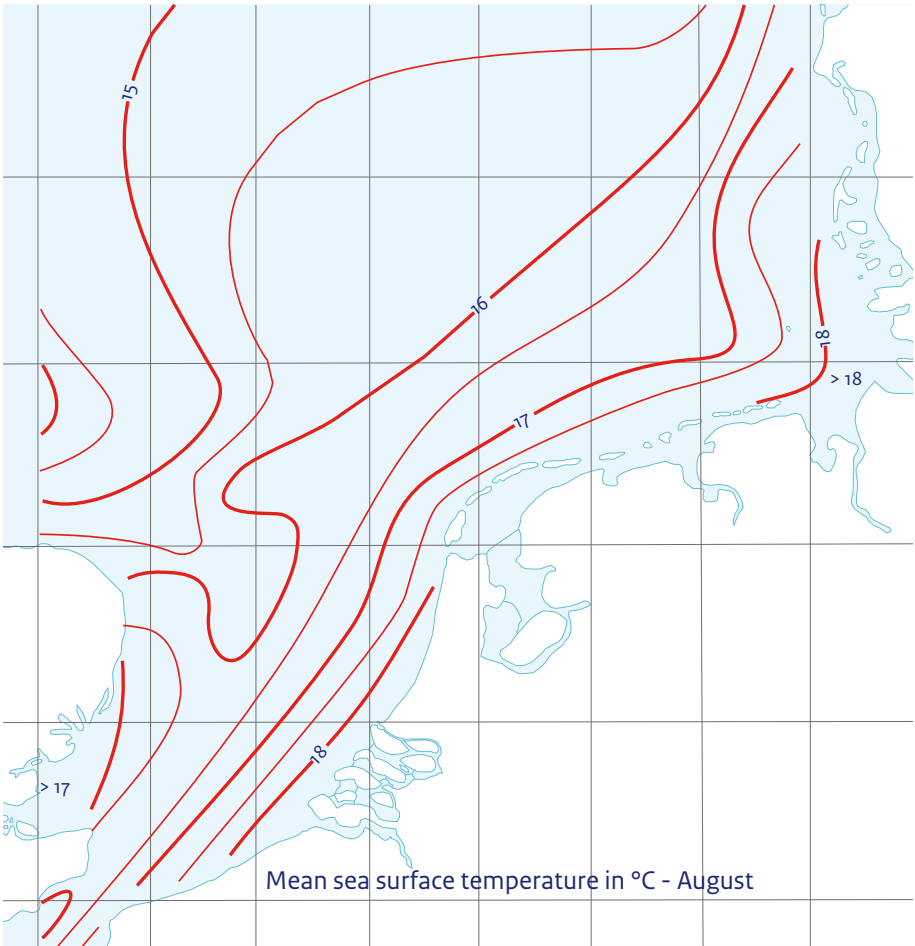
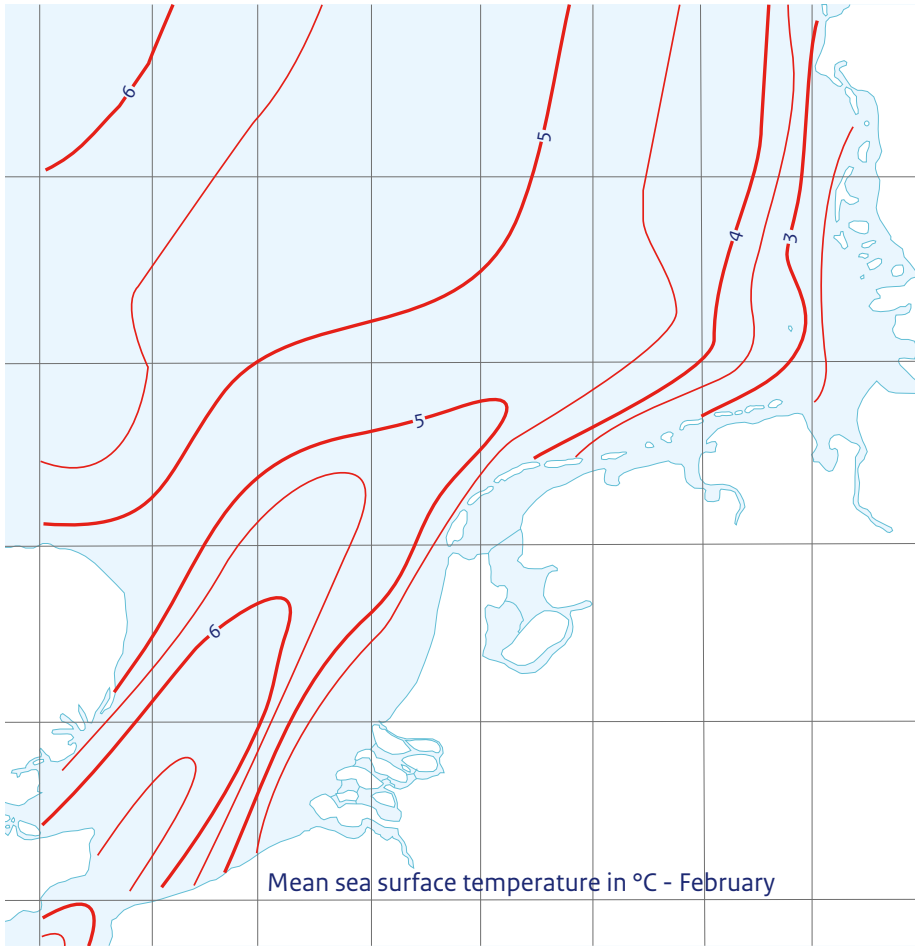


3.11.3

Sea surface temperature

The illustrations show the mean sea surface temperature of the North Sea for months of February and August respectively.

Departure from the mean value normally does not exceed 2°C, but very rarely may be as great as 3° to 5°C. As shown in figures, the greatest annual variations of the sea surface temperature of the North Sea occur in the German Bight.



3.12 Heavy seas

3.12.1 General information

In many shallow waters along the Netherlands coast heavy breakers or ground seas can arise. On the one hand, these dangerous seas are caused by a combination of wind, wave-height, tidal height, strength and/or direction of the current and on the other hand, by the depth of the water and the profile of the sea-bottom.

Heavy seas and or heavy breakers arise above shallow banks; ground seas arise especially along the 10m depth contour line during SW-ly to NE-ly winds of 6 Bft. or more.

3.12.2 Local information

See Chapters 6 – up to and including Chapter 15.

3.13 Port Meteorological Services

All Netherlands ports and Antwerpen:

Rene Rozeboom

Port Meteorological Officer

Koninklijk Nederlands Meteorologisch Instituut

Telephone: +31 (0)6 55 45 75 46 (Mo-Thu., office hours only)

E-mail: pmo-office@knmi.nl

Arjan Kramer

Port Meteorological Officer

Koninklijk Nederlands Meteorologisch Instituut

Telephone: +31 (0)6 55 20 14 22 (office hours only)

E-mail: pmo-office@knmi.nl

4

Oceanography

4.1 Tides

4.1.1

Introduction

Tides are mainly the result of the fluctuating gravitational forces of the Sun and the Moon on the water masses of the Earth. During New and Full Moon, the forces of the Sun and Moon reinforce each other resulting in spring tides. During the First and Last Quarter phases of the Moon, both forces are exerted at a right angle in respect to the other, creating neap tides. By performing a harmonic analysis on long series of tidal observations at a certain location, one can make tidal predictions for that location. These are called astronomical tides. These tidal heights in the tide tables of the HP33 and the digital tide tables of the HP33D-NLTides are published by the Hydrographic Service of the Royal Netherlands Navy.

The tides originate in the Southern Ocean, surrounding Antarctica, where the water mass, and therefore also the tidal wave, propagates without interruption, between 55 and 65 degrees southern latitude. Via the Atlantic Ocean, the tidal wave propagates from South to North to reach the Belgian and Netherlands coasts. The spring tides happen well over 2 days after Full and New Moon (from Katwijk to Texel about 3 days). Neap tides occur well over 2 days after the moments of First and Last Quarter (from Katwijk to Texel after about 3 days).

In the southern part of the North Sea, tidal waves rotate in a counterclockwise direction around two centres, called amphidromic points, situated at approximately $52^{\circ}30'N - 003^{\circ}03'E$ and $55^{\circ}21'N - 005^{\circ}40'E$. When the co-tidal line of high water (the wave crest) is situated at one side of an amphidromic point, the co-tidal line of low water (the wave trough) is situated at the exact opposite side. In contrast to the horizontal tidal streams, vertical tidal movements rarely occur in amphidromic points.

4.1.2

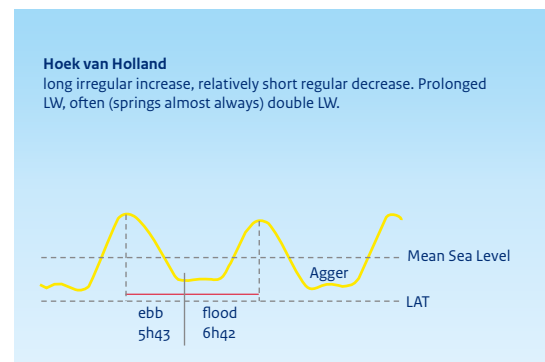
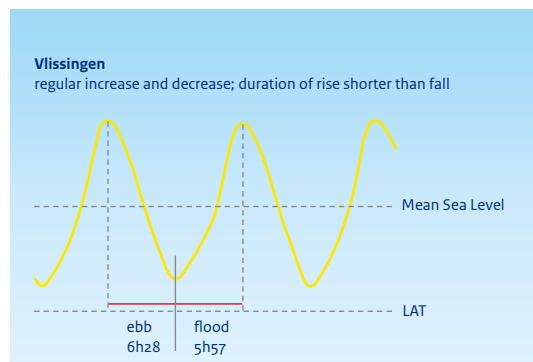
Semidiurnal tides

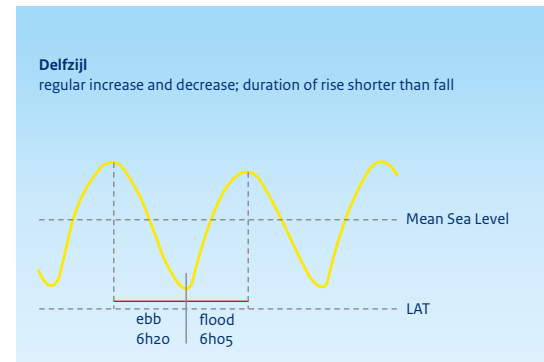
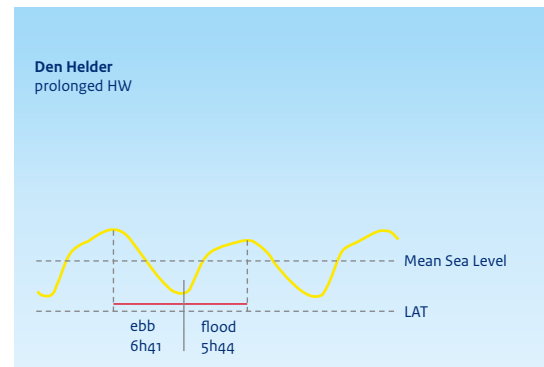
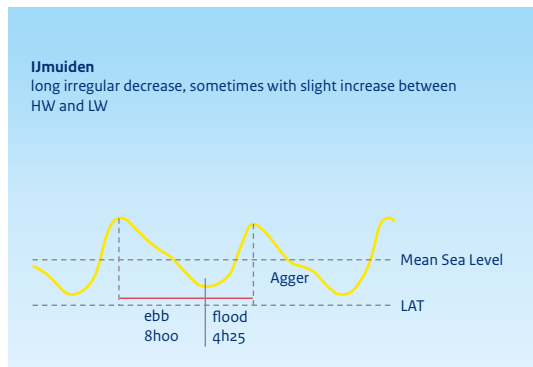
Long series of observations obtained from various standard ports and offshore stations provide tidal data and stream patterns.

The mean tidal curves shown for different shore stations do not have the same shape.

Northward along the coast the mean high water intervals increase fairly regularly. Along the coast, from Oostende to Petten (halfway IJmuiden and Den Helder), the tidal range decreases slowly. From Petten in a north-easterly direction, the range increases gradually. Spring tides occur well over two days (from Katwijk to Texel about three days) after full and new moon. Neap tides occur well over two days (from Katwijk to Texel again about three days) after the first and last quarter. The neap tide-range is roughly $3/4$ of the range of the spring tides.

For hourly tidal heights and times and heights of HW and LW at various coastal stations consult HP33 ('Tidal heights and streams for the coastal waters of the Netherlands and adjacent areas') and HP33D (NLTides) published by the Hydrographer of the Royal Netherlands Navy. Notice that Summer Time has been taken into account.





4.1.3 Meteorological influence

Introduction

The influence of meteorological conditions on the predicted water levels may be large, and during days with adverse weather conditions the range and the duration of rising or falling tides may be distorted. After the disturbing conditions have ceased to exist it takes some time before the tidal movements have become normal again.

In the southern part of the North Sea westerly winds prevail, specially westnorthwesterly winds cause higher than normal water levels along the Belgian and Netherlands coast. In the coastal area surge levels may reach 2.5m above normal HW-levels. On the other hand easterly winds in the same area may cause negative surges up to 1.5m below normal LW-levels.

The table gives an overall view of the ranges along the coast.

	Station	Vlissingen	Hoek van Holland	IJmuiden	Den Helder	Delfzijl
Range in metres	Springs	4.45	1.95	1.88	1.55	3.39
	Neaps	2.99	1.45	1.37	1.14	2.59

Negative surge

Aforementioned windfields, and to a lesser extent airpressure differences, can affect water levels in coastal areas, in addition to which local topographical conditions play their part. However, this influence is not restricted to coastal areas. Negative surges may occur in the whole southern part of the North Sea, and they can become of great importance for the relatively small underkeel allowance of deep draught shipping in certain areas, such as Sandettiè, Noord Hinder and the approach to Europoort. Comparison over a great number of years between predicted and observed HW and LW levels yield to the following broad outcome.

4.1.4

Chart datum

Chart Datum (CD) is the plane of reference to which all charted depths and drying heights are related. In tidal areas, charts show the least depth of water found in any place under “normal” meteorological conditions. It will vary from place to place in relation to the land survey datum or mean sea level.

LAT is the lowest tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions. LAT is not the lowest level that can be reached. Storm surges may cause considerably lower water levels than LAT. About once a year a water level occurs that is 0,50 m below LAT. This mainly occurs on the eastern part of the North Sea. About 2 times a month a water level occurs that is 0,25 m below LAT.

All hourly heights are referenced to LAT except at the port of Rotterdam, Amaliahaven, Europahaven and Vlaardingen. The hourly heights of these ports are referenced to approximate LAT (ALAT). ALAT forms a fluent transition from LAT in Hoek van Holland to Equivalent Low River level (OLR) on the river Waal near Tiel. OLR is a local water level based on the Equivalent Low Discharge (OLA) at Lobith for stations on the Bovenrijn, the river IJssel, the river Waal up to Tiel, the river Lek, and the Benedenrijn.

Chart datum is mentioned on every paper chart and Electronic Navigational Chart (ENC). It is important to read and use the information in the legend. Chart Datum currently used by neighbouring countries: The United Kingdom Hydrographic Office (UKHO) uses ALAT. The German Hydrographic Service (BSH) and the Flemish Hydrographic Service use LAT.

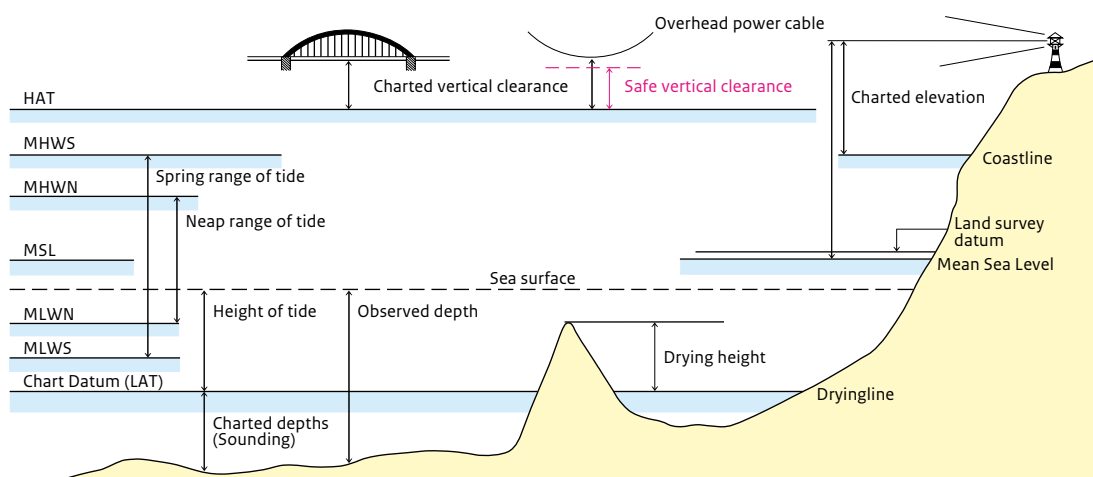
In the Netherlands, heights on land are referenced to the Amsterdam Levelling Reference (NAP). Along the coast, NAP equals MSL to within a decimetre. On pages containing the tidal curves, an indication of the difference between NAP and LAT / approximately LAT is provided.

In the curve of Zeebrugge, a line representing the Second General Levelling plane (TAW) is shown. This plane approximates LAT.

Vertical Clearance

Highest Astronomical Tide (HAT) is the highest level that can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions. HAT is not the most extreme water level that can be reached. Storm surges may cause even considerable higher water levels. Vertical clearances are referenced to HAT. The Dutch national standards for waterways (RVW 2020) prescribes in standard H99 that at vertical clearances the daily observed water levels may only exceed the (agreed upon) local reference water level for a maximum of 1% of the total measurements annually. At locations with little variation in astronomical tide, HAT does not meet this standard. For these locations new reference water levels, that do meet the H99 standard, are determined.

Chart datums are not exactly as shown below, for all charts.



4.2 Tidal streams

4.2.1 Main direction

The times of HW and LW offshore differ greatly from the times of slack water, and it is preferable to use the terms north-easterly and southwesterly streams rather than ebb or flood stream. The direction of a tidal stream, at its maximum rate, alters only slightly, and is generally parallel to the coast.

The NE-ly stream from the southern part of the North Sea and the W-SW-ly stream from the German Bight meet approximately off Texel, and merge to flow north-west to the central part of the North Sea. In reverse, the tidal stream splits approximately off Texel into the NE-E-ly component to the German Bight and a SW-ly component to the southern part of the North Sea. Proportional to the rate of the tidal stream the junction/partion-line shifts NE-ly from approximately off Texel to approximately off Terschelling.

The higher the rates of the tidal streams, the lesser the variabilities of the directions. On the other hand: the weaker the stream, the more variability in direction in the same period of time. Along the Netherlands' coast, during slack water, the rotary speed of the tidal stream is very high ($135^{\circ} - 160^{\circ}/h$), and consequently the strength of the stream is small. For normal shipping the tidal stream goes to and from parallel to the coast.

As the tide sweeps through the North Sea from south to north, one can run with the tide longer if navigating in the same direction. However, following the opposite route one can run longer against the tide.

Under normal conditions, two days after full or new moon, the maximum rate of the tidal stream is 1.9kn; two days after first or last quarter the maximum rate is 1.3kn.

With wind-forces of seven or more the direction of the tidal stream is altered only slightly, however, duration and speed can alter significantly. SW-ly gales will increase the duration of the NE-ly tides, whereas the SW-ly tides will be less noticeable. Shipping is well advised that specially during NW- and N-ly gales the tidal stream perpendicular to the coast is more powerful than normal.

Meteorological conditions causing changes in common water levels in the southern part of the North Sea (e.g. prolonged winds from one direction) have their impact on tidal streams. If such conditions lead to negative surges then they will cause a mean flow of 0.75kn from the Channel to the North Sea. Conditions inducing higher than normal water levels cause a flow from the southern North Sea to the Channel, however, with considerable less strength. The effects of these flows on tidal streams are noticeable as an increase in duration and strength in one direction, and a proportional decrease in the opposite direction.

SW-ly winds, force seven or more, always cause rough seas. The - as a rule - more powerful NE-ly tides, coupled with the not everywhere equally powerful tidal streams during slack water, and under the influence of (recently) prevailing winds, can often shift the ship's position more to or from the coast, and this may lead to miscalculations in dead reckoning positions. Beyond areas with sand banks the directions of tidal streams are only slightly influenced by the flows in and out of a tidal inlet. In the near shore areas, the directions of streams correspond mainly with the offshore directions. More inshore the change of directions is strongly influenced by the locations of banks and channels.

4.2.2 Meteorological influence

The influence of meteorological conditions on the horizontal water movement is difficult to determine, in particular distant weather conditions (e.g. off the Norwegian coast) may affect the horizontal water movement near the Dutch coast. The principal meteorological conditions that affect the predicted tidal streams are wind fields and, to a lesser extent, air pressure differences at sea.

Conditions that lead to a rise of sea levels in the southern part of the North Sea will cause a water movement from the North Sea towards the English Channel. On the other hand, conditions that lead to a fall of sea levels in the southern part of the North Sea will cause a water movement from the English Channel towards the North Sea.

The influence of these movements on the tidal streams results in an increase in duration and strength in one direction and a decrease in duration and strength in the opposite direction. After the meteorological disturbance has ceased to exist, it takes some time before the tidal streams have become normal again. In general, wind increases or decreases the rates of tidal streams dependent on the directions of the wind and streams.

To determine the effect of wind in open sea, the following rule of thumb applies: a current of 2% of the wind velocity should be applied to the tidal streams. As an example, a wind of 40 knots generates a current of 0.8 knot. The wind-generated current is about 10° veered with respect to the direction of the wind. For example, wind from the north-west generally generates a current to the direction south- by south-east.

5

Environment

5.1 Environmental protection

The Netherlands have ratified the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocols of 1978 and 1997 and kept updated with relevant amendments. Now known universally as MARPOL. The provisions of the MARPOL convention must be observed. Any person contravening these provisions is liable to prosecution. The territorial sea and the continental shelf of the Netherlands are under intensive surveillance for violations of the MARPOL convention. This is carried out by aircraft and patrol vessels of the Netherlands Coastguard. The use of airborne remote-sensing equipment enables almost any kind of pollution to be detected regardless of visibility and even at night. Observation is also possible when detergents have been added to the discharged oil. Any person found guilty of violating the MARPOL provisions can be punished. Masters are strongly recommended to make use of the reception facilities available in ports for oil, chemicals, garbage and any other waste on board.

5.2 Pollution reports

Under the MARPOL convention, a Master is obliged to report pollution incidents or damage and breakdowns affecting the safety of his vessel. Vessels navigating within Netherlands Exclusive Economic Zone (EEZ) are requested to provide the Netherlands Coast Guard with the following information:

- Name and call sign of reporting vessel;
- Date and time in UT of observation;
- Position, size and type of pollution (heavy or light oil, thick or thin layer, etc.);
- Name, port of registration (or Nationality) and type of discharging vessel;
- Course and speed of discharging vessel;
- Any other relevant information.

See also [Chapter 2, Navigation | Traffic Safety, section 2.1 ‘The Netherlands Coast Guard’](#) and [section 2.17 ‘Incident reporting’](#).

5.3 Special areas

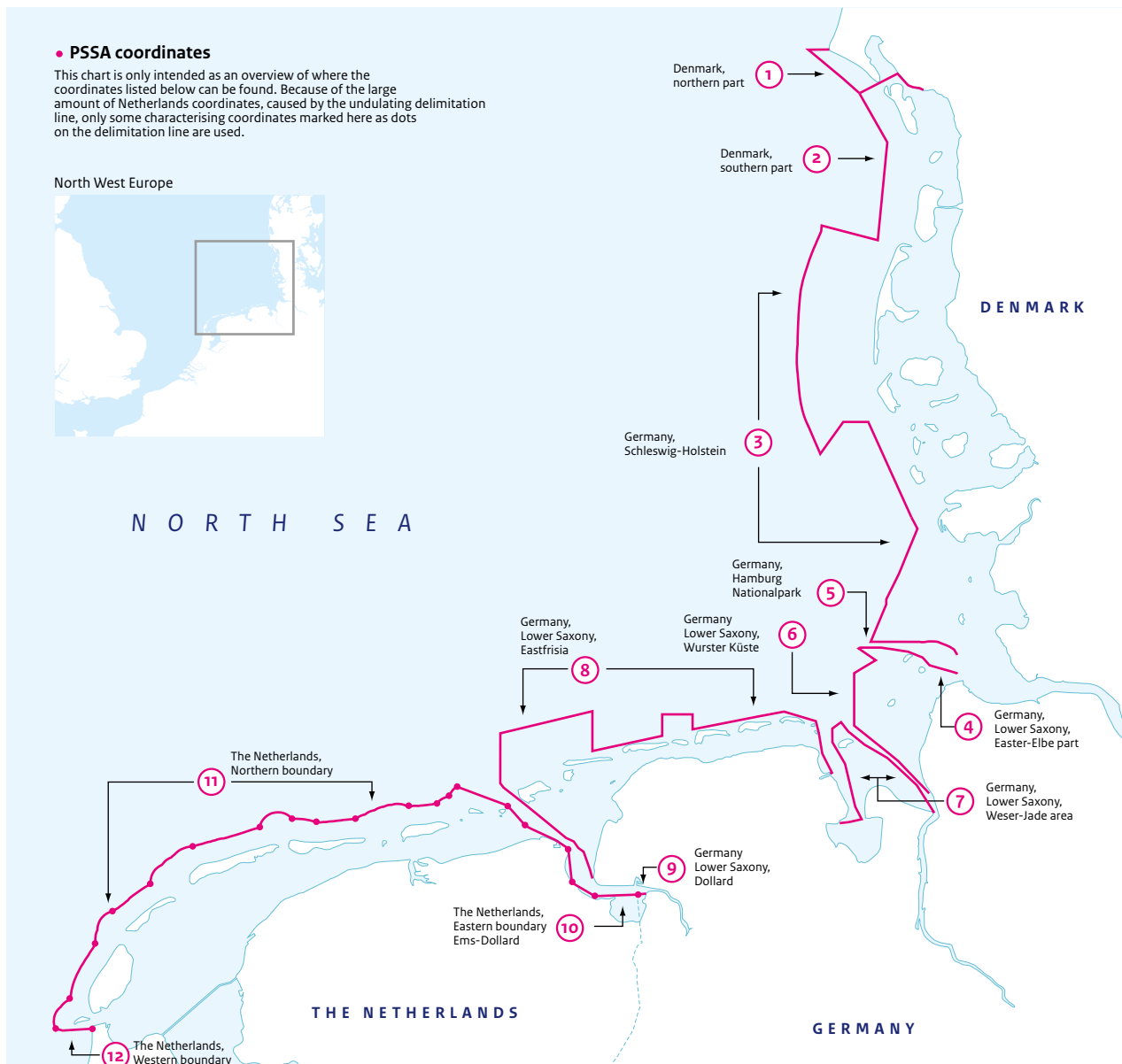
Under MARPOL designated Special Areas, owing to their sensitive oceanographic and ecological conditions and to their maritime traffic, are provided with a higher level of protection and regulation than other areas of the sea. The North Sea region is regarded as a Special Area in respect of Annexes I (Oil) and V (Garbage from Ships) and, in respect of Annex VI (Air Pollution), it is a special SO_x and NO_x Emission Control Area.

5.3.1 Particularly Sensitive Sea Area

The Wadden Sea and adjacent parts of the North Sea in the common Wadden Sea area of Denmark, Germany and The Netherlands have been granted the status of Particularly Sensitive Sea Area (PSSA). See chart on next page. A PSSA is an area that needs special protection because of its vulnerability to damage, caused by maritime activities.

Those operating in or near such an area should exercise the utmost care to avoid damage. No waste should be discharged and no damage should be inflicted to the marine environment and the marine organisms living in it.

The outer border of the Netherlands part coincides with the 3 miles zone. As this 3M border also is based on drying heights, the PSSA border will change accordingly.



5.4 Nature Reserves

5.4.1 North Sea - Netherlands coastal area

Parts of the Netherlands coastal area are protected by the 'Nature Conservation Act'. For fishery, offshore, through going shipping and air traffic it is not permitted to carry out certain activities in and above specified zones within this coastal area as described.

Zone I:

Access to zone I areas is restricted in the sense that it is not permitted to carry out any activities of any kind in or above these areas, with the exception of the activities listed below:

- a With regard to fishery:
 - Trawl fishing necessary for research in research areas.
- b With regard to laying and maintenance of cables and (pipe)lines:
 - ▣ Laying of cables and (pipe)lines and their maintenance is permitted from 1 November to 1 April. Maintenance of cables and (pipe)lines is only permitted in emergencies or in other case of urgent need, to be decided in advance by the competent authority.



c With regard to shipping:

- Zone I areas, except the zone I area off Petten, are accessible for all vessels between 1 April and 1 November. Note that fishing is not allowed and that fishing gear must be stowed away or be in a condition that does not allow its use;
- Only the zone I area off Petten: accessible to all shipping for through passage close to the coast from one area to the other, but not for fishing, so fishing gear must be stowed away or be in a condition that does not allow its use;
- From 1 November to 1 April accessible for sand suppletion vessels in transit via a variable corridor, the exact location of which depends on the location of the sand extraction site and the suppletion site to be reached, as well as the presence of concentrations of scoters. The position of the variable corridor is determined in consultation with the competent authority, on the principle that the sailing distance between the sand extraction site and the suppletion site is as short as possible, provided that a distance of 1500 metres is observed in relation to concentrations of scoters;
- Shipping (transit) in the part that overlaps with buoyed sea lanes (or sea lanes still to be buoyed) and the zone I area above Rottum, insofar as that part overlaps with the Eems-Dollard treaty area.

Zone II

Access to zone II areas is restricted in the sense that seabed fishery and other activities that disturb the seabed are prohibited throughout the year, with the exception of the activities listed below:

a With regard to fishery:

- Shrimp fishery: if permitted by license of the Nature Conservation Act;
- Shrimp fishery in the zone II area in the main channel near Rottum until further notice;
- Pelagic fishery using a vessel other than one which is suitable for seabed fishery;
- Handline fishing;
- Fishing with fixed gear;
- Mussel seed capture installations.

- b** With regard to exploitation of fossile shells:
Exploitation of fossile shells in the zone II areas of Stortemelk and Razende Bol, provided it is authorised under the Nature Conservation Act.
- c** With regard to laying and maintenance of cables and (pipe)lines:
 - ▣ Laying of cables and (pipe)lines and their maintenance, if permitted under the Nature Conservation Act;
 - ▣ From 1 November to 1 April maintenance of cables and (pipe)lines is only permitted in emergencies or in other cases of urgent need, to be decided in advance by the competent authority, and in accordance with more detailed conditions.
- d** With regard to shipping:
Transit and anchoring of shipping.

Zone III

Access to zone III areas is restricted in the sense that seabed fishing and other activities that disturb the seabed are prohibited throughout the year, with the exception of the activities listed below:

- a** With regard to fishery:
 - ▣ Fishing according to the best available techniques and fishery practices;
 - ▣ Shellfish fishery, except spisula fishery in the zone III area above Ameland, provided it is regulated by a licence under the Nature Conservation Act or regulated by the management plan;
 - ▣ Handline fishing;
 - ▣ Fixed gear fishery;
 - ▣ Mussel seed capture installations.
- b** With regard to exploitation of fossile shells:
Exploitation of fossile shells in the zone III area north of Schiermonnikoog if a licence on the basis of the Nature Conservation Act has been issued.
- c** With regard to laying and maintenance of cables and pipelines:
 - ▣ Laying of cables and pipelines and their maintenance, if permitted under the Nature Conservation Act;
 - ▣ From 1 November to 1 April maintenance of cables and pipelines is only permitted in emergencies or due to some other urgent requirement, to be decided in advance by the competent authority, and in accordance with more detailed conditions.
- d** With regard to shipping:
Transit and anchoring of shipping.

Notes

- ▣ Year-round access to parts of the Netherlands coastal area outside the zone I, II and III areas, is permitted outside research areas, for all forms of fishery, provided a licence has been granted under the Nature Conservation Act, or the relevant type of fishery is included in a management plan;
- ▣ The year-round access restrictions do not apply to the performance of government duties, whether or not assisted by government vessels or by contract to the government, where necessary for management and maintenance, marking, monitoring, rescue, inspection, supervision, investigation or defence.

5.4.2

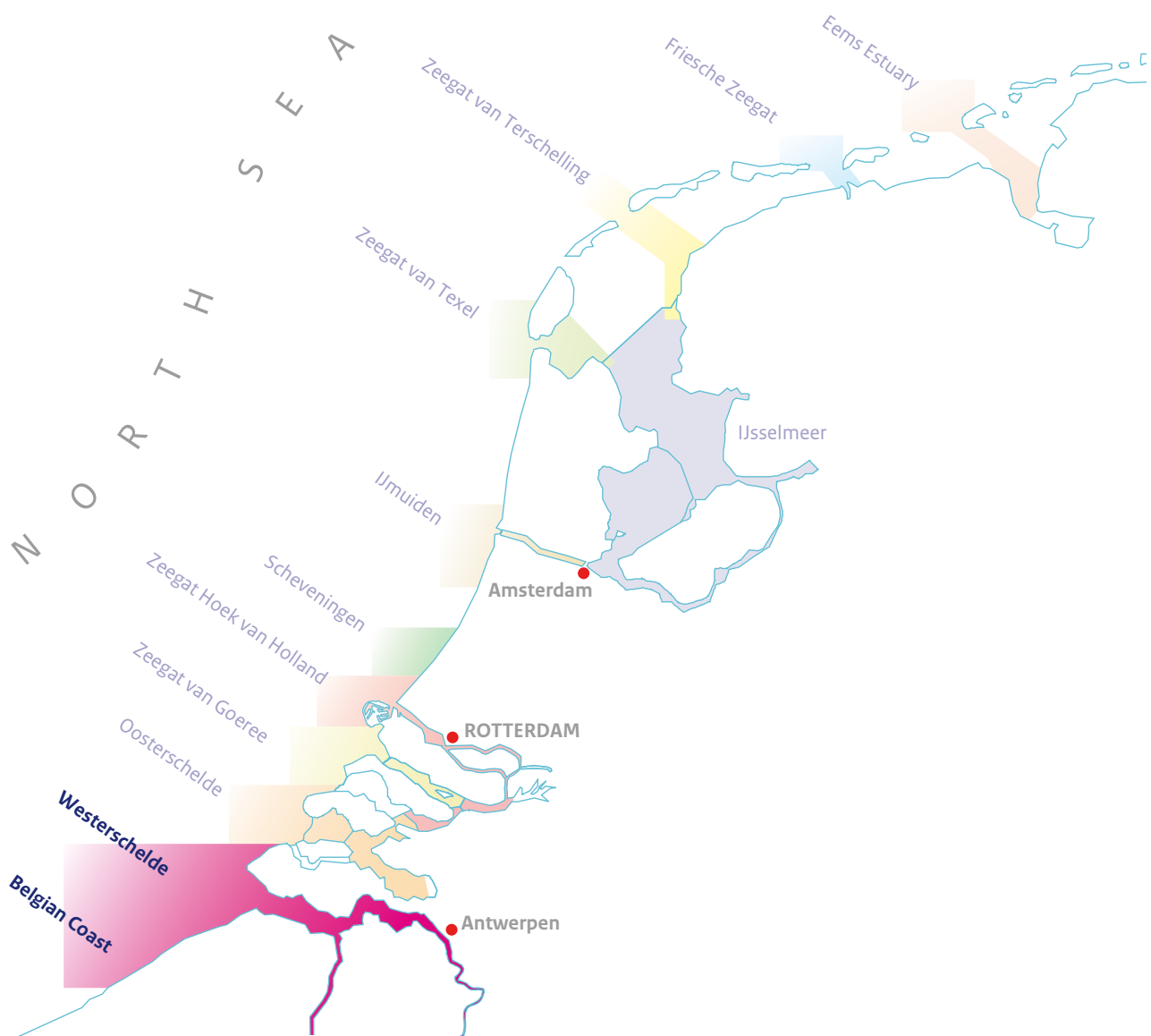
Netherlands - Tidal rivers area and Waddenzee

Certain parts of the tidal rivers area and Waddenzee, comprising both land and water, are protected by the 'Nature Conservation Act'. These closed areas are of great ecological value and of special importance to birds and seals. The specific regime for each of the specific close areas (all year round or only in certain periods and/or certain users) in respect to the Waddenzee is laid down in the "Limited Access-areas Decision on the Waddenzee".

If you have any questions about entrance permissions or remarks you can contact the Ministry of Agriculture, Nature and Food Quality e-mail: wetnatuurbescherming@mininv.nl

6

Westerschelde Belgian Coast



6.1 Destinations



6.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - 'Catalogue of Nautical Charts and Nautical Publications'. This publication can be downloaded from: www.defensie.nl/hydro

6.3 Communication

6.3.1 Pre-entry/Pre-departure reports

Notification of dangerous goods	
Who	All vessels carrying noxious and dangerous goods on the way to or leaving from the harbour, an inland anchorage or load/discharge terminal.
To	Zeeland Seaports (destination Vlissingen, Terneuzen, Dow Chemical, Total Jetty) Telephone: +31(0)115 64 75 60 Fax: +31(0)115 46 06 00 Harbour Master Westerschelde (destination Westerschelde, Canal Gent-Terneuzen) Telephone: +31(0)118 42 47 90 Fax: +31(0)118 47 25 03
What	A - B1 - G - H - I1 - I2 - L - O - P - U - W
When	■ If possible at least 24h before arrival at the port, anchorage or load/discharge terminal but at the latest before entering Netherlands territorial waters; ■ Before leaving the harbour, anchorage or load/discharge terminal.

International Pollution Prevention Certificate

Who	All vessels carrying noxious and dangerous goods on the way to or leaving from an anchorage, load/discharge terminal inside territorial waters and in the approach area.
To	Rijkshavenmeester Westerschelde Telephone: +31(0)118 42 47 90 Fax: +31(0)118 47 25 03
What	A - B1 - G - H - I1 - I2 - L - O - P - U - W
When	■ If possible at least 24h before arrival at the port, anchorage or load/discharge terminal but at the latest before entering Netherlands territorial waters; ■ Before leaving the harbour, anchorage or load/discharge terminal.
Who	All vessels carrying noxious and dangerous goods on the way to or leaving from an anchorage, load/discharge terminal inside territorial waters but outside the approach area.
To	Netherlands Coastguard Telephone: +31(0)88 958 4000 Fax: +31(0)223 65 83 58 E-mail: ccc@kustwacht.nl
What	A - B1 - G - H - I1 - I2 - L - O - P - U - W
When	■ If possible at least 24h before arrival at the port, anchorage or load/discharge terminal but at the latest before entering Netherlands territorial waters; ■ Before leaving the harbour, anchorage or load/discharge terminal.
Note	See also section 6.3.3 'Explanation of codes' .
Who	All oil tankers with a gross tonnage of 150 tons or more.
To	■ Zeeland Seaports (destination Vlissingen, Terneuzen, Dow Chemical, Total Jetty) via agent (Electronic Data Interchange - EDI); ■ Harbour Master Westerschelde (destination Westerschelde, Canal Gent-Terneuzen) via agent (Electronic Data Interchange - EDI).
What	X7
When	ETA – 24h at pilot station.
Note	See also section 6.3.3 'Explanation of codes' .

Notification of waste

Who	All vessels.
To	■ Zeeland Seaports (destination Vlissingen, Terneuzen, Dow Chemical, Total Jetty) via agent (Electronic Data Interchange - EDI); ■ Harbour Master Westerschelde (destination Westerschelde, Canal Gent-Terneuzen) via agent (Electronic Data Interchange - EDI).
What	Name – call sign – IMO – flag – ETA – ETD – last and next port of call – last port and date where waste has been landed – do you land all/some/no garbage at the harbour reception facilities – Waste Report form.
When	ETA – 24h at Pilot station Wandelaar/Steenbank or, if departure from a port was within this 24h, as soon as possible.
Remarks	None

Notification of vessel's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passenger vessels.
To	■ Zeeland Seaports (destination Vlissingen, Terneuzen, Dow Chemical, Total Jetty) via agent (Electronic Data Interchange - EDI); ■ Harbour Master Westerschelde (destination Westerschelde, Canal Gent-Terneuzen) via agent (Electronic Data Interchange - EDI).
What	X6
When	ETA – 24h at Pilot station Wandelaar/Steenbank or, if departure from a port was within this 24h, as soon as possible.
Remarks	■ Only vessels that are under way to a port or anchorage in the Netherlands as part of an international voyage; ■ The following vessels do not have to report : warships and troop transporting vessels – vessels without propulsion – wooden vessels with primitive construction – fishing vessels.
Note	See also section 6.3.3 'Explanation of codes' .

ETA/ETD

Who	All seagoing vessels.
To	Harbour Master Westerschelde Telephone: +31(0)118 42 47 90 Fax: +31(0)118 47 25 03
What	A - B - C - G - H - I - J - L - O - P - Q - T1 - U - W - X
When	1 At least 24h before arrival but at the latest before entering Netherlands territorial waters; 2 Before leaving the harbour, anchorage or load/discharge terminal.
Note	See also section 6.3.3 'Explanation of codes'.

Transit

Who	All vessels, except vessels with a length of 20m or less which are located in the VTS area.
To	Traffic Centres
What	A - D
When	When crossing a VTS sector boundary.
Note	See also section 6.3.3 'Explanation of codes'.

6.3.2 Request for a pilot**Netherlands harbours**

Who	All seagoing vessels compulsory to pilotage before entering the pilotage region (see also section 6.4.1 'Local pilotage')
To	- Port authorities harbour of destination or local Pilot Service via agent (Electronic Data Interchange - EDI); - When EDI is not available/operational a pilot request has to be made via agent or master by other means of communication:
	Pilotage Vlissingen (destination Netherlands harbours)
	Telephone: +31(0)118 48 95 02 Telefax: +31(0)118 41 23 21 E-mail: scheldepilot@loodswezen.nl Website: www.loodswezen.nl
	Pilot Services (destination Antwerpen)
	Telephone: +32(0)32 320 229 GSM: +32 (0)476 580 149 Fax: +32 (0)32 322 085 E-mail: orderpilot@loodswezen.be (via pilot cruising station Wandelaar) E-mail: scheldepilot@loodswezen.nl (via pilot cruising station Steenbank) Website: www.loodswezen.be
	Pilot Services (destination Gent)
	Telephone: +32 (0)92 505711 GSM: +32 (0)478 581 480 Fax: +32 (0)92 516 321 E-mail: orderpilot@loodswezen.be (via pilot cruising station Wandelaar) E-mail: scheldepilot@loodswezen.nl (via pilot cruising station Steenbank) Website: www.loodswezen.be
	Pilot Services (destination coastal harbours Belgium)
	Telephone +32 (0)50 355 239 GSM +32 (0)478 582 110 E-mail orderpilot@loodswezen.be Website www.loodswezen.be
	Belgium Pilot Services (Vlissingen)
	Telephone +31 (0)118 424 540 GSM +32 (0)473 897 002 Fax +31 (0)118 431 537 Website www.loodswezen.be
When	- At least 6h before arrival at pilot cruising station; - When a request for a pilot has been made more than 24h in advance, the request has to be confirmed at least 12h but at the latest 6h before arrival at the pilot cruising station; - At least 1h before arrival at Wandelaar or Steenbank pilot cruising station on VHF Ch. 65 or 64 respectively; - A delay in arrival time of 1h or more should be reported; - Canceling a pilot request has to be made immediately.

Belgian harbours

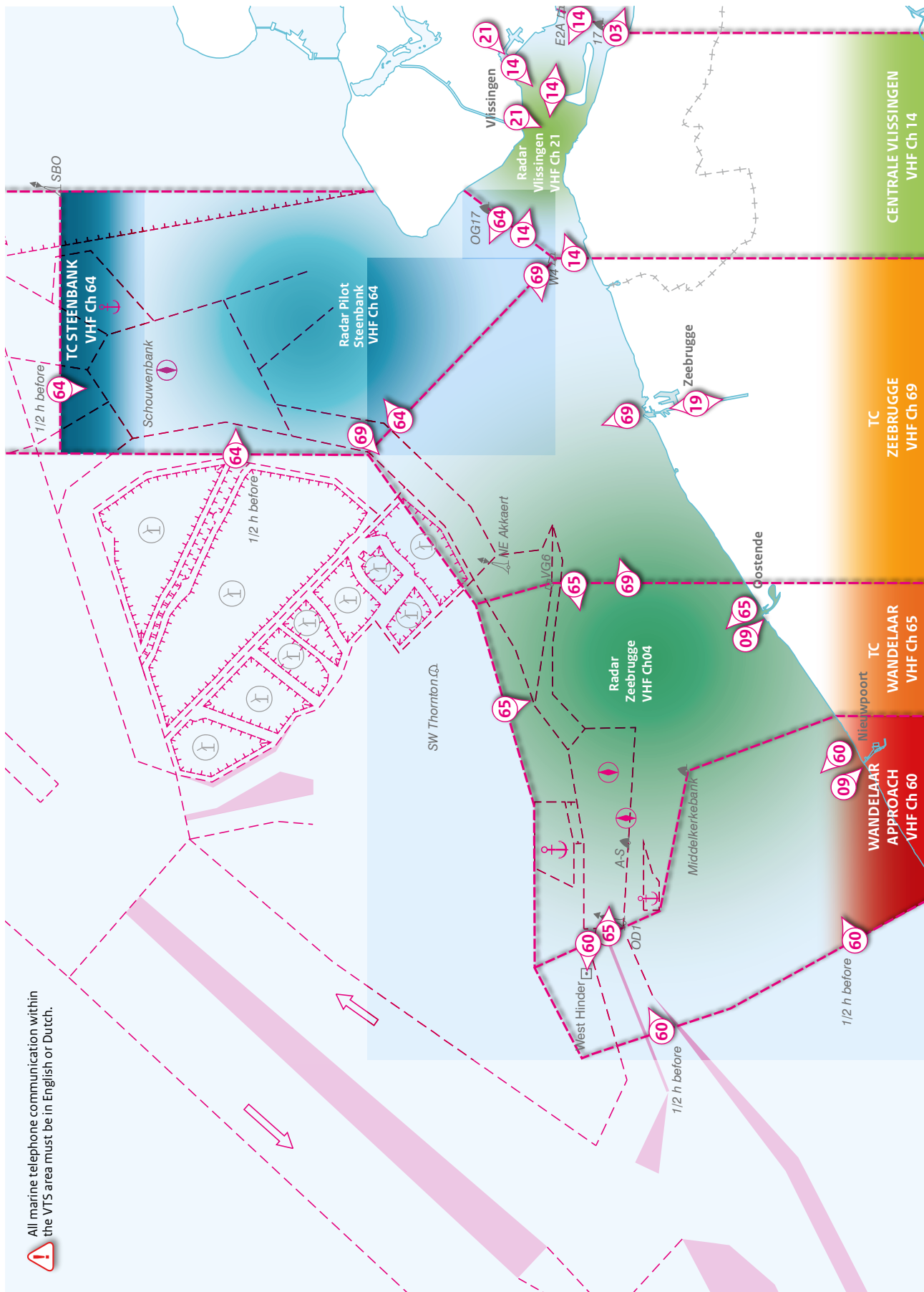
What	Name vessel and IMO-number - Call sign - Flag - Harbour of destination - Berth - Preferred mooring side - ETA (date and time) pilot cruising station - Specification of sailing plan for vessels which are not compulsory to pilotage - Name agent - LOA - Beam - Actual max. draught in dm (fresh water) - Max. manoeuvring speed - Actual freeboard or freeboard to ship's side door in dm - Any remarks such as damage to the vessel, limited manoeuvrability, etc.
Who	All seagoing vessels compulsory to pilotage before leaving or shifting within the pilotage region.
To	■ Port authorities harbour of departure/shifting or local Pilot Service via agent (Electronic Data Interchange - EDI) ■ When EDI is not available/operational a pilot request has to be made via agent or master by other means of communication (see procedures for vessels entering the pilot area).
When	■ At least 3h before departure/shifting; ■ A delay in departure time of 1h or more should be reported ■ Canceling a pilot request has to be made immediately.
What	Name vessel and IMO-number - Call sign - Flag - Actual berth - Destination: name pilot cruising station, harbour of destination within pilot area or new berth after shifting - ETD (date and time) from berth or - Specification of sailing plan for vessels which are not compulsory to pilotage - Name agent - LOA Beam - Actual max. draught in dm (fresh water) - Max. manoeuvring speed - Actual freeboard or freeboard to ship's side door in dm - Any remarks such as damage to the vessel, limited manoeuvrability, etc.

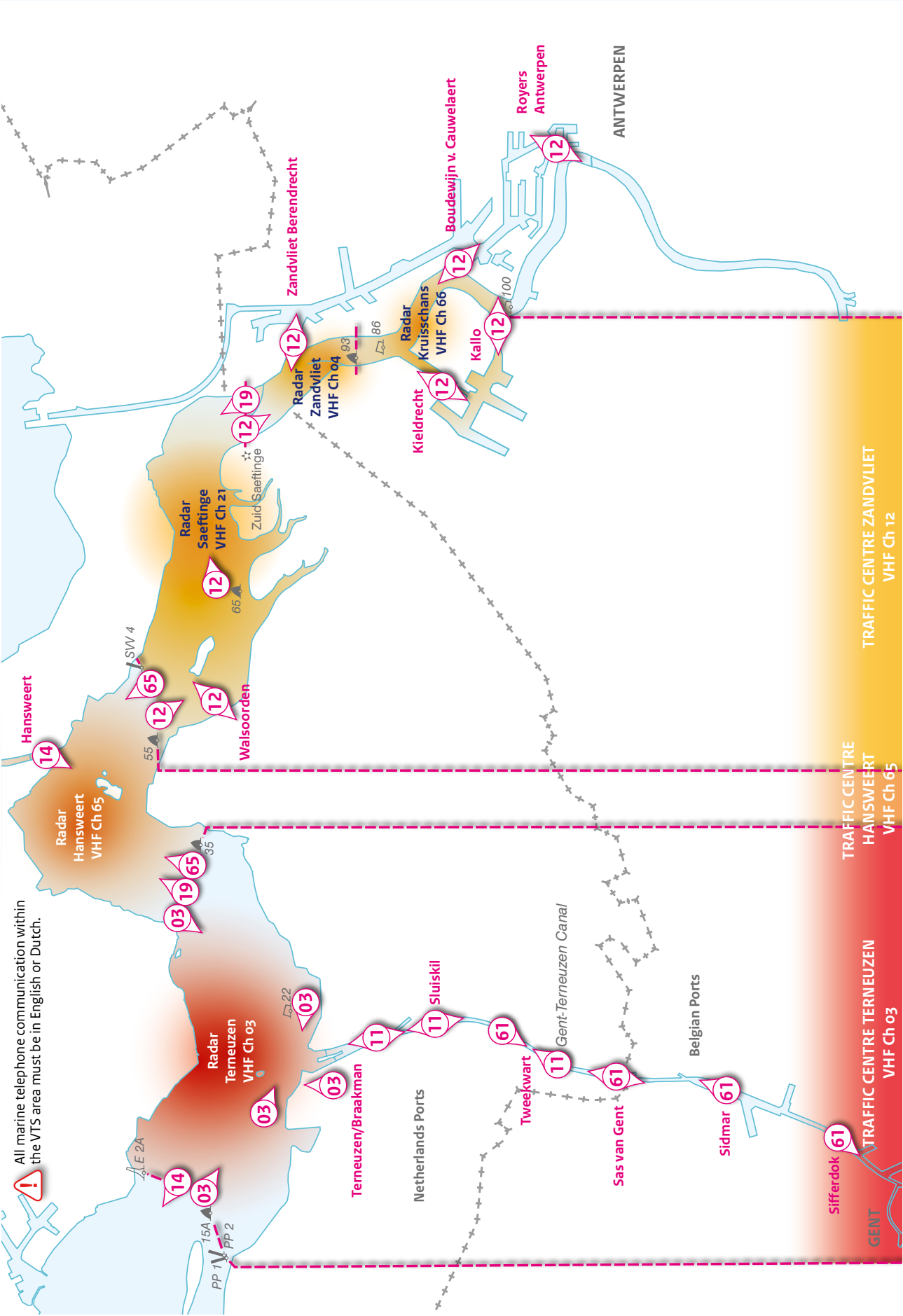
6.3.3 Explanation of codes

Code	Explanation
A	Vessel Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure Name of last port of call.
I	Destination and ETA Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system ETD expressed as in (B).
L	Route information Intended track.
O	Maximum present static draught in m A 4 digit group giving metres and centimetres
P	Cargo on board Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative Name of customer.
U	Ship's size and type Details of length, beam, tonnage (GT) and type.
W	Total number of persons on board Total number of crew on board and the total number of persons on board.
X1	Miscellaneous Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous Report any changes in previous report.
X3	Miscellaneous Required tugboats or linesmen.
X4	Miscellaneous What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous Any other information that might be important.
X6	Miscellaneous Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

6.3.4 VTS-Scheldt





VTS Reports – All seagoing vessels Inward bound/Sailing upriver

VHF Ch	Location	Message	To
64	1/2 h before entering VTS area	Name vessel – position – draught – destination	Traffic Centre Steenbank
60	1/2 h before entering VTS area	Name vessel – position – draught – destination	Traffic Centre Wandelaar
65	SW Akkaert Lt buoy	Name vessel – position – ETA Vlissingen Roads – route	Traffic Centre Wandelaar
64	SBZ Lt buoy	Name vessel – position – ETA Vlissingen Roads – route	Traffic Centre Steenbank
69	Lt buoys: A1bis, VG6, S2, NE Akkaert, WP4	Name vessel – position – ETA Vlissingen Roads – route	Traffic Centre Zeebrugge
14	Lt buoys: OG17, W5	Name vessel – Position	Traffic Centre Vlissingen
14	Vlissingen Roads	Name vessel – ETA destination – route	Traffic Centre Vlissingen
03	Buoys: 15A, E2A	Name vessel – position	Traffic Centre Terneuzen
65	Lt buoys: 35, MG2	Name vessel – position	Traffic Centre Hansweert
19	Lt buoy 35	Name vessel – position	Schelde informatie dienst
12	Lt buoy 55	Name vessel – position – destination	Traffic Centre Zandvliet
12	Lt buoy 65	Name vessel – position – destination	Traffic Centre Zandvliet
12	Sector Lt Zuid Saeftinge	Name vessel – position – ETA destination	Traffic Centre Zandvliet

Pilot vessel Wandelaar VHF Ch 65 – Pilot vessel Steenbank VHF Ch 64 – Calamities VHF Ch 67

All seagoing vessels Outward bound/Sailing downriver

VHF Ch	Location	Message	To
81	On departure, upriver buoy 100	Name vessel – position – intentions	All ships
12	Lt buoy 100 or when entering the river	Name vessel – destination	Traffic Centre Zandvliet
19	Sector Lt Zuid Saeftinge	Name vessel – position – ETA Vlissingen Roads	Scheepvaart informatie dienst
65	Lt buoy 46	Name vessel – position	Traffic Centre Hansweert
03	Lt buoy 32	Name vessel – position	Traffic Centre Terneuzen
14	Buoys: 8, E2A	Name vessel – position	Traffic Centre Vlissingen
14	Vlissingen Roads	Name vessel – position – ETA Pilot station	Traffic Centre Vlissingen
64	Lt buoys: OG14, WP4	Name vessel – position – route – ETA pilot station	Traffic Centre Steenbank
69	Lt buoy W4	Name vessel – position – route – ETA pilot station	Traffic Centre Zeebrugge
65	Lt buoys: VG6, S2, A1bis	Name vessel – position – route	Traffic Centre Wandelaar
60	Lt buoy OD1	Name vessel – position – route	Traffic Centre Wandelaar

Pilot vessel Wandelaar VHF Ch 65 – Pilot vessel Steenbank VHF Ch 64 – Calamities VHF Ch 67

VTS reports – All seagoing vessels joining the traffic

VHF Ch	Area	Message	To
19	Zeebrugge harbour area	Name vessel – position	Radar Zeebrugge
69	Zeebrugge Roads area	Name vessel – position	Traffic Centre Zeebrugge
21	Vlissingen	Name vessel – intentions	Radar Vlissingen
14	Vlissingen	Name vessel – position	Traffic Centre Vlissingen
03	Terneuzen	Name vessel – intentions	Traffic Centre Terneuzen
65	Hansweert	Name vessel – intentions	Traffic Centre Hansweert
12	Antwerpen	Name vessel – intentions	Traffic Centre Zandvliet
85	Antwerpen	Name vessel – intentions	Scheepvaart informatie dienst

VTS reports – All seagoing vessels leaving the traffic

VHF Ch	Area	Message	To
19	Zeebrugge harbour area	Name vessel – position	Radar Zeebrugge
69	Zeebrugge Roads area	Name vessel – position	Traffic Centre Zeebrugge
21	Vlissingen	Name vessel – request anchor information	Radar Vlissingen
14	Vlissingen	Name vessel – intentions	Traffic Centre Vlissingen
03	Terneuzen (Dow-jetty – Lt buoy 22)	Name vessel – intentions	Traffic Centre Terneuzen
65	Hansweert	Name vessel – intentions	Traffic Centre Hansweert
12	Antwerpen	Name vessel – intentions	Traffic Centre Zandvliet
85	Antwerpen	Name vessel – intentions	Scheepvaart informatie dienst

VTS reports – All seagoing vessels sailing up Gent-Terneuzen Canal

VHF Ch	Location	Message	To
11	Terneuzen locks	Name vessel – position - draught	VTS Terneuzen
11	Passing Sluiskil bridge	Name vessel – position	VTS Terneuzen
61	Passing Tweekwart	Name vessel – position	VTS Terneuzen
61	Passing Sas van Gent bridge	Name vessel – position	VTS Gent
61	After mooring in a Netherlands harbour	Name vessel – position	VTS Gent
61	Before leaving a Netherlands harbour	Name vessel – position - draught - destination	VTS Gent
61	Passing Zelzate bridge	Name vessel – position	VTS Gent
61	Passing Sifferdok	Name vessel – position	VTS Gent
61	After mooring in Belgian harbour	Name vessel – position	VTS Gent
61	After mooring in Belgian harbour	Checking out	VTS Gent

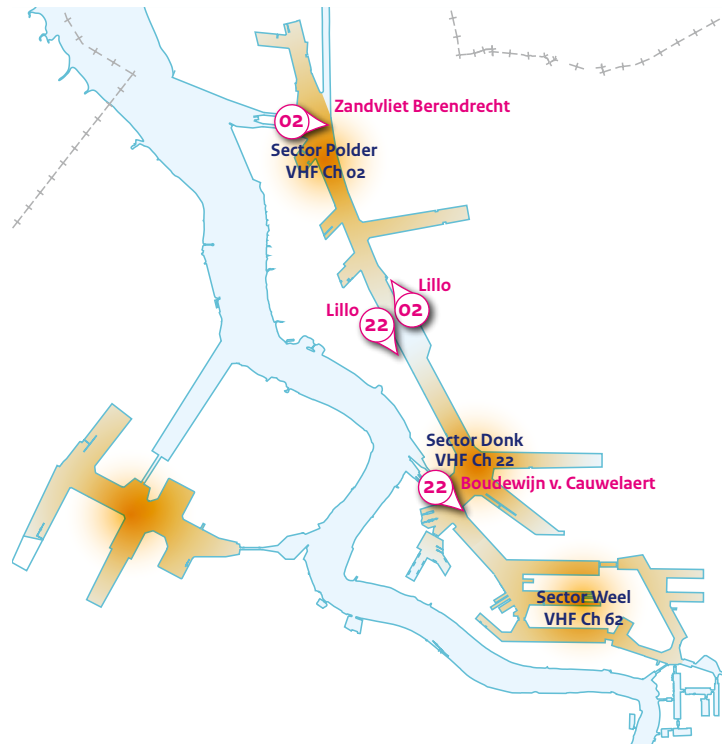
VTS reports – All seagoing vessels sailing down Gent-Terneuzen Canal

VHF Ch	Location	Message	To
61	Before leaving Belgian harbour	Checking in	VTS Gent
61	Before leaving Belgian harbour	Name vessel – position - draught - destination	VTS Gent
61	Sidmar Zuid	Name vessel – position	VTS Gent
61	Passing Zelzate bridge	Name vessel – position	VTS Gent
61	Passing Sas van Gent bridge	Name vessel – position	VTS Gent
61	After mooring in a Netherlands harbour	Name vessel – position	VTS Gent
61	Before leaving a Netherlands harbour	Name vessel – position - draught - destination	VTS Gent
11	Passing Tweekwart	Name vessel – position	VTS Terneuzen
11	Passing Sluiskil bridge	Name vessel – position	VTS Terneuzen
11	Terneuzen locks	Name vessel – position - draught	VTS Terneuzen

Vessel Traffic Services Scheldt Area

Station	VHF Ch	Compulsory reporting	Traffic arrangements	Traffic instructions	Traffic information	Navigation assistance	Shore Based Pilotage	Helicopter piloting	Guidance LNG	Harbour and lock information
Wandelaar Approach	60	✓	✓	✓	✓		✓	✓		
TC Wandelaar	65	✓	✓	✓	✓		✓	✓		
TC Zeebrugge	69	✓	✓	✓	✓		✓			
TC Steenbank	64	✓	✓	✓	✓	✓	✓			
TC Vlissingen	14	✓	✓	✓	✓		✓			
TC Terneuzen	03	✓	✓	✓	✓					✓
TC Zandvliet	65	✓	✓	✓	✓					✓
TC Zandvliet	12	✓	✓	✓	✓					
Radar Zeebrugge	04				✓	✓	✓		✓	
Radar Vlissingen	21	✓				✓				
Radar Terneuzen	03					✓				
Radar Hansweert	65					✓				
Radar Saeftinge	21					✓				
Radar Zandvliet	04					✓				
Radar Kruisschans	66					✓				
Terneuzen Port Control	11	✓	✓		✓					✓
Gent Port Control	11	✓	✓		✓					✓

6.3.5 VTS - Port of Antwerp



VTS reports – All seagoing vessels sailing in the Port of Antwerp

VHF Ch	Area	Message	To
02	Zandvlietsluis	Name vessel – position - destination	Sector Polder
02	Berendrechtsluis	Name vessel – position - destination	Sector Polder
02	Passing Lillobrug	Name vessel – position - destination	Sector Polder
22	Passing Lillobrug	Name vessel – position - destination	Sector Polder
22	Boudewijns sluis	Name vessel – position - destination	Sector Polder
22	Van Cauwelaert sluis	Name vessel – position - destination	Sector Polder

VTS reports – All seagoing vessels joining the traffic

VHF Ch	Area	Message	To
02	Before leaving berth	Name vessel – position - destination	Sector Polder
22	Before leaving berth	Name vessel – position - destination	Sector Donk

VTS reports – All seagoing vessels leaving the traffic

VHF Ch	Area	Message	To
02	After mooring	Name vessel – position	Sector Polder
22	After mooring	Name vessel – position	Sector Donk

6.3.6 Communication during Shore Based Pilotage (SBP)

Fairway	SBP advice from	VHF Ch
Via Oostgat	Radar Pilot Steenbank	79
	Another vessel via:	
	Traffic Centre Steenbank	64
Via Scheur and Wielingen	Centrale Vlissingen	14
	Radar pilot Wandelaar	65
	Radar pilot Zeebrugge	69
	Radar pilot Vlissingen	14

6.3.7 Communication Locks

Location	Locks	VHF Ch
Vlissingen	Grote and Kleine sluis	18
Kanaal door Walcheren (south entrance)	Binnenkeersluis	22
Terneuzen (Kanaal Gent-Terneuzen north entrance)	Oostsluis	18
	Westsluis	06
Hansweert (Kanaal door Zuid-Beveland south entrance)	Oostsluis	22
	Westsluis	22
Antwerpen	Zandvlietsluis	79
	Berendrechtsluis	79
	Boudewijnsluis	71
	Van Cauwelaertsluis	71
	Royerssluis	20
	Kallosluis	01
	Kieldrechtsluis	01
Schelde-Rijnverbinding (north of Antwerpen)	Kreekraksluizen	20

6.3.8 Communication Bridges

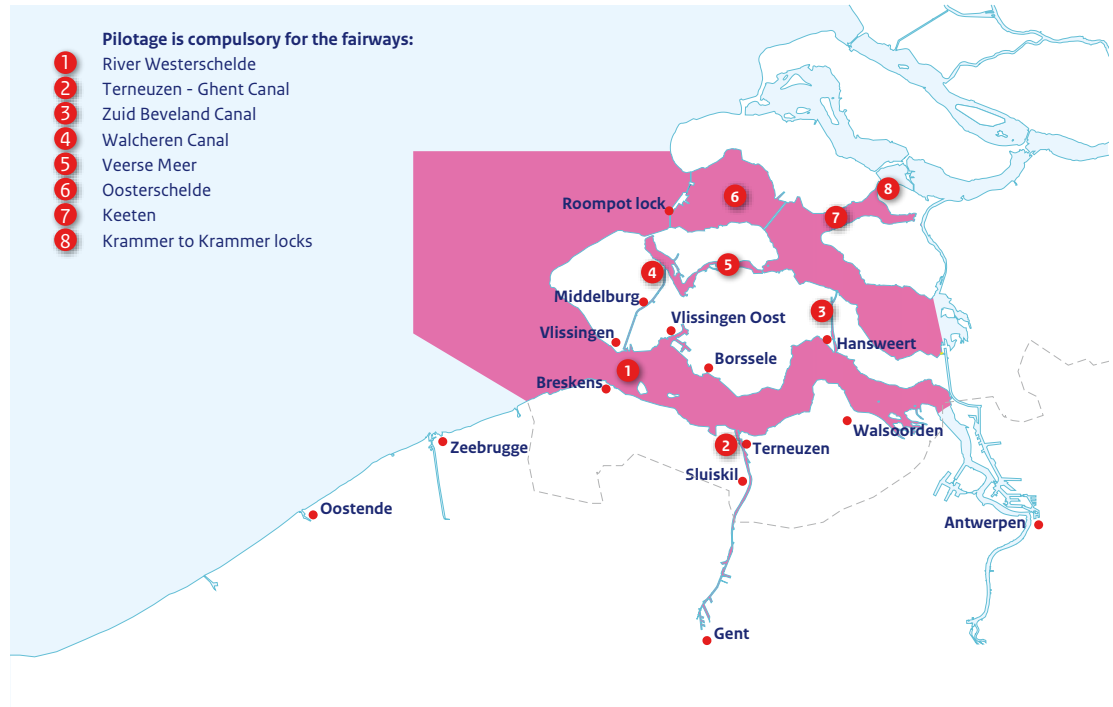
Location	Bridges	VHF Ch
Kanaal door Walcheren (south entrance up to Arnekanaal)	Keersluisbrug	22
	Sloebrug	22
	Souburg	22
	Schroebrug	22
	Stationsbrug	22
Gent-Terneuzen Canal	Sluiskil	11
	Sas van Gent	11
	Zelzaterbrug	11
Kanaal door Zuid-Beveland	Vlakebrug	22
	Postbrug	22
Antwerpen	Wilmarsdonkbrug	62
	Oosterweelbrug	62
	Noordkasteelbrug	62
	Lillobrug	02
	Siberiabrug	62

6.4 Pilotage

6.4.1 Local pilotage

Compulsory pilotage

Pilotage in this region is compulsory for the following fairways:



Exemptions compulsory pilotage

See [Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage The Netherlands’ – 2.6 ‘Pilotage Belgium’](#)

Request for a pilot

See [section 6.3.2 ‘Request for a pilot’](#).

Signals when pilotage is suspended

See [section 6.8 ‘Signals’](#).

6.4.2 Shore based pilotage

General information

See [Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage’ \(The Netherlands\)](#).

Routes

1 SBP via Oostgat

When pilotage is suspended at the pilot cruising station Steenbank, SBP will be available on the track Steenbank Pilot station to Oostgat entrance or until the pilot embarks at a more inward position.

When embarkation cannot take place at a more inward position SBP can be given from the pilot vessel or another vessel.

2 SBP via Scheur and Wielingen

When pilotage is suspended at the pilot cruising station Wandelaar, SBP will be available on the track AZ / AN Lt buoys to Vlissingen roads / NE Akkaert buoy to Vlissingen roads or until the pilot embarks.

Masters obligations

See [Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage’ \(The Netherlands\)](#).

Excluded from SBP

- Scheur/Wielingen channels: Vessels exceeding the following upper limits: length of 175m; draught of 80dm;
- Oostgat channel: Vessels exceeding the following upper limits: length: 125m; draught 64dm;
- Vessels as mentioned in Article 12, subsection 1, section A, B and C of the ‘Blue Book’ (Regulations for carrying dangerous substances by seagoing vessels);
- Loaded or unloaded vessels which have not been certified gas-free in accordance with Article 25 of the ‘Blue Book’;
- Loaded or unloaded vessels which have not been certified gas-free in accordance with Article 24, subsection 2 of the ‘Blue Book’;
- Loaded or unloaded vessels which have not been certified gas-free in accordance with IMO-class 3.1, 3.2, 3.3, 6.1, 8 (only marine pollutant) and 9 (only marine pollutant) of the ‘Blue Book’;
- Vessels excluded by Belgian or Netherlands authorities.

Communication

See [section 6.3](#).

6.4.3 Deep sea pilotage

See [Chapter 2 – Navigation | Traffic Safety, section 2.7 ‘Deep sea pilotage’](#).

6.4.4 Boarding arrangements

Boarding by pilot vessel

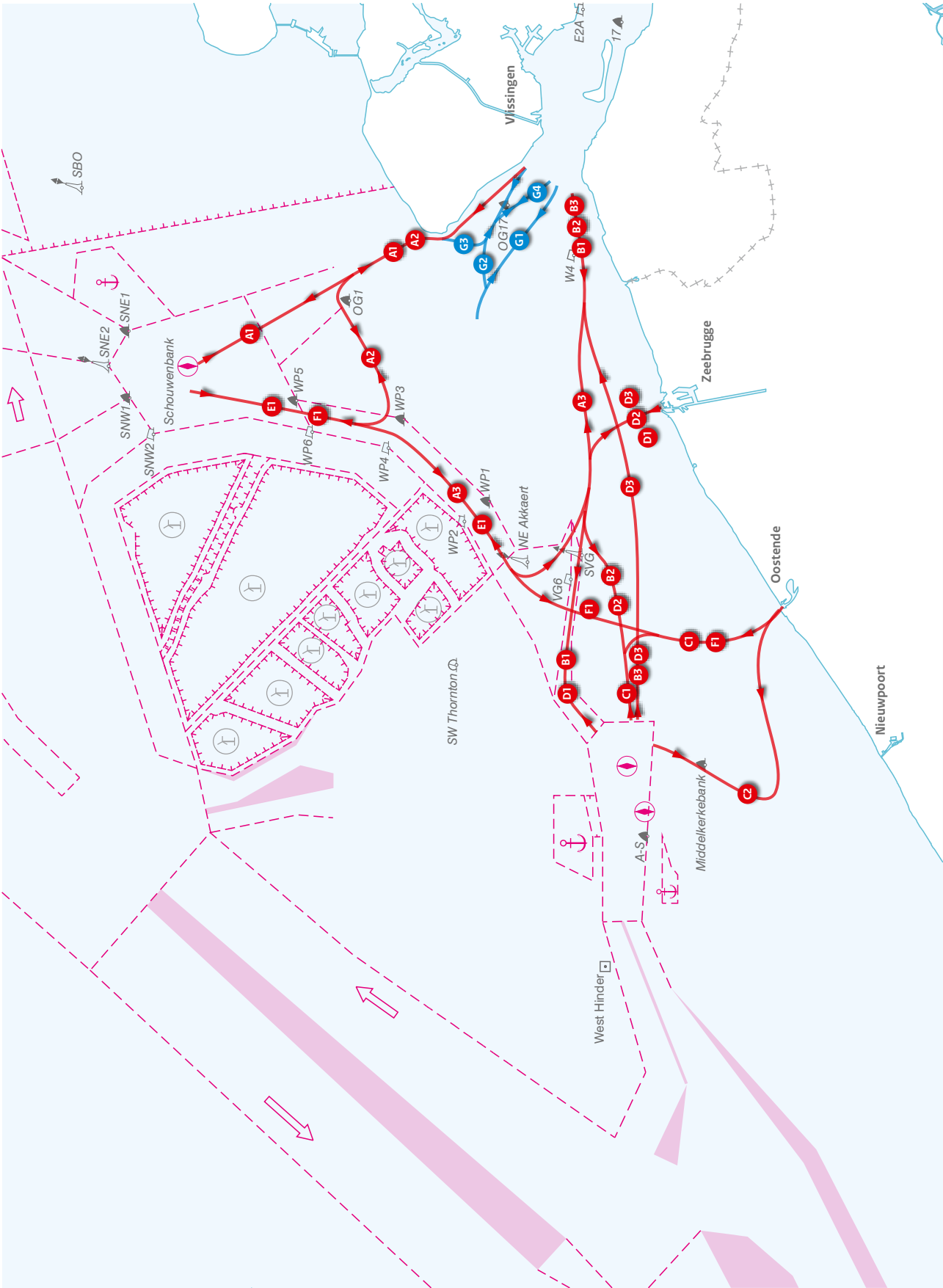
See [Chapter 2 – Navigation | Traffic Safety, section 2.5.6 ‘Pilot boarding arrangements’](#).

Boarding by helicopter

See NP100 ‘The Mariner’s Handbook’.

6.5 Sailing directions

6.5.1 Westerschelde approach



Main fairways to Vlissingen Roads**A1 – Through Oostgat and Sardijneul across Steenbanken**

From Steenbank Pilot station 150° (true) leads to Kaloo Lt buoy through the "2-way route Schouwenbank SE". Passing SBZ, Middelbank, Magne and MSB Lt buoys. Oostgat is then entered on the leading line 149.5°. Corrections to the course may be necessary to allow for effect of wind and tide. In the case of deep draught vessels the deepest part of the route should be followed, particularly in the vicinity of Steenbanken. On leaving the line of Westkapelle Lt in line with sector Lt Molenhoofd, the leading line 130° provides a guide off OG9 Lt buoy. Off OG-DL Lt buoy the unlit fairway Deurloo leads into Oostgat.

Near OG21 Lt buoy guidance is given by leading line 117°, which leads into Sardijneul.

It should be noted that vessels bound for Oosterschelde and vessels sailing close along the coast will be crossing this route. When navigating Oostgat and Sardijneul speed should be adjusted to avoid suction and wash.

A2 – Through Oostgat and Sardijneul, SW of Steenbanken

Steenbanken can be avoided by following the "2-way route Westpit" and then exit the route north of Lt buoy WP3, thence passing south of ZSB Lt buoy and keeping OG1 Lt buoy on the starboard hand, the track leads towards Kaloo Lt buoy. Outward bound vessels can use the route in the reverse direction. It should be noted that vessels bound for Oosterschelde and vessels sailing close along the coast will be crossing this route. When navigating Oostgat and Sardijneul speed should be adjusted to avoid suction and wash.

A3 – Through Westpit, Scheur and E-part of Wielingen

This route is approximately 25 n miles longer than route A1 and may be chosen if required by the vessel's draught. Other reasons for its use are meteorological conditions, the vessel's dimensions or the nature of the cargo. The route follows the "2-way route Westpit" to the vicinity of NE Akkeart Lt buoy (appr. 51°27.3'N 2°59.4'E). From NE Akkeart Lt buoy, Scheur is entered between S3 and S4 Lt buoys, thence Wielingen is entered between W2 and W3 Lt buoys.

B1 – Through Vaargeul, Scheur and Wielingen

Vessels with a draught > 13.1m are considered channel-bound and therefore obliged to make use of Vaargeul as part of the 'Deep Water (DW) Route in the approaches to river Scheldt'. Vaargeul is converging Scheur between S3 and S4 Lt buoys, thence Wielingen is entered between W2 and W3 Lt buoys.

B2 – Through Scheur and Wielingen

Scheur is entered south of Akkeartbank between S1 and S2 Lt buoys after passing A1 Lt buoy, thence Wielingen is entered between W2 and W3 Lt buoys.

B3 – Through Wielingen to the south of Scheur

The route may be used by vessels drawing less than 8m and leads through the channel north of Wenduinebank, thence through Wielingen to the south of Scheur, which converges with Scheur at the S-W Lt buoy (N cardinal). When crossing Zand (Approach channel to Zeebrugge) in and out going vessels, often without pilots, and ferries to and from Zeebrugge may be encountered.

Main fairways to Oostende harbour**C1 – Through the passage between Ravelingen and Wenduinebank**

Through the passage between Ravelingen and Wenduinebank, thence via Buitenstroombank Lt buoy (Grote Rede) and Rechtstreekse Kil, Oostende Harbour is entered on the 128° leading line.

C2 – Through Negenvaam

Through Negenvaam, thence Noordpas is entered through the passage between D1 and Middelkerkebank S Lt buoys, thence via Buitenstroombank Buoy Rechtstreekse Kil is entered, thence Oostende harbour is entered on the 128° leading line.

F1 – Through Westpit, Ravelingen, Grote Rede and Rechtstreekse Kil

The route follows the "2-way route Westpit" to the vicinity of NE Akkeart Buoy (appr. 51°27.3'N 02°59.4'E). From NE Akkeart Buoy a course is set out towards A1 Buoy. On this part of the route crossing traffic may be encountered on their way from pilot station Wandelaar to Zeebrugge/Westerschelde or vice versa. From A1 Buoy the route leads through Ravelingen. This passage is entered between the Oostendebank E and Wenduinebank W Buoys, thence via Buitenstroombank Buoy (Grote Rede) and Rechtstreekse Kil, Oostende Harbour is entered on the 128° leading line.

Main fairways to Zeebrugge harbour**D1 – Through Vaargeul, Scheur and Zand**

Vessels with a draught > 13.1m are considered channel-bound and therefore obliged to make use of Vaargeul as part of the 'Deep Water (DW) Route in the approaches to river Scheldt'. Vaargeul is converging Scheur between S3 and S4 Lt buoys, thence Wielingen is entered between W2 and W3 Lt buoys.

D2 – Through Scheur and Zand

Scheur is entered south of Akkeartbank between S1 and S2 Lt buoys after passing A1 Lt buoy, thence Zand is entered between SZ and S7 Lt buoys.

D3 – Through the channel N of Wenduinebank and Zand

The route can be used by vessels drawing less than 8m and leads through the channel north of Wenduinebank, thence Zand is entered between Z and WZ Lt buoys. In the approach channel to Zeebrugge (Zand) in and out going vessels, often without pilots, and ferries to and from Zeebrugge may be encountered.

E1 – Through Westpit, Scheur and Zand

The route follows the "2-way route Westpit" to the vicinity of NE Akkeart Buoy (appr. 51°27.3'N 02°59.4'E). Very deep-draught vessels take a more westerly course. From NE Akkeart Buoy Scheur is entered between S3 and S4 Buoys, thence Zand is entered between SZ and S7 Buoys.

Notes**Special attention is drawn to the following points:**

- Scheur is continually dredged;
- There is a lot of crossing traffic near S3 and S4 Lt buoys, especially ferries to and from Zeebrugge and Vlissingen enter or leave Scheur at this point;
- Vessels, with a draught too deep to use Oostgat, which have embarked the pilot at Steenbank pilot station, enter Scheur between S3 and S4 Lt buoys;
- In the shoalest part of the channel between S5 and S6 Lt buoys and S12 and S-W Lt buoys and as far as W2 Lt buoy and Fort Maisonneuve wreck Lt buoy, the axis of the deepest part of the dredged channel (500m wide), lies about 1 cable north of the fairway. Deep draught vessels proceeding inwards follow the middle of this channel slightly N of the axis of the fairway;
- If a large LPG-tanker is navigating the route between Wandelaar pilot station and Zeebrugge harbour, the following applies: if required the LPG-tanker must anchor at West hinder anchorage - keel clearance ≥ 15% - wind force < 14m/s – tidal stream at Zeebrugge harbour entrance < 1,5kts – visibility > 1000m – all other shipping should remain at a distance ≥ 0,5nm;
- Between S3 and S4 Lt buoys, Vaargeul is converging Scheur;
- Between SZ and S7 Lt buoys, Zand (approach channel to Zeebrugge) is converging Scheur. In and out going vessels, often without pilots, and ferries to and from Zeebrugge may be encountered;
- Scheur/Wielingen: Vessels with a length > 200m and/or draught > 10m shall exhibit during day time a black cylinder and during night time in addition to the prescribed navigation lights three all-round red lights in a vertical line;
- Firing exercises see Chapter 2 – Navigation/Traffic Safety, [section 2.8 'Military exercise and detonation areas'](#).

Secondary fairways to Vlissingen Roads

G1 – Geul van Walvischstaart

The fairway is not of importance to seagoing vessels.

G2 – Deurloo

The fairway is not used by large vessels. It is not advisable to navigate this fairway at night or during poor visibility.

G3 – Geul van de Rassen

The fairway is not used by large vessels. It is not advisable to navigate this fairway at night or during poor visibility.

G4 – Spleet

The fairway is not of importance to seagoing vessels.

Anchorage

Anchorage Schouwenbank

Just NE of Schouwenbank Junction is an anchorage of about 5 x 2,5 n miles. Vessels wishing to use this anchorage should inform Traffic Centre Steenbank as early as possible. On leaving the anchorage this should also be reported. (see also [section 6.3 'Communication'](#)).

Anchorage West Hinder

Anchorage for LNG-carriers bound for or departed from the port of Zeebrugge.

Anchorage Oostdyck

Anchorage for LNG-carriers bound for or departed from the port of Zeebrugge.

6.5.2 Westerschelde



General information

Westerschelde runs through Netherlands territory between Walcheren and Zuid Beveland on the N side and Zeeuwsch Vlaanderen on the S side and becomes the Schelde at the Netherlands/Belgian border. The fairway is very winding and the channels are narrow in some places. Due to strong currents, the direction and depth of the channels are subject to change. There is heavy traffic, both sea-going vessels and inland craft. Therefore the use of a pilot is always recommended. The fairways are well marked by buoys and have leadinglights and sector lights in various parts. In places where there is a lot of background lighting the navigation lights of ships may be difficult to see. The Westerschelde Shipping Regulations ('Scheepvaartreglement Westerschelde') are in force in the Netherlands part of Westerschelde and the 'Scheepvaartreglement van de Beneden Zeeschelde' and the 'Politiereglement van de Beneden Zeeschelde' in the Belgian part.

Main fairways from Vlissingen Roads to Antwerpen**H1 – Vlissingen Roads**

Vlissingen Roads lies within the magenta dotted lines shown on nautical charts and consists of: Anchorages Wielingen Noord/Zuid; Anchorage Vlissingen Roads; Prohibited anchorage between the anchorages of Wielingen Zuid and Vlissingen Roads.

A precautionary area lies within Vlissingen Roads. It comprises the entire area of Vlissingen Roads with the exception of the anchorages mentioned. The Precautionary area forms the main channel. Within the Precautionary area the following rules apply: Fishing vessels should not impede other vessels and should give way.

A vessel on a E-ly course should, as much as possible, avoid navigating N of a line running from a point approximate goom S of the W-ly head of the Koopmanshaven at Vlissingen to a point approximate goom S of the red light of Buitenhaven at the entrance to the Kanaal door Walcheren (see arrows on the nautical chart);

A vessel on a W-ly course should, as far as possible, avoid navigating S of the line mentioned above. When a yellow flashing light is displayed from the radar tower, located on the front at Vlissingen, indicating that vessels coming from sea are approaching through Sardijngeul, vessels proceeding to sea should not pass W of the sector-light on the head at Koopmanshaven, at Vlissingen. Please be aware of vessels coming from, or bound for Vlissingen Buitenhaven and crossing vessels such as ferries. Also to vessels coming from the anchorages in Everingen bound for Pas van Terneuzen and turning in Vlissingen Roads. Changes of pilot also take place in the roads and consideration should be given to vessels wishing to anchor or weigh anchor.

H2 – Honte

Honte fairway passes across the harbour entrance to Vlissingen Oost harbour (Sloehaven). Please be aware of traffic entering and leaving the harbour.

H3 – Pas van Terneuzen

Pas van Terneuzen leads across the entrance to the harbours of Terneuzen. Off Drempel van Borssele the fairway is very narrow. Local cross currents may make the passage of this channel difficult, especially for large and/or deep draught vessels. Drempel van Borssele is regularly dredged. Be aware of the possibility of vessels coming from Everingen and Schaar van Spijkerplaat. Between buoys 17 and 25, the secondary fairways

Thomaesgeul and Vaarwater langs Paulinapolder are converging Pas van Terneuzen.

Between buoy 17 and Dow-Schelde jetty at Terneuzen seagoing vessels bound for Braakmanhaven, Scheldesteiger or West Buitenhaven of Terneuzen make fast harbour tugs. Care is required on passing the various harbour entrances of Terneuzen to avoid vessels entering or departing. Opposite Veerhaven (marina) at Terneuzen N of the red port hand buoys, lies a route marked by yellow special buoys, specially intended for pleasure craft.

H4 – Gat van Ossensisse

The fairway is the E continuation of Pas van Terneuzen and enters Overloop van Hansweert at its E end.

H5 – Overloop van Hansweert

Opposite the harbour entrance to Hansweert, S of the green starboard hand buoys is a waiting area for inland craft. The waiting area is marked by yellow buoys. Please be aware of vessels entering and leaving the harbour. On entering Overloop van Hansweert during the ebb (out going) stream a strong set towards the can-buoy side, should be anticipated. This applies particularly when drying sandbanks are awash. At the E end of Overloop van Hansweert two flood streams meet, one from Middelgat and the other from the fairway first mentioned, and special care is necessary.

H6 – Zuidergat

During strong spring tides a very strong tidal stream can cross Zuidergat. This tidal cross stream occurs during high water levels of 54dm (+2.80m referred to NAP) or higher from 20 minutes before HW Hansweert to 60 minutes after HW Hansweert and runs between the 51 and 53 Lt buoys from the E-part of Platen van Ossensisse (north of Hoek van Ossensisse) in the direction of the northwest entrance of Schaar van Waarde. At the same time, a western tidal cross stream runs between the 53 and 55 buoys towards the outlet area of the Schaar van Ossensisse. The tidal cross stream can also occur during less developed spring tides which, due to storm surging, result in a water level Hansweert >6.10m LAT (+3.35m NAP). On passing the harbour of Walsoorden, speed should be adjusted to avoid suction and wash. Meetings between oversized vessels with opposing directions should be avoided near the harbour entrance. Care is required in connection with traffic entering and leaving the harbour of Walsoorden.

H7 – Overloop van Valkenisse

The fairway is running between the steep banks of Verdrongen land van Saeftinge and Platen van Valkenisse.

H8 – Nauw van Bath

When considering a reduction of speed in Nauw van Bath the effects of ebb and flood sets should be taken into account. The floodstream is weak on the N side of the fairway, but runs strongly along and across the conical buoy side. At the end of the incoming tide a strong flood stream persists along the conical buoys, when the ebb is already running along the N side. The ebb stream, is mainly persistent towards the opposite shore, specially when the banks are covered. In Nauw van Bath the ebb stream runs strongly along the N side and sets towards the can buoy side.

H9 – Pas van Rilland

Seagoing vessels bound for the Zandvliet/Berendrecht lock complex and container quay, make fast their tugs in the vicinity of Noord Ballastplaat sector Lt. Vessels bound for these locks cross the fairway between Ballastplaat and Ouden Doel sector Lts. Care is therefore required.

H10 – Zandvlietsluis/Berendrechtlsuis to Scheldekaai

This part of the fairway gives entrance to several locks. Crossing vessels and vessels waiting their turn to lock in, may be encountered off all the lock entrances. There are two container terminals situated close N and S to the entrances of Zandvlietsluis/Berendrechtlsuis (locks). Vessels should proceed with caution. The fairway is well marked by Lt buoys and a series of leading and sector Lts.

Secondary fairways from Vlissingen Roads to Nauw van Bath**I1 – Vaarwater langs Hoofdplaat**

Vaarwater langs Hoofdplaat is deep, but narrow and leads from Breskens in a generally E direction to its junction with Pas van Terneuzen. It runs between the coast of Zeeuwsch Vlaanderen to the S and Hooge Platen to the N. The E end of the channel is known as Springergeul. The channel is buoyed but not lighted and is mainly used by inland and pleasure craft.

I2 – Thomaesgeul

Thomaesgeul is a narrow branch channel of Vaarwater langs Paulinapolder which leads between the drying heights of Lage Springer into the main fairway Pas van Terneuzen. The channel is buoyed but unlit and is mainly used by small seagoing vessels and pleasure craft. On its northeast end the channel runs into the anchorage Springergeul (Pas van Terneuzen).

I3 – Vaarwater langs Paulinapolder

The fairway is the SE continuation of Vaarwater langs Hoofdplaat. It is buoyed with special marks (yellow) and leads to Pas van Terneuzen. The channel runs between the coast of Zeeuwsch Vlaanderen to the S and Lage Springer to the N and is mainly used by pleasure craft.

I4 – Schaar van Spijkerplaat

Schaar van Spijkerplaat, an alternative to Honte should only be used by day and with local knowledge. The fairway is buoyed but partly lit and leads from Rede van Vlissingen along the N side of Hooge Platen and between Hooge Springer and Spijkerplaat and joins Pas van Terneuzen just S of Drempel van Borssele. The fairway is frequently used by pleasure craft and small to medium-sized vessels.

I5 – Everingen

Everingen is the continuation of Honte and runs between the coast of Zuid Beveland to the N and Suikerplaat and Middelplaat to the S. The channel connects Honte with Middelgat. S of Ellewoutsdijk Zuid Everingen connects the channel with Pas Van Terneuzen. The channel is buoyed and lit and is used by medium-sized seagoing vessels, inland and pleasure craft. Especially the shallow E side of the channel is due to frequent changes in depths, therefore local knowledge is essential for safe navigation. The W part of the channel provides good anchorage. Just E of Ellewoutsdijk lies a naval exercise area. This area should not be used for fishing.

I6 – Zuid Everingen

Zuid Everingen is running through Middelplaat (dry and flooded) and connects Everingen and Pas van Terneuzen. The fairway is buoyed but not lit and mainly used by inland- and pleasure craft.

I7 – Middelgat

The S entrance of secondary fairway Middelgat starts at the E end of secondary fairway Everingen and runs in a northeasterly direction between the coast of Zuid Beveland and the drying heights of Rug van Baarland, Brouwerplaat and Molenplaat. On its E end (just W of Hansweert) Middelgat runs into the main fairway Overloop van Hansweert. Middelgat is buoyed and lit and mainly used by inland and pleasure craft.

I8 – Schaar van Valkenisse

Entry to the fairway Schaar van Valkenisse is prohibited, except for pleasure craft.

Anchorage**Use of anchorages**

Rules are in force for the following activities for anchorages in the Westerschelde:

- transshipment of cargo
- bunkering/supplying/discharging sludge
- cleaning/fumigating
- repair and maintenance

Permission must be obtained from the State Harbour Master who will allocate an anchorage. The most important criteria considered when giving permission are safety and the environment. Seagoing gas carriers as defined in Art. 25 of the 'Regulations for the Carriage of Dangerous substances by seagoing vessels' (IMDG) and seagoing vessels loaded with cargo of IMO Class I, are required by the regulation to make an uninterrupted passage. In case of an emergency the above-mentioned vessels may anchor at the anchorage Wielingen Noord (west of Lt buoy W8) or at the anchorage Everingen (Nr. A) Permission to anchor will never be given for vessels awaiting orders, a berth or for changing crews. Gas carriers, not covered by the above Article, are allowed to anchor at the anchorages indicated for that purpose. Vessels wishing or having to anchor for any reason should make their intentions known to the Traffic Service of the sector area concerned in good time. After the vessel has anchored, the time and position of anchoring must be reported. The intention to, and weighing of the anchor must also be reported.

Wielingen Noord anchorage

This anchorage serves:

- In case of emergency when the anchorage in 'Vlissingen Roads' is not safe for any reason.
- Seagoing tankers as defined in Art 25 of the 'Regulations for the Carriage of Dangerous substances by seagoing vessels' (IMDG), loaded with liquified gas, should, if unable to comply with the established route (Scheur, Hoofdvaargeul), as stated in Art. 25 (IMDG), anchor in the Wielingen Noord anchorage, and for the safety of other shipping, as far W as practicable, and in any case W of the meridian of buoy W8, or, if the Everingen mooring is available, in position 'A'.
- Vessels loaded with dangerous substances which are required to display the signals given in articles 12 and 23 of the IMDG and vessels loaded with substances of danger class IMO1, which have a requirement to anchor, W of the meridian of buoy W8. Vessels may not anchor until they have obtained permission from the Westerschelde State Harbour Master.

If any objections are raised to the above rules by the ship's management from navigational or meteorological reasons, the Westerschelde State Harbour Master may allocate an anchorage in the Eastern part of Vlissingen Roads or another anchorage. The holding ground in the anchorage is poor. It is therefore advised not to use the anchorage in stormy weather.

Wielingen Zuid anchorage

This anchorage serves:

- Vessels with a draught over 14m waiting for the tide (E of Nieuwe Sluis Lt);
- all other vessels that are not required to display the signals for the carriage of dangerous substances.

The holding ground in the anchorage is poor. It is therefore advised not to use the anchorage during stormy weather.

Vlissingen Roads anchorage

This anchorage consists of two parts, an E and a W part. They are separated by a line joining H/SS and SS5 Lt buoys. The E part is designated for small sea going vessels with dangerous cargoes. A disadvantage of anchoring in 'Vlissingen Roads' is that the anchorage lies open to westerly winds. High seas occur during westerly gales.

Springergeul anchorage

This anchorage may be used by vessels with a maximum length of 110m (LOA). It may be necessary to allocate anchorages.

Everingen anchorages

These anchorages can be used by any type of vessel. Anchorage position 'A' is intended primary for gas carriers and tankers which have not been certified gas free.

Put van Terneuzen anchorage

This anchorage may be used by vessels with a maximum length of 290m (LOA).

Marlemon anchorage

This anchorage lies S of NvB-MA Lt buoy.

The stream here should be reckoned with. The depths are subject to change.

Schaar van Ouden Doel anchorage

This anchorage lies just S of the line connecting Lt buoys 85 and 85A. No particular information available.

Middelgat – Kapellebank anchorage

This anchorage lies W of Hansweert, off Kapellebank. It offers some shelter during NW winds.

Schaar van Waarde anchorage

This anchorage lies SE of the line Veerhaven Kruiningen and ZG-SvW Lt buoy. No particular information available.

6.5.3**Gent - Terneuzen Canal****General information**

The Gent - Terneuzen Canal gives access through locks to the harbours of Terneuzen, Sluiskil, Sas van Gent, Zelzate and Gent. The canal is 32km (17 n miles) long. There are bridges at Sluiskil, Sas van Gent and Zelzate. High voltage wires cross the canal in various places. At Langerbrugge, Sluiskil and Terdonk small ferries are crossing the canal. Seagoing vessels should have a pilot on board equipped with a properly functioning portable VHF. Seagoing vessels should be properly navigable during their passage through the canal. Seagoing vessels must use the services of a qualified helmsman and must use the 'lock approach system'. During its in and outgoing trip from Westbuitenhaven (Terneuzen), the passage through the lock and the passage in the canal, the seagoing vessel should be assisted by sufficient tugs with sufficient power.

Restrictions

Gent-Terneuzen Canal – Restrictions	
Maximum vessel dimensions (incoming)	Length: 265m; Beam: 34m; Draught: 125dm Note: For vessels with a beam between 34m and max 37m the max LOA is 230m
Maximum vessel dimensions (outgoing)	Length: 265m; Beam: 34m; Draught: 123-125dm Note: For vessels with a beam between 34m and max 37m the max LOA is 230m
Maximum vessel dimensions (Moervaart)	Length: 120m; Beam: 16m; Draught: 56dm
Maximum speed Netherlands section	Draught > 10m: 4.8 kn; Draught > 4.5m < 10m: 6.4 kn; Draught < 4.5m: 8.6 kn
Maximum speed Belgian section	Draught > 10m: 5.4 kn; Draught > 4.5m < 10m: 7.5 kn; Draught < 4.5m: 9.7 kn
Visibility	During visibility more than 100m but less than 250m the bridges are only operational for seagoing vessels if: ■ LOA less than 200m; ■ Beam less than 28m; ■ Draught less than 8m; ■ Maximum displacement less than 1 600 tons (of 1 000 kgs.).
Wind force	Loaded vessels with a beam between 34m and max 37m (LOA max 230m) are not allowed to sail up or down the canal with a wind force of more than 6Bft. If vessels as stated above are sailing in ballast the max wind force is 5Bft.
Dangerous cargo	No dangerous substances further specified under IMO-danger class 1.1, 1.2, 1.3, 1.5 and 5.2, may be carried. A maximum of 1 000 kgs. (nett) accumulated of class 8 substances, as far as indicated in the IMDG-code as poisonous, may be carried, including substances of classes 1.4, 2, 3.1, 4.3 and 6.1
Minimum requirements	■ bow truster(s) with enough power; ■ two radarsets with a minimum range of 0.25 n mile (no deviation or blurred images around the screen centre); ■ a rate of turn indicator; ■ a speed indicator linked to one of the radarsets; ■ two radiosets (VHF). The equipment will be checked by the pilot. If the vessel does not come up to the requirements mentioned above no permission is given to pass the bridges.

Locks



Terneuzen Locks – Westsluis	
Dimensions Locks	Length: 290m; Width: 40m; Navigable depth: 135dm
Maximum vessel dimensions	Length: 245m; Beam: 37m; Draught: 125dm
Visibility	When visibility is less than 250m the lock is not operational for car carriers. For vessels with a beam between 34m and max. 37m (LOA max. 230m the visibility must be at least 1000m).
Mooring	■ min. use of 4 ropes; ■ LOA more than 180m: 1 extra rope; ■ LOA more than 245m: 1 extra spring.
Tugboat assistance	■ available; ■ Car carriers with a loa of more than 245m are compulsory to use tugboat assistance; ■ Compulsory for vessels with a beam between 34m and max. 37m.
Boatmen assistance	All vessels are compulsory to use boatmen except when own crewmember(s) are used ashore for mooring activities.
Note	For communication with locks see section 6.3 'Communication' .

Terneuzen Locks – Oostsluis	
Dimensions Locks	Length: 270m; Width: 24m; Navigable depth: 66dm
Maximum vessel dimensions	Length: 95m; Beam: 22.5m; Draught: 43dm
Visibility	-
Mooring	minimum use of 4 ropes
Tugboat assistance	available
Boatmen assistance	All vessels are compulsory to use boatmen except when own crewmember(s) are used ashore for mooring activities.
Note	For communication with locks see section 6.3 'Communication' .

Bridges

Gent-Terneuzen Canal – Bridges at Sluiskil, Sas van Gent, Zelzate	
Dimensions	Vertical clearances when closed 7m (9.4m at Zelzate) canal datum
Maximum vessel dimensions	Length 265m
	Beam 34m
	Draught 125dm
Visibility	During visibility more than 100m but less than 250m the bridge is only operational for seagoing vessels if: ■ Loa is less than 200m; ■ Beam is less than 28m; ■ Draught is less than 8m; ■ Max. displacement is less than 1 600 tons (of 1 000 kgs.). During visibility less than 100m the bridge is not operational.
Note	For communication with bridges see section 6.3 'Communication' .

6.5.4 Kanaal door Zuid Beveland

General information

Kanaal door Zuid-Beveland connects Westerschelde (Hansweert) with Oosterschelde (Wemeldinge). The southern access to the 7.5km long canal goes through the locks at Hansweert. Further passage goes through some movable bridges. The canal is accessible to small seagoing vessels.

Restrictions

Kanaal door Zuid Beveland – Restrictions	
Maximum vessel dimensions	Length: 150m Beam: 23m Draught: The max. draught permitted is 4.75m at a water level higher or equal to MLLWS. At a water level lower than MLLWS the maximum draught is correspondingly reduced. Vessels entering the canal (during falling tide) and vessels departing from a jetty inside the canal may never exceed the maximum permitted draught. Alongside a jetty the maximum draught of 4.75m is permitted at any water level.
Maximum speed	The maximum speed depends on the multiplication 'beam x draught (more than 20m²: max. speed= 15km/h; less than 20m²: max. speed= 20km/h).

Locks



Hansweert – Zuidervoorhaven and entrance to Kanaal door Zuid Beveland



Hansweert – Oostsluis and Westsluis

Dimensions Locks	-
Maximum vessel dimensions	Length: 150m Beam: 23m Draught: The max. draught permitted is 4.75m at a water level heigher or equal to MLLWS. At a water level lower than MLLWS the maximum draught is correspondingly reduced. Vessels entering the canal (during falling tide) and vessels departing from a jetty inside the canal may never exceed the maximum permitted draught. Alongside a jetty the maximum draught of 4.75m is permitted at any water level.
Visibility	-
Mooring	-
Tugboat assistance	-
Note	For communication with locks see section 6.3 'Communication' .

Bridges

Kanaal door Zuid beveland – Bridges (Postbrug and Vlaktebruggen)

Dimensions	Vertical clearances fixed parts: 8.5m canal datum Vertical clearances when closed: 7.5m canal datum Vertical clearances when opened: 47m canal datum
Maximum vessel dimensions	Beam: 23m
Visibility	-
Note	For communication with bridges see section 6.3 'Communication' .

6.5.5 Kanaal door Walcheren

General information

The Canal is 14.5km long and connects Westerschelde (Buitenhaven Vlissingen) with Veerse Meer. Veerse Meer is a tideless lake and is extensively used for recreational purposes and not of importance to seagoing vessels.

Small seagoing vessels can sail up to Middelburg (Arnekanaal).

Restrictions

Kanaal door Walcheren – Restrictions from Binnenkeersluis to Veerse Meer

Maximum vessel dimensions from Binnenkeersluis to north entrance Arnekanaal	Length: 130m; Beam: 18m; Draught: 45dm
Maximum vessel dimensions from north entrance Arnekanaal to Veerse Meer	Length: 130m; Beam: 18m; Draught: 37dm
Maximum speed	The maximum speed depends on the multiplication 'beam x draught' from 8 to 15km/h.
Remarks	Veerse Meer is a tideless lake and is extensively used for recreational purposes and not of importance to seagoing vessels.

Locks

Vlissingen – Buitenkeersluis

Dimensions Locks	-
Maximum vessel dimensions	Length: -; Beam: 34.4m; Draught: 85dm
Operational	At slack water and on request
Mooring	-
Tugboat assistance	-
Boatmen assistance	-
Note	For communication with locks see section 6.3 'Communication' .

Vlissingen – Grote Sluis

Dimensions Locks	Length: 138m; Width: 22.5m; Depth on sill: 5.4m
Maximum vessel dimensions	Length: -; Beam: -; Draught: -
Operational	Day and night. Vessels are not locked through when the tidal range is greater than 3.4m during the flood (incoming stream) and 3.25m during the ebb (outgoing stream).
Mooring	-
Tugboat assistance	-
Boatmen assistance	-
Note	For communication with locks see section 6.3 'Communication' .

Vlissingen – Kleine Sluis

Dimensions Locks	Length: 65m; Width: 8m; Depth on sill: 3.0m
Maximum vessel dimensions	Length: -; Beam: -; Draught: -
Operational	Day and night. Vessels are not locked through when the tidal range is greater than 3.4m during the flood (incoming stream) and 3.25m during the ebb (outgoing stream).
Mooring	-
Tugboat assistance	-
Boatmen assistance	-
Note	For communication with locks see section 6.3 'Communication' .

Vlissingen – Binnenkeersluis

Dimensions Locks	-
Maximum vessel dimensions	Length: 130m; Beam: 18m; Draught: 45dm as far as Middelburg (Arnekanaal)
Operational	At slack water and on request
Mooring	-
Tugboat assistance	-
Boatmen assistance	-
Note	For communication with locks see section 6.3 'Communication' .

Bridges

Kanaal door Walcheren – Bridges (5 swingbridges)	
Dimensions	-
Maximum vessel dimensions	Beam: 19.3m
Operational	The bridges are operated 24h a day throughout the year. During certain block times the bridges are available for road and rail traffic only.
Note	For communication with bridges see section 6.3 'Communication' .

6.5.6**Schelde Rijnverbinding****General information**

Schelde Rijnverbinding joins the harbours of Antwerp with the harbours of Rotterdam. Through Volkerak and Volkeraksluizen access is given to Hollandsch Diep, Dordtsche Kil and Oude Maas (see [Chapter 9 – 'Zeegat van Hoek van Holland'](#)). Through Volkerak and Krammersluizen, access is given to Oosterschelde (see [Chapter 7 – 'Oosterschelde'](#) and [Chapter 9 – 'Zeegat van Hoek van Holland'](#)).

Restrictions

Schelde Rijnverbinding – Restrictions	
Maximum vessel dimensions	Length: 225m; Beam: 23.50m; Draught: 43dm
Remarks	The canal is mainly used by inland and pleasure craft, and occasionally by small seagoing vessels. The non-movable bridges across the Schelde-Rhine connection have a maximum clearance of 9.1m.

6.6

Tidal Information

For general information see [Chapter 4 – 'Oceanography'](#).

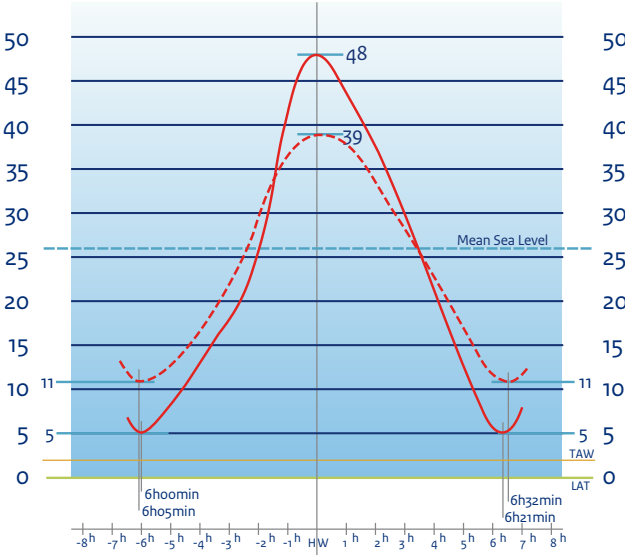
6.6.1

Tidal curves



Zeebrugge
TIDAL HEIGHT in dm
referred to LAT
51°20,8'N-03°12,1'E

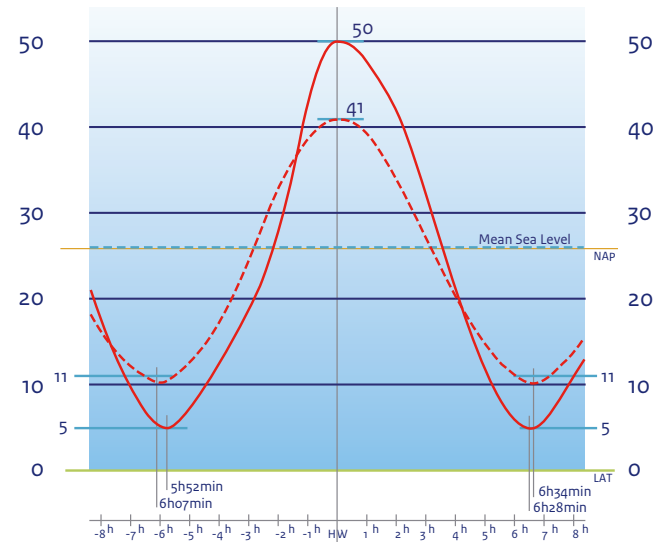
— Springs
- - - Neaps
LAT lies 26 dm below Mean Sea Level
TAW lies 24 dm below Mean Sea Level



Vlissingen

TIDAL HEIGHT in dm
referred to LAT
51°26,6'N-03°35,9'E

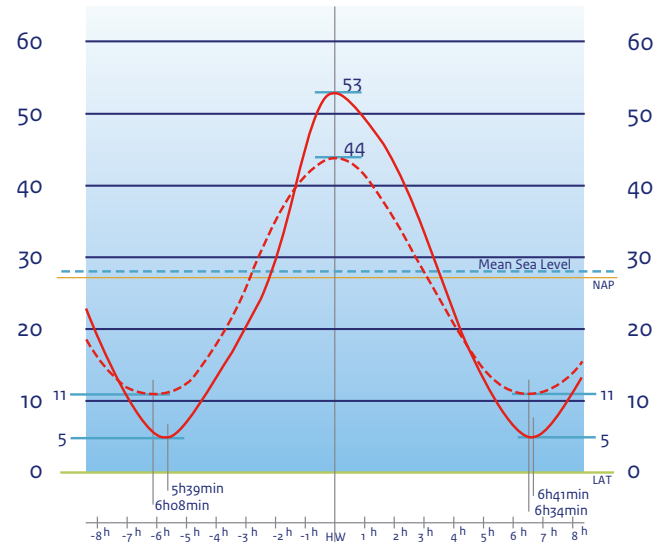
— Springs
- - - Neaps
LAT lies 26 dm below Mean Sea Level
NAP lies 0.1 dm below Mean Sea Level



Terneuzen

TIDAL HEIGHT in dm
referred to LAT
51°20,2'N-03°49,3'E

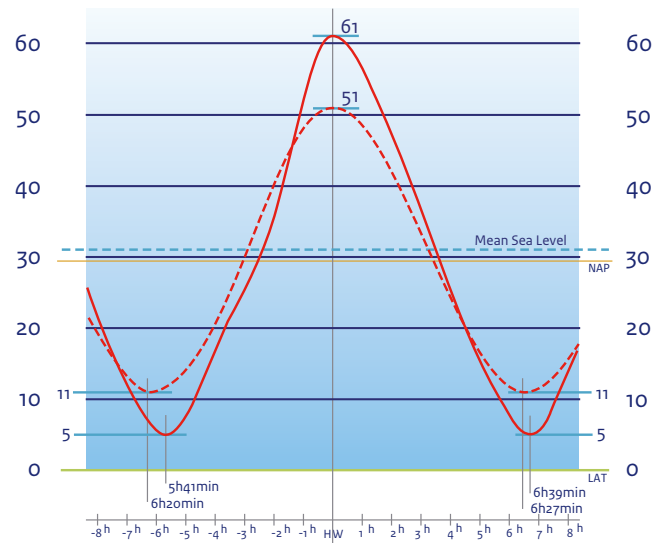
— Springs
- - - Neaps
LAT lies 28 dm below Mean Sea Level
NAP lies 0.9 dm below Mean Sea Level



Bath

TIDAL HEIGHT in dm
referred to LAT
51°24,0'N-04°12,7'E

— Springs
- - - Neaps
LAT lies 32 dm below Mean Sea Level
NAP lies 1.6 dm below Mean Sea Level

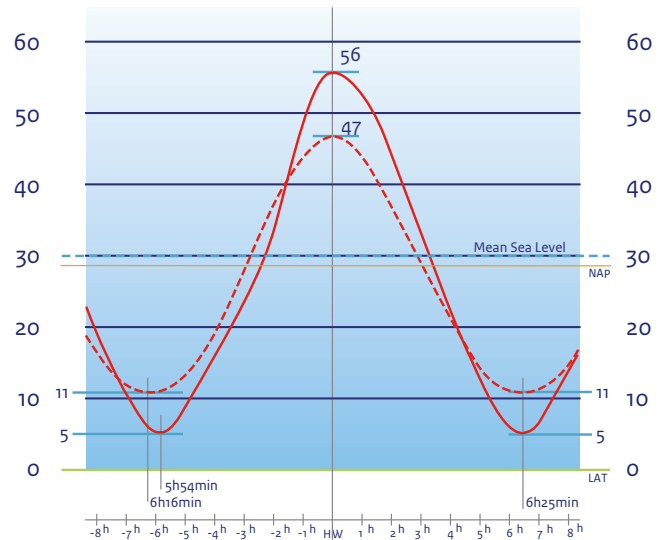


Hansweert

TIDAL HEIGHT in dm
referred to LAT
51°26,8'N-04°00,5'E

— Springs
- - - Neaps

LAT lies 30 dm below Mean Sea Level
NAP lies 1.3 dm below Mean Sea Level

**6.6.2****Tidal streams**

The predictions in the tables refers to HW Zeebrugge

Oostende		51°15.2'N	02°51.7'E
Time	Direction	Spring Rate	Neap Rate
-06	238°	0.8 kn	0.7 kn
-05	227°	0.9 kn	0.7 kn
-04	227°	0.9 kn	0.6 kn
-03	215°	0.6 kn	0.3 kn
-02	084°	0.7 kn	0.6 kn
-01	061°	1.6 kn	1.0 kn
HW	055°	1.3 kn	1.0 kn
+01	050°	1.1 kn	0.8 kn
+02	046°	0.8 kn	0.6 kn
+03	008°	0.3 kn	0.2 kn
+04	266°	0.5 kn	0.3 kn
+05	249°	0.7 kn	0.5 kn
+06	239°	0.8 kn	0.6 kn

Zeebrugge		51°23.7'N	03°05.9'E
Time	Direction	Spring Rate	Neap Rate
-06	269°	1.3 kn	1.0 kn
-05	250°	1.2 kn	0.9 kn
-04	238°	0.9 kn	0.6 kn
-03	181°	0.5 kn	0.4 kn
-02	117°	0.9 kn	0.9 kn
-01	090°	2.0 kn	1.3 kn
HW	075°	1.4 kn	1.0 kn
+01	059°	1.0 kn	0.8 kn
+02	046°	0.7 kn	0.5 kn
+03	337°	0.5 kn	0.4 kn
+04	293°	1.0 kn	0.7 kn
+05	280°	1.3 kn	1.0 kn
+06	270°	1.3 kn	1.1 kn

The predictions in the tables refers to HW Vlissingen

Vlissingen		51°26.2'N	03°37.1'E
Time	Direction	Spring Rate	Neap Rate
-06	254°	2.6 kn	1.1 kn
-05	251°	1.1 kn	0.2 kn
-04	083°	0.4 kn	0.7 kn
-03	077°	1.3 kn	1.2 kn
-02	075°	1.9 kn	1.6 kn
-01	076°	3.0 kn	1.7 kn
HW	076°	2.2 kn	0.9 kn
+01	078°	0.4 kn	0.2 kn
+02	260°	0.9 kn	1.0 kn
+03	256°	2.2 kn	1.9 kn
+04	255°	3.2 kn	2.3 kn
+05	254°	3.3 kn	2.1 kn
+06	254°	2.8 kn	1.6 kn

Vlissingen Oost		51°25.9'N	03°41.2'E
Time	Direction	Spring Rate	Neap Rate
-06	307°	2.0 kn	0.8 kn
-05	309°	0.7 kn	0.0 kn
-04	123°	0.6 kn	0.7 kn
-03	125°	1.4 kn	1.2 kn
-02	124°	1.8 kn	1.6 kn
-01	123°	2.8 kn	1.8 kn
HW	121°	2.6 kn	1.1 kn
+01	119°	0.9 kn	0.1 kn
+02	312°	0.5 kn	0.9 kn
+03	308°	1.8 kn	1.5 kn
+04	306°	2.5 kn	1.8 kn
+05	307°	2.6 kn	1.7 kn
+06	307°	2.2 kn	1.3 kn

Breskens		51°23.7'N	03°35.1'E
Time	Direction	Spring Rate	Neap Rate
-06	304°	1.2 kn	0.1 kn
-05	125°	0.7 kn	0.8 kn
-04	125°	1.3 kn	1.1 kn
-03	125°	1.4 kn	1.2 kn
-02	128°	1.6 kn	1.3 kn
-01	130°	2.6 kn	1.2 kn
HW	130°	1.3 kn	0.3 kn
+01	303°	0.3 kn	0.8 kn
+02	309°	1.5 kn	1.4 kn
+03	307°	2.1 kn	1.6 kn
+04	306°	2.3 kn	1.5 kn
+05	303°	1.9 kn	1.1 kn
+06	304°	1.5 kn	0.7 kn

Borssele – Total Jetty		51°24.6'N	03°43.3'E
Time	Direction	Spring Rate	Neap Rate
-06	317°	1.7 kn	0.6 kn
-05	319°	0.5 kn	0.2 kn
-04	128°	0.8 kn	0.8 kn
-03	133°	1.2 kn	1.1 kn
-02	135°	1.7 kn	1.5 kn
-01	136°	2.9 kn	1.8 kn
HW	135°	3.2 kn	1.3 kn
+01	136°	1.3 kn	0.2 kn
+02	293°	0.3 kn	0.8 kn
+03	312°	1.6 kn	1.5 kn
+04	315°	2.6 kn	1.8 kn
+05	316°	2.5 kn	1.5 kn
+06	317°	1.9 kn	1.1 kn

Terneuzen		51°20.6'N	03°50.4'E
Time	Direction	Spring Rate	Neap Rate
-06	272°	2.0 kn	1.0 kn
-05	271°	1.4 kn	0.2 kn
-04	112°	0.3 kn	0.5 kn
-03	096°	0.9 kn	0.9 kn
-02	094°	1.4 kn	1.2 kn
-01	095°	2.0 kn	1.5 kn
HW	095°	2.9 kn	1.3 kn
+01	093°	1.4 kn	0.3 kn
+02	313°	0.2 kn	0.7 kn
+03	276°	1.5 kn	1.4 kn
+04	273°	2.3 kn	1.7 kn
+05	272°	2.5 kn	1.7 kn
+06	272°	2.2 kn	1.3 kn

Hansweert		51°25.9'N	04°01.0'E
Time	Direction	Spring Rate	Neap Rate
-06	307°	2.6 kn	1.5 kn
-05	308°	2.2 kn	0.4 kn
-04	344°	0.2 kn	0.9 kn
-03	124°	1.6 kn	1.5 kn
-02	125°	2.0 kn	1.7 kn
-01	125°	2.4 kn	2.0 kn
HW	124°	4.1 kn	2.1 kn
+01	123°	3.2 kn	0.9 kn
+02	119°	0.5 kn	0.9 kn
+03	301°	1.8 kn	1.7 kn
+04	306°	2.6 kn	2.1 kn
+05	307°	2.9 kn	2.1 kn
+06	307°	2.8 kn	1.8 kn

Walsoorden		51°24.6'N	04°02.0'E
Time	Direction	Spring Rate	Neap Rate
-06	349°	1.8 kn	1.1 kn
-05	351°	1.6 kn	0.5 kn
-04	003°	0.6 kn	0.3 kn
-03	162°	0.8 kn	0.8 kn
-02	165°	1.3 kn	1.0 kn
-01	162°	1.4 kn	1.2 kn
HW	159°	2.3 kn	1.3 kn
+01	161°	1.9 kn	0.6 kn
+02	206°	0.5 kn	0.4 kn
+03	329°	1.0 kn	0.9 kn
+04	341°	1.5 kn	1.3 kn
+05	345°	1.9 kn	1.4 kn
+06	348°	1.9 kn	1.3 kn

Bath		51°23.9'N	04°12.0'E
Time	Direction	Spring Rate	Neap Rate
-06	287°	1.6 kn	1.1 kn
-05	288°	1.5 kn	0.7 kn
-04	288°	1.1 kn	0.2 kn
-03	112°	0.8 kn	0.8 kn
-02	103°	1.4 kn	1.0 kn
-01	103°	1.4 kn	1.1 kn
HW	103°	1.7 kn	1.2 kn
+01	101°	1.9 kn	0.8 kn
+02	094°	0.7 kn	0.1 kn
+03	306°	0.3 kn	0.7 kn
+04	286°	1.0 kn	1.1 kn
+05	285°	1.5 kn	1.3 kn
+06	286°	1.6 kn	1.2 kn

Cautions

- The tables (section 6.6.2 'Tidal streams') show averages, in directions and rates, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand waves, etc.) deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a noticeable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels; this depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks, the tidal stream pulls through the channels. The direction of the stream follows the bearings of the banks. After sufficient flooding, the tidal stream will cross the banks.

- For the tidal rivers, the only important directions are upstream and downstream. Near basins, docks, secondary waterways, and similar waters, the tidal stream pattern may be complicated.
- Stream rates in the stream atlas 'B' (Western Scheldt/Eastern Scheldt) are subject to changes. In the Western Scheldt, in particular its secondary fairways, stream rates alteration may appear as a result of dredging work and natural migration of channels.
- Platen van Ossensisse (Western Scheldt)
During strong spring tides a very strong tidal stream (2.2 to 5 knots) can cross the Zuidergat. This tidal cross-stream occurs during high water levels of 5.53 m LAT (+2.70 m NAP) or higher, from 20 minutes before HW Hansweert to 60 minutes after HW Hansweert, and runs between the 51 and 53 buoys from the eastern part of Platen van Ossensisse (north of Hoek van Ossensisse) in the direction of the northwest entrance of the Schaar van Valkenisse. At the same time, a Western tidal cross stream runs between the 53 and 55 buoys towards the outlet area of the Schaar van Ossensisse. The tidal cross stream can also occur during less developed spring tides which, due to storm surging, result in a water level Hansweert > 6.08 m LAT (+3.25 m NAP). Shipping is kept informed by the local traffic centre about the tidal cross-stream.
- Middelgat – Overloop van Hansweert (Western Scheldt)
During strong spring tides a strong tidal stream (measured till 2,7 knots) out of the Middelgat crosses the Overloop van Hansweert (between the 40A and 40B buoys.) This tidal cross-stream occurs from 1 hour before HW Hansweert to HW Hansweert.

6.7 Rules | Regulations

6.7.1 General Rules | Regulations

See [Chapter 2 – 'Navigation | Traffic Safety, section 2.13 'Shipping Regulations'](#).

6.7.2 Local Rules | Regulations

Tankers

I Tankers proceeding at night

A tanker loaded with highly inflammable substances or which have not been certified gas free after discharging may only navigate the Schelde upstream of the S-ly head of the approach channel to Kallosluis (Belgium) if:

- The vessel is equipped with a good working radar installation
- The radar is in use during the whole track
- VHF-communication is possible at all times
- The navigator(s) has a radar licence

II Tank cleaning restriction

In general tank cleaning, degassing and flushing pipelines is not allowed without permission from local authorities in the areas Westerschelde and approaches.

Gas carriers

For gas carriers, which for any kind of gas exceed a particular number of cubic metres, a number of measures are in force:

- Cargo operations where fumes are released in the air are not allowed without permission from the local authorities in the Westerschelde and approaches.
- Gas carriers which, in the judgement of the proper authorities, have to break off their passage through Scheur (see section 6.6.1) and the main fairways, should anchor at Wielingen Noord (see section 6.6.2.4).
- The radar must be in working order.
- By day flag 'B' should be flown; at night and when visibility is less than 1000m, a red all around light should be shown.
- When visibility is less than 2000m the passage should not be commenced, and if possible the vessel should anchor.

Towing of floating objects

The common nautical authorities will determine the number of pilots and tugs to be employed by special and extraordinary transports. These transports must have permission to navigate the approaches to the Westerschelde river, the Westerschelde river and the Gent-Terneuzen Canal. A request for permission should be made 72h in advance. The application form can be found on the website.

Gemeenschappelijke Nautische Autoriteit
 Commandoweg 50, 4381 BH Vlissingen
 Telephone: +31 (0)88 7980 760 or +31 (0)88 7980 758
 E-mail: gna-scc@vts-scheldt.net
 Website: www.vts-scheldt.net

Oversized vessels sailing up/down the Westerschelde river

Vessels with dimensions above average (length, beam and/or draught) or with insufficient means of propulsion etc. must have permission from the authorities to sail the Westerschelde river. The required application form can be found on the website. Additional requirements and rules apply to these vessels.

These rules concern the:

- Visibility on the river
- Maximum wind force
- Tide
- Manoeuvring characteristics and speed of the vessel

To/from Vlissingen Oost

Additional requirements apply to the following vessels:

- Length overall $\geq 340\text{m}$ and/or draught $\geq 125\text{dm}$
- Bulk carriers length overall $\geq 235\text{m}$ and/or draught $\geq 125\text{dm}$
- Car carriers length overall $\geq 200\text{m}$
- Container vessels length overall $\geq 275\text{m}$

To/from Terneuzen/Braakmanhaven

Additional requirements apply to the following vessels:

- Length overall $\geq 210\text{m}$ for Westbuitenhaven Terneuzen
- Draught $\geq 91\text{dm}$ for the Westsluis Terneuzen
- Draught $\geq 125\text{dm}$ to/from anchorages Put van Terneuzen and Everingen
- Draught $\geq 110\text{dm}$ and/or length $\geq 210\text{m}$ for the Braakmanhaven

To/from Antwerpen

Additional requirements apply to the following vessels:

- Length overall $\geq 300\text{m}$
- Beam $\geq 45\text{m}$
- Draught $\geq 80\text{dm}$ for berths upstream of Kallo Lock
- Draught $\geq 100\text{dm}$ for the Kallo Lock
- Draught $\geq 120\text{dm}$ for the Zandvliet-Berendrecht locks
- Draught $\geq 125\text{dm}$ for the Kieldrecht lock and the tidal terminals
- Air draught $\geq 60\text{m}$

All draughts refer to the maximum draught of the planned voyage in fresh water (1.000 T/m³).

For more information, contact:

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 Commandoweg 50, 4381 BH Vlissingen
 Telephone: +31 (0)88 7980 760 or +31 (0)88 7980 758
 E-mail: gna-scc@vts-scheldt.net
 Website: www.vts-scheldt.net

6.8

Signals

6.8.1

Signals when pilotage is suspended

When pilotage is temporarily suspended for the Westerschelde or in Vlissingen, the following signals will be displayed from the masthead on the Traffic Centre Vlissingen building at Vlissingen (approximate 51°26.5'N 03°35.1'E):

Station	Signals	Remarks
Pilot station Steenbank		Suspended for all vessels
		Suspended for all vessels for which pilotage is not possible by swath
Pilot station Wandelaar		Suspended for all vessels
		Suspended for all vessels for which pilotage is not possible by swath
Vlissingen Roads		Suspended for all vessels at anchor
		Suspended for all vessels

6.9 Port Information

6.9.1 Vlissingen Oost

Facilities	<i>Scaldia haven</i> <i>Quarleshaven</i> <i>Kraayerhaven</i> <i>Kaloothaven</i> <i>Bijleveldhaven</i> <i>Westhofhaven</i> <i>Van Cittershaven</i>
Cargo	General cargo, Containers, LPG, RoRo, Aluminium, Cargo transhipment, Coal, steel, Reefer products, Agriculture products, Oil
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	- Tugboats and boatmen available; - Tugboats are compulsory for vessels with LOA > 235m (max. 315m) and/or draught > 125dm: number of tugboats depends on size of vessel, kind of propulsion (stern/bow) or kind of rudder.
Restrictions	Bulkcarries (dry/wet bulk) with LOA > 235m and/or draught > 125dm: - Keel clearance at least 1m; - No sailing permission when visibility < 2500m (Van Citterskanaal); - No sailing permission when windforce > 7Bft. if loaded or > 6Bft. if in ballast. All harbours: safe speed in accordance with local circumstances

6.9.2 Vlissingen

Facilities	<i>1^e Binnenhaven</i> <i>2^e Binnenhaven</i> <i>Buitenhaven</i> <i>Het Dok</i> <i>Bijleveldhaven</i>
Cargo	General cargo, RoRo, Passengers, Reefer products, Oil
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities. Het Dok: Shipyard (drydock and slipway)
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	All harbours: safe speed in accordance with local circumstances. For Maximum Dimensions see section 6.5.5 'Kanaal door Walcheren' .

6.9.3 Borssele

Facilities	<i>Total Jetty</i>
Cargo	Oil
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Maximum Dimensions: length 280m; beam 15m; Type of vessel: tankers up to 100 000dwt

6.9.4 Breskens



Facilities	
Cargo	Fish, fish products, sand transhipment area, grain
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	All harbours: safe speed in accordance with local circumstances. Maximum Draught: 60dm Keel clearance: 10% of draught

6.9.5 Terneuzen



Facilities	
Cargo	Containers, Oil, Gas, Chemical products, Coal, Wood pulp, Paper, Bulk goods, RoRo, Agriculture products, Sand, Gravel/Shingle, Building material
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	All harbours: safe speed in accordance with local circumstances. Braakmanhaven ■ Maximum Dimensions: length 280m; Vessels with a length equal/more than 210m and/or draught equal/more than 120dm may only enter Braakmanhaven at HW (neap) or depending on the tidal window at LW (neap). ■ Keel clearance at least 1m; ■ Arrival/departure is prohibited when visibility is less than 250m without a good working radar; ■ Arrival/departure Braakman and OTT jetties, with a good working radar, the visibility should be at least 250m; ■ Arrival/departure Container Quay: there are no sailing restrictions for vessels with a good working radar, otherwise the visibility should be at least 250m; ■ Vessels with a draught ≥ 11.0m may only enter the harbour within a tidal window calculated by TC Terneuzen; ■ Braakman and OTT-2 jetties: mooring with bow to north or south (depending on local circumstances); ■ Braakman jetty west-side: mooring prohibited for vessels with LOA >165m; ■ Braakman jetty (B-east): mooring prohibited for vessels with LOA >140m; ■ Braakman jetty (A-east) and OTT-4 jetty: mooring prohibited for seagoing vessels; ■ OTT-1: mooring prohibited for vessels with a LOA >236m and/or beam >34.0m and/or draught >12.8m and/or DWT $>60\,000$ tons; ■ OTT-2: mooring prohibited for vessels with a LOA >110m and/or beam >12.5m and/or draught >4.5m and/or DWT $>5\,000$ tons. ■ OTT-3: mooring prohibited for vessels with a LOA >135m and/or beam >22.0m and/or draught >12.8m; ■ OTT-5: mooring prohibited for vessels with a LOA >275m and/or beam >50.0m and/or draught >15.0m and/or DWT $>1\,500\,000$ tons; ■ OTT-6: mooring prohibited for vessels with a LOA >150m and/or beam >25.0m and/or draught >10.0m and/or DWT $>20\,000$ tons; Dow Chemical Jetty ■ Maximum Dimensions: length 200m; 22.500dwt; ■ Keel clearance: 10% of max draught. For other Maximum Dimensions see section 6.5.3 'Gent-Terneuzen Canal'

6.9.6 Sluiskil



Facilities	
Cargo	Containers, gas, chemical products.
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available. Tugs are compulsory: ■ for conventional vessels with a length >190m (2 tugs on arrival); ■ for vessels with good working stern and bow thruster (enough tugs); ■ IMO-2 vessels (at least 1 tug on arrival); ■ IMO-2 vessels <130m (no tugs on departure if moored SB alongside); ■ towing gear of tugs has to be used.
Restrictions	All harbours: safe speed in accordance with local circumstances. For other Maximum Dimensions see section 6.5.3 'Gent-Terneuzen Canal' Swinging: ■ vessels with a length >190m may not swing on 'Axelse Vlakte' when IMO-2 gastanker is moored at the 'Yara Alpha' quay; ■ vessels which have an expected draught on departure >10m must swing on arrival; ■ maximum length for swinging: 205m for vessels with a draught between 9.5m and 10.0m; 210m for vessels with a draught between 9.0m and 9.5m; 225m for vessels with a draught less than 9.0m; ■ maximum draught at Yara quay is 12.2dm; ■ when a vessel is loading ammonia at the Yara quay it will be announced by Traffic Centre Terneuzen on the appropriate VHF Channel.

6.9.7 Hansweert



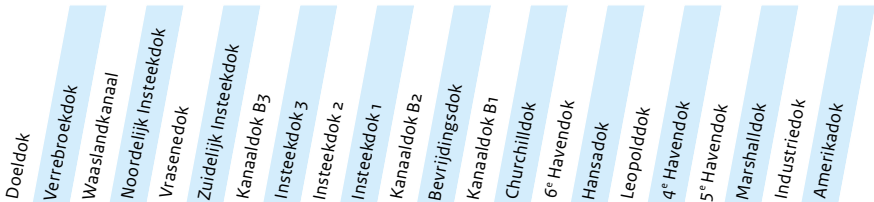
Facilities	
Cargo	All harbours: No cargo handling facilities Zuider Voorhaven is used as a channel which gives access to Kanaal door Zuid Beveland via Hansweert locks and Noorder Voorhaven. Noorder Voorhaven is used as a channel which gives access to Kanaal door Zuid Beveland via Hansweert locks and Zuider Voorhaven.
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	All harbours: safe speed in accordance with local circumstances. For other Maximum Dimensions see section 6.5.3 'Gent-Terneuzen Canal'

6.9.8 Walsoorden



Facilities	
Cargo	Sand, Gravel, Shingle
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Safe speed in accordance with local circumstances Only approachable for small seagoing vessels Maximum Dimensions: 95m

6.9.9 Antwerpen



Facilities	
Cargo	Containers, Oil and oil products, RoRo, Chemical products, General cargo, Storage area, Grain, Waiting area for lighters
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	All harbours ■ Safe speed in accordance with local circumstances; ■ Toxic flammable liquides : maximum 200tons allowed; ■ IMO restrictions - For maximum quantities contact Port Authorities. Kallosluis Lock dimensions: length 360m; width 48m; sill depth 11.4m Kieldrechtsluis Lock dimensions: length 500m; width 68m; sill depth 17.8m Zandvlietluis Lock dimensions: length 500m; width 57m; sill depth 13.1m Berendrechtsluis Lock dimensions: length 500m; width 68m; sill depth 13.5m Boudewijnsluis Lock dimensions: length 360m; width 45m; sill depth 9.9m Only for vessels <45 000 tons Van Cauwelaertsluis Lock dimensions: length 270m; width 35m; silldepth 9.4m Royersluis Lock dimensions: length 180m, width 22m, sill depth 5.9m The lock is only used by small seagoing vessels, inland shipping and yachts.

Facilities	Albertdok 3 ^e Havendok 2 ^e Havendok Straatsburgdok Houtdok Kempischdok Asiadok Kattendijkdok Noordkasteeldok Insteekdok 1 Deurgangdok
Cargo	General cargo, Fruit, Storage/Transshipment area, Seed, Feed, Grain, Forest products, Wine
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	All harbours ■ Safe speed in accordance with local circumstances; ■ Toxic flammable liquides : maximum 200tons allowed; ■ IMO restrictions - For maximum quantities contact Port Authorities. Boudewijnsuis Lock dimensions: length 360m; width 45m; sill depth 9.9m Only for vessels <45 000 tons Van Cauwelaertsuis Lock dimensions: length 270m; width 35m; silldepth 9.4m Royerssluis Lock dimensions: length 180m, width 22m, sill depth 5.9m The lock is only used by small seagoing vessels, inland shipping and yachts.

6.9.10

Oostende

Facilities	Vlotdok Voorhaven Zeewezendok Tijdok Vissershaven-Vlotdok Vuurtorendok
Cargo	General cargo, Forest products, Containers, RoRo, Passengers, Sand, Gravel, Clay, Fish, Fish related products
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats assistance and boatmen available
Restrictions	■ Maximum dimensions Demeysluis: length 120m, width 18m; ■ Safe speed in accordance with local circumstances; ■ Maximum ships dimensions Oostende harbour area: length 160m, beam 32m.

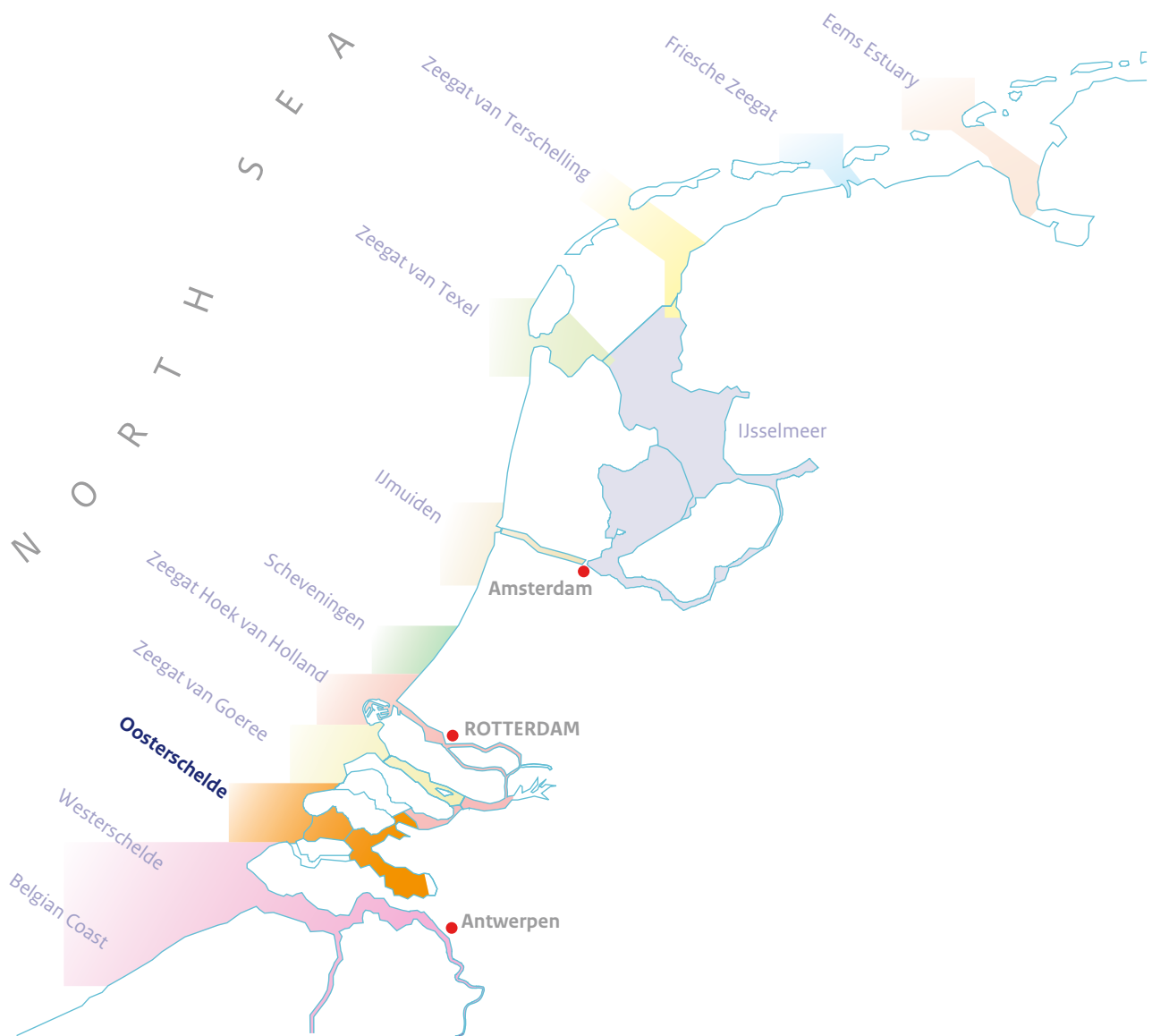
6.9.11

Zeebrugge

Facilities	Noordelijk Insteekdok Prins Filipsdok LNG-Terminal Britanniadok 1 ^e Militair Tijdok 2 ^e Militair Tijdok Zuidelijk Kanaaldok Leopold II Dok Albert II Dok Wielingendok
Cargo	General cargo, Containers, Ro-Ro, Gas, Forest products
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Garbage
Mooring	Tugboats assistance and boatmen not available
Restrictions	■ Maximum ship's dimensions up to harbour master; ■ Safe speed in accordance with local circumstances;

7

Oosterschelde



7.1 Destinations



7.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 – ‘Catalogue of Nautical Charts and Nautical Publications’.

This publication can be downloaded from: www.defensie.nl/hydro

7.3 Communication

7.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods

Who	All vessels carrying noxious and dangerous goods on the way to or leaving from the harbour, an inland anchorage or load/discharge terminal.
To	Lock master Roompotsluis Telephone: +31 (0)111 65 92 65 VHF Ch 18
What	A - B1 - G - H - I1 - I2 - L - O - P - U - W
When	1 If possible at least 24h before arrival at the lock, but at the latest before entering the Netherlands territorial waters; 2 Before leaving the harbour, anchorage or load/discharge terminal.
Who	All vessels carrying noxious and dangerous goods on the way to or leaving from an anchorage, load/discharge terminal inside territorial waters but outside the approach area.
To	Netherlands Coastguard Regulations for carrying dangerous substances by seagoing vessels
What	A - B1 - G - H - I1 - I2 - L - O - P - U - W
When	1 If possible at least 24h before arrival at the anchorage or load/discharge terminal but at the latest before entering the Netherlands territorial waters; 2 Before leaving the harbour, anchorage or load/discharge terminal.
Note	See also section 7.3.3 ‘Explanation of codes’.

International Pollution Prevention Certificate

Who	All oil tankers with a gross tonnage of 150 tons or more.
To	Lock master Roompotsluis Telephone: +31 (0)111 65 92 65 VHF Ch 18
What	X7
When	ETA – 24h at pilot station.
Note	See also section 7.3.3 'Explanation of codes'.

Notification of waste

Who	All vessels.
To	Lock master Roompotsluis Telephone: +31 (0)111 65 92 65 VHF Ch 18
What	Name – call sign – IMO – flag – ETA – ETD – last and next port of call – last port and date where waste has been landed – do you land all/some/no garbage at the harbour reception facilities – Waste Report form.
When	ETA – 24h at Pilot station Wandelaar/Steenbank or, if departure from a port was within this 24h, as soon as possible.
Remarks	None

Notification of ship's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passenger vessels.
To	Lock master Roompotsluis Telephone: +31 (0)111 65 92 65 VHF Ch 18
What	X6
When	If possible at least 24h before arrival at the lock or, if departure from a port was within this 24h as soon as possible.
Remarks	- Only vessels that are under way to a port or anchorage in the Netherlands as part of an international voyage. - The following vessels do not have to report : warships and troop transporting vessels – vessels without propulsion – wooden vessels with primitive construction – fishing vessels. See also section 7.3.3 'Explanation of codes'.

ETA/ETD

Who	All seagoing vessels.
To	Lock master Roompotsluis Telephone: +31 (0)111 65 92 65 VHF Ch 18
What	A - B - C - G - H - I - J - L - O - P - Q - T1 - U - W - X
When	1 At least 24h before arrival but at the latest before entering the Netherlands territorial waters; 2 Before leaving the harbour, anchorage or load/discharge terminal.
Note	See also section 7.3.3 'Explanation of codes'.

7.3.2**Request for a pilot**

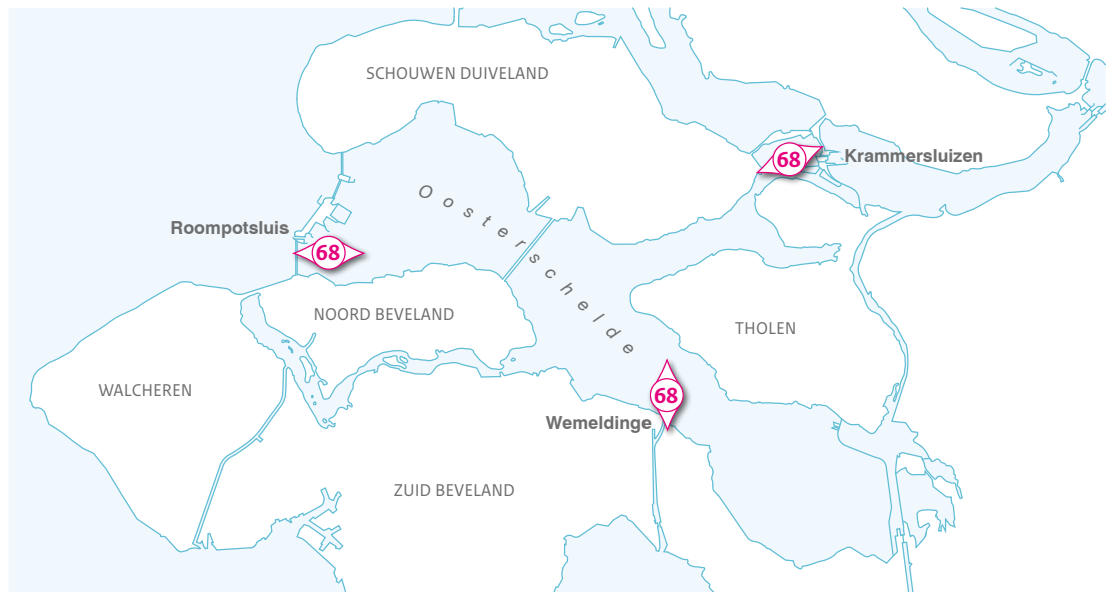
See [Chapter 6 – Westerschelde | Belgian Coast](#), section 6.3.2 'Request for a pilot'.

7.3.3 Explanation of codes

Code	Explanation
A	Vessel: Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event: A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position: True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, beam, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

7.3.4 Vessel Traffic Services



VTS reports - All seagoing vessels Inward bound / Outward bound

VHF Ch	Location	Message	To
68	Roompotsluis	All seagoing vessels intended to enter or leave Oosterschelde stating:	Traffic Centre Wemeldinge
68	Wemeldinge	- Vessel's name, nationality and type; - Vessel's dimensions;	Traffic Centre Wemeldinge
68	Krammersluizen	- Amount, type and weight of cargo; - Last port of call and destination.	Traffic Centre Wemeldinge

7.3.5 Communication locks

VHF Ch	Location	Message	To
18	Roompotsluis	All seagoing vessels intending to enter the lock should call well in advance stating: - Vessel's name, nationality; - Dimensions; - Cargo capacity, type and weight of cargo; - Last port of call and destination; - ETA at lock.	Lock master
22	Krammersluizen	All seagoing vessels should call when about 1.6 n mile from the lock entrance stating: - Vessel's name, type and nationality; - Cargo capacity, type and weight of cargo; - Owner's name; - Dimensions; - Height above waterline; - Last port of call and destination.	Lock master

7.3.6 Communication bridges

Location	Bridges	VHF Ch
Oosterschelde (close to Zierikzee harbour entrance)	Zeelandbrug	18

7.4

Pilotage

See [Chapter 6 – Westerschelde | Belgian Coast, section 6.4 ‘Pilotage’](#).

7.5

Sailing directions

7.5.1

General information

Oosterschelde is of minor importance to seagoing vessels. During bad weather it is occasionally used by small seagoing vessels which prefer not to navigate through the North Sea to Rotterdam, but choose a route through Westerschelde and Kanaal door Zuid-Beveland to reach Hollandsch Diep passing through Oosterschelde and Volkerak. Hollandsch Diep is connected to the fairways in Rotterdam port area. Coming from sea, Oosterschelde can also be entered through Zeegat van Zierikzee. However, because Oosterschelde has been closed off by a storm surge barrier it is only accessible through Roompotsluis, situated at the S side of the barrier. Shallow banks, some of which partially dry, border the navigable channels. During strong W to NW winds heavy breakers may occur on these shallow areas, especially at half tide. It is anticipated that closing-off Oosterschelde will cause the course and depths of the fairways to change. The most recent information should therefore be obtained. To navigate Oosterschelde vessels must pass several locks. Because of the sizes of these locks there are limiting conditions to seagoing vessels.



7.5.2

Approaching from open sea

1 – Through Westgat and Oude Roompot

Approaching from Steenbanken the route to Roompotsluis leads through Westgat and Oude Roompot. Both fairways are marked by buoys and lit and therefore available for night transit.

2 – Through Roompot

Approaching from Steenbanken the channel Roompot can be used as an alternative channel to Westgat and Oude Roompot and Roompotsluis.

This fairway is marked by buoys but unlit and joins Oude Roompot at its east end. Great care is necessary where the two fairways meet due to the cross-currents.

3 – Through Geul van Banjaard and Oude Roompot

Approaching from the N the route leads through Geul van Banjaard and Oude Roompot to Roompotsluis. Both fairways are marked by buoys and lit and therefore available for night transit.

4 – Through Domburger Rassen and Roompot

Approaching from Oostgat the buoyed but unlit channels Domburger Rassen en Roompot gives access to Roompotsluis.

Roompot leads into Oude Roompot off the S-ly part of the surge barrier. Great care is necessary where the two fairways meet due to the cross-currents.

Note:

Navigating is prohibited in the areas shown on the nautical charts adjacent to the storm surge barrier. These areas situated both W and E of the barrier are marked by unlit buoys.

7.5.3

Approaching via Westerschelde and Kanaal door Zuid-Beveland

See [Chapter 6 – Westerschelde | Belgian Coast, sections 6.5 ‘Sailing directions’ – 6.5.4 ‘Kanaal door Zuid-Beveland’](#).

7.5.4

Approaching via Volkerak

See [Chapter 9 – Zeegat van Hoek van Holland, section 9.5 ‘Sailing directions’](#).

7.5.5

Main fairways Oosterschelde

5 – From Roompotsluis to Zeelandbrug

The main channel Roompot continues on the E side of the storm surge barrier and leads to the N passage through Zeelandbrug. The channel is marked by buoys and lit.

6 – From Zeelandbrug to Krammersluizen

After passing Zeelandbrug through the N passage the route continues through the channels Keeten and Krammer to Krammersluizen which separates Krammer from Volkerak. The channels are marked by buoys and Lt buoys and in places by sector Lts.

7 – From Wemeldinge to Keeten

From Wemeldinge the channel Oosterschelde is crossed over to the entrance of Brabantsche Vaarwater. From there the route continues through the channel Brabantsche Vaarwater, which leads into channel Keeten. The channels are marked by buoys and Lt buoys and in places by sector Lts.

7.5.6 Locks

Roompotsluis	
Dimensions Locks	No information
Maximum vessel dimensions	Length: 95m; Beam: 14.5m; Draught: The maximum draught permitted is 3.20m at LAT. At a water level lower than LAT the maximum draught is correspondingly reduced and at a higher level increased.
Visibility	No information
Mooring	No information
Tugboat assistance	No information
Boatmen assistance	No information
Operating hours	■ Monday and Thursday: 0000 - 2200; ■ Tuesday and Sunday: 0600 - 2400; ■ Wednesday: 0000 - 2400; ■ Friday and Saturday: 0600 - 2200. The lock is not operational when the storm surge barrier is closed due to strong winds and strong currents.
Bridge	The fixed bridge above the lock has a vertical clearance of 18.10m at LAT. At a water level lower than LAT the maximum draught is correspondingly reduced and at a higher level increased.
Note	For communication with locks see section 7.3.5 'Communication locks' .

Krammersluizen	
Dimensions Locks	No information
Maximum vessel dimensions	Length: 110m; Beam: 22.8m; Draught: 4.75m
Visibility	No information
Mooring	No information
Tugboat assistance	No information
Boatmen assistance	No information
Operating hours	24h
Bridge	The fixed bridge which crosses Krammersluizen has a vertical clearance of 15m.
Note	For communication with locks see section 7.3.5 'Communication locks' .

7.5.7 Bridges

Zeelandbrug

Zeelandbrug connects the shores of Schouwen and Zuid-Beveland, and has a length of 5km. The bridge consists of 54 piles, 2 landings, 52 arches of 95m each and a bascule bridge which is located about 400m from the N shore (between piles 4 and 7).

The piles are numbered from N to S. On the E side of piles 12 and 38, and on the W side of piles 15 and 41 unlit tide gauges are attached to the caissons indicating the clearance for the midsection of an arch. For passage of Zeelandbrug at night, yellow lights are shown marking the recommended through passage. These are located on the E side between piles 12 - 13 and 38 - 39, and on the W side between piles 14 - 15 and 40 - 41.

The bascule bridge has a through passage opening of 40m. Unlimited vertical clearance is available over a width of 35m. On the W approach to the bascule bridge there are two steel dolphins on the N side and four on the S side, and in the E approach there are four steel dolphins on the N side and two on the S side. The distance between the dolphins is 25m. A purple light is shown from the outer dolphin on either side of the bridge. The bridge is lit by sodium lights for 100m either side of the bascule bridge. The remainder of the bridge is unlit. During passage through the bridge the prevailing stream should be considered.

The bridge is operational every day; every h+25 and h+55 and is not operational from 05h55-09h52, 16h35-17h52 and with windforce > 7 Bft.

7.6 Tidal information

7.6.1 Tidal curves

For the nearest tidal station at Vlissingen see [Chapter 6 – Westerschelde | Belgian coast, section 6.6.1 'Tidal curves'](#).

7.6.2 Tidal streams

The predictions in the tables refers to HW Vlissingen.

W of Roompotsluis		51°37.1'N	03°39.1'E
Time	Direction	Spring Rate	Neap Rate
-06	299°	1.0 kn	0.4 kn
-05	278°	0.3 kn	0.1 kn
-04	136°	0.4 kn	0.6 kn
-03	124°	0.8 kn	0.7 kn
-02	122°	0.9 kn	0.8 kn
-01	117°	1.2 kn	0.8 kn
HW	122°	1.1 kn	0.6 kn
+01	121°	0.7 kn	0.1 kn
+02	308°	0.1 kn	0.7 kn
+03	304°	1.1 kn	1.1 kn
+04	300°	1.4 kn	1.0 kn
+05	301°	1.3 kn	0.9 kn
+06	300°	1.1 kn	0.6 kn

E of Roompotsluis		51°36.1'N	03°42.9'E
Time	Direction	Spring Rate	Neap Rate
-06	280°	1.8 kn	0.9 kn
-05	277°	0.9 kn	0.3 kn
-04	222°	0.1 kn	0.3 kn
-03	112°	0.6 kn	0.7 kn
-02	103°	0.9 kn	0.9 kn
-01	102°	1.5 kn	1.2 kn
HW	103°	1.9 kn	1.0 kn
+01	105°	1.2 kn	0.4 kn
+02	117°	0.2 kn	0.5 kn
+03	280°	0.9 kn	1.1 kn
+04	283°	1.7 kn	1.4 kn
+05	281°	2.0 kn	1.4 kn
+06	280°	1.9 kn	1.2 kn

Zeelandbrug		51°36.6'N	03°52.9'E
Time	Direction	Spring Rate	Neap Rate
-06	314°	1.8 kn	1.0 kn
-05	324°	1.0 kn	0.3 kn
-04	077°	0.3 kn	0.7 kn
-03	124°	1.1 kn	1.1 kn
-02	125°	1.3 kn	1.2 kn
-01	123°	1.7 kn	1.5 kn
HW	123°	2.7 kn	1.4 kn
+01	122°	1.7 kn	0.6 kn
+02	107°	0.5 kn	0.6 kn
+03	305°	1.1 kn	1.3 kn
+04	304°	1.9 kn	1.4 kn
+05	310°	1.8 kn	1.3 kn
+06	313°	1.8 kn	1.2 kn

Wemeldinge		51°31.2'N	04°02.2'E
Time	Direction	Spring Rate	Neap Rate
-06	284°	0.8 kn	0.5 kn
-05	282°	0.5 kn	0.0 kn
-04	108°	0.4 kn	0.5 kn
-03	107°	0.7 kn	0.6 kn
-02	105°	0.7 kn	0.6 kn
-01	105°	0.8 kn	0.8 kn
HW	107°	1.7 kn	1.0 kn
+01	107°	1.5 kn	0.5 kn
+02	092°	0.4 kn	0.3 kn
+03	290°	0.8 kn	0.8 kn
+04	286°	1.1 kn	0.8 kn
+05	284°	0.9 kn	0.7 kn
+06	284°	0.8 kn	0.6 kn

Krammersluizen		51°39.1'N	04°06.3'E
Time	Direction	Spring Rate	Neap Rate
-06	210°	0.4 kn	0.1 kn
-05	206°	0.1 kn	0.0 kn
-04	037°	0.1 kn	0.2 kn
-03	032°	0.2 kn	0.2 kn
-02	030°	0.2 kn	0.3 kn
-01	031°	0.4 kn	0.4 kn
HW	031°	1.0 kn	0.3 kn
+01	357°	0.1 kn	0.0 kn
+02	030°	0.4 kn	0.1 kn
+03	214°	0.5 kn	0.4 kn
+04	210°	0.6 kn	0.3 kn
+05	210°	0.4 kn	0.4 kn
+06	210°	0.5 kn	0.2 kn

Cautions

- It is strongly emphasized that stream atlases show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand waves, etc.), deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels; this depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks the tidal stream flows through the channels; the direction of the stream follows the bearings of the banks. After sufficient flooding the tidal stream will cross the banks.
- For the tidal rivers, the only important directions are upstream and downstream. Near basins, docks, tributary waterways, and similar waters, the tidal stream pattern may be complicated.
- Stream rates in Oosterschelde are subject to changes.

7.7 Rules | Regulations

See Chapter 2 – Navigation | Traffic safety, section 2.13 ‘Shipping regulations’.

7.8 Port information

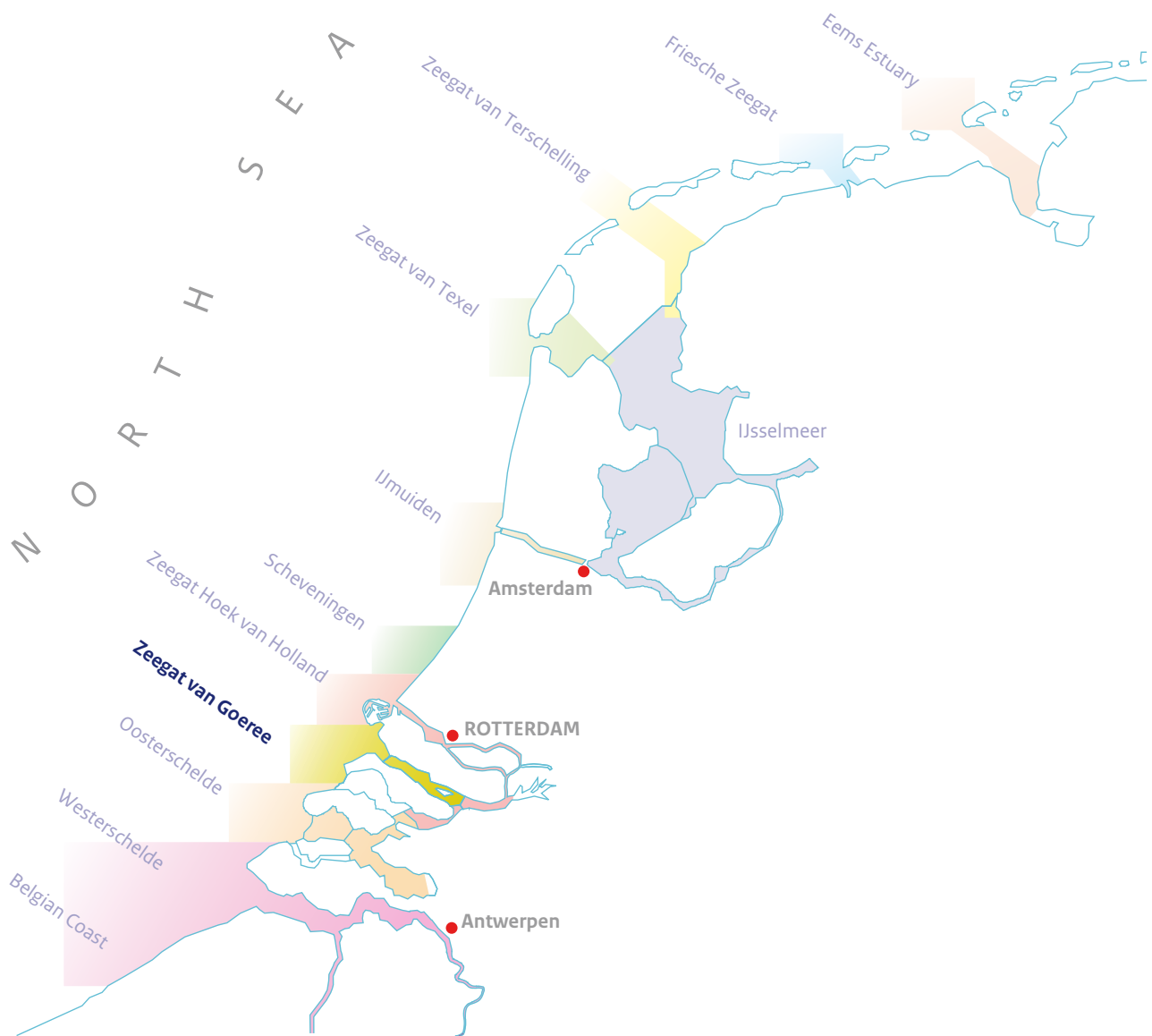
7.8.1 Roompotsluis



Facilities	
Cargo	No facilities
Bunker	No facilities
Repairing	No facilities
Port reception	No facilities
Mooring	No facilities
Restrictions	The harbours are used as approach channels to Oosterschelde or open sea via Roompotsluis.

8

Zeegat van Goeree



8.1 Destinations



8.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - 'Catalogue of Nautical Charts and Nautical Publications'.

This publication can be downloaded from: www.defensie.nl/hydro

8.3 Communication

8.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods

Who	All vessels carrying noxious and dangerous goods on the way to or leaving from the harbour, an inland anchorage or load/discharge terminal.
To	Traffic Station Ouddorp Telephone: +31 (0)88 79 70 956 VHF Ch 87 Or via agent (Electronic Data Interchange - EDI)
What	A - B1 - G - H - I1 - I2 - L - O - P - U - W
When	■ If possible at least 24h before arrival at Stellendam harbour, anchorage or load/discharge terminal but at the latest before entering the Netherlands territorial waters; ■ Before leaving the harbour, anchorage or load/discharge terminal.
Note	See also section 8.3.3 'Explanation of codes'.

International Pollution Prevention Certificate

Who	All oil tankers with a gross tonnage of 150 tons or more.
To	Traffic Station Ouddorp Telephone: +31 (0)88 79 70 956 VHF Ch 87 Or via agent (Electronic Data Interchange - EDI)
What	X7
When	ETA - 24h Stellendam harbour
Note	See also section 8.3.3 'Explanation of codes'.

Notification of waste

Who	All vessels
To	Harbour master Stellendam via agent (Electronic Data Interchange - EDI)
What	Name - call sign - IMO - flag - ETA - ETD - last and next port of call - last port of date where waste has been landed - do you land all/some/no garbage at the harbour reception facilities - Waste Report form.
When	If possible at least 24h before arrival at Stellendam harbour, if departure from a port was within this 24h, as soon as possible.
Remarks	None

Notification of ship's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passenger vessels.
To	Harbour master Stellendam via agent (Electronic Data Interchange - EDI)
What	X6
When	ETA - 24h arrival at Stellendam harbour
Remarks	■ Only vessels that are under way to a port or anchorage in the Netherlands as part of an international voyage. ■ The following vessels do not have to report: warships and troop transporting vessels - vessels without propulsion - wooden vessels with primitive construction - fishing vessels. ■ See also section 8.3.3 'Explanation of codes'.

ETA/ETD

Who	All seagoing vessels
To	Lock master Goereese Sluis VHF Ch 20
What	■ Name, nationality and ship's type; ■ Dimensions; ■ Amount, sort and weight of cargo; ■ Last port of departure and port of destination; ■ ETA at the lock.
When	In time

Transit

Who	All vessels, except vessels with a length of 20m or less which are located in the VTS area.
To	Traffic Centre Hoek van Holland VHF Ch 01, 02 or 03
What	A - D
When	When crossing a VTS sector boundary.
Remarks	For VTS sector boundaries see Chapter 9 - Zeegat van Hoek van Holland, section 9.4.4 'Vessel Traffic Services'.
Note	See also section 8.3.3 'Explanation of codes' .

8.3.2**Request for a pilot**

See [Chapter 9 – Zeegat van Hoek van Holland, section 9.3.2 'Request for a pilot'](#).

8.3.3 Explanation of codes

Code	Explanation
A	Vessel : Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event : A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position : True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, beam, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

8.3.4 Vessel Traffic Services



VTS reports – All seagoing vessels entering / leaving VTS-area of Zeegat van Hoek van Holland

VHF Ch	Location	Message	To
01	Goereese Sluis	Vessel's name, call sign; Draught; Position; Any particulars.	Maas approach

Vessel Traffic Services fairway Slijkgtat (destination Goereese Sluis)

Station	VHF Ch	Traffic guidance	Navigational assistance	Traffic instructions				
Radar Maas Approach	01	√	√	√				

8.3.5 Communication Locks

See section '8.3.1 ETA/ETD'.

8.3.6 Communication bridges

Location	Bridges	VHF Ch
Haringvliet	Haringvlietbrug	20

8.4 Pilotage

8.4.1 Local pilotage

Compulsory pilotage

Pilotage in this region is compulsory / ad-hoc compulsory for the following fairways:



Exemptions compulsory pilotage

See Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage’ (The Netherlands).

Request for a pilot

See Chapter 9 – Zeegat van Hoek van Holland, section 9.3.2 ‘Request for a pilot’ and section 9.4.1 ‘Pilot vessel cruising stations’.

8.5 Sailing directions

8.5.1 General information

Zeegat van Goeree is situated between Goeree and Voorne and has been closed off from open sea by the Haringvlietdam. A complex of scouring sluices has been constructed in the middle of the dam (Haringvlietssluisen).

The harbour of Stellendam is to the southwesterly end of the dam. The Buitenhaven and Binnenhaven are separated from each other by Goereese Sluis. The lock (Goereese Sluis) gives entrance to Haringvliet, allowing passage to various shipping routes, which among others lead to the harbour areas of Rotterdam, Dordrecht, Moerdijk, Antwerp and the Westerschelde.



8.5.2 Approaching from open sea

1 – Main fairway to Goereese Sluis

On the seaward side Zeegat van Goeree is largely closed off by the banks of Bollen van Goeree, Hinder and during LW the drying sandbank Ribben. Strong W winds cause breakers on the banks and in the channel a heavy ground swell can be expected. It is not advisable to approach this channel during strong winds, during a falling tide or during gales. It is however possible to approach the Buitenhaven of Stellendam with a flooding tide after the tide has run for some time and the water level has risen considerably.

The Outer harbour of Stellendam is entered via the channels Slijkgat and Pampus. The harbour is only visible just after passing the Pg Lt buoy. Depths in the channels are liable to frequent changes. Buoyage in the channels are changed accordingly.

Note

Off Haringvlietsluizen (drainage sluices) strong currents may arise during sluicing. A distance of 300m from the scouring sluices should be kept. The area prohibited is marked by yellow can buoys. From 30 minutes before sluicing till the end of the sluicing period the sluicing signal on the 4 pillar heads is lit (3 red Lts in a triangle with their top upwards). An outgoing stream may occur in the approaching channel to the Outer harbour when the sluice situated at the SW corner, is opened.

8.5.3 Approaching via Hollandsch Diep

See [Chapter 9 – Zeegat van Hoek van Holland, section 9.5 ‘Sailing directions’](#).

8.5.4 Main fairways Haringvliet

2 – From Goereese Sluis to Haringvlietbrug via Hitsertse of Vuile Gat

Leaving the Binnenhaven of Stellendam the main channel to Haringvlietbrug leads through Deltageul, Haringvliet (N of island Slijkplaat) and Hitsertse of Vuile Gat (N of island Tiengemeten).

The channels are well marked by buoys and Lt buoys and in places by sector and leading Lts.

3 – From Goereese Sluis to Haringvlietbrug via Haringvliet

Leaving the Binnenhaven of Stellendam the channel to Haringvlietbrug leads through Deltageul, Aardappelengat (S of island Slijkplaat) and Haringvliet (S of island Tiengemeten). The channels are well marked by buoys but unlit.

8.5.5 Locks

Goereesesluis	
Dimensions Locks	No information
Maximum vessel dimensions	Length: 144m; Beam: 15m; Draught: 50dm
Visibility	No information
Mooring	No information
Tugboat assistance	No information
Boatmen assistance	No information
Operating hours	The lock operates 24h a day on weekdays until 2200 on Friday, but is restricted to 0800 - 2000 on weekends, and on Sundays only from November 1st to April 1st, to 0800 - 1000 and 1600 - 1800.
Bridge	Movable bridges span the outer and inner lock gates. These bridges have vertical clearances of 12.2m and 4m respectively, when closed. The bridges are not operational when the windforce is more than 6-7 Bft.
Note	For communication with locks see section 8.3.1 ‘ETA/ETD’ .

8.5.6 Bridges

Haringvlietbrug

Haringvlietbrug spans the E end of Haringvliet and is 150m in length. It is supported by 10 pillars, numbered from the S end and has a bascule bridge near its N end with through passage of 35m. Vessels passing through the fixed spans of the bridge should proceed beneath the spans which are indicated by yellow fixed lights, while fixed red lights indicate that passage is prohibited. Vertical clearance varies between 10.7m and 12.8m and is shown on unlit tide gauges adjacent to the spans.

8.6 Tidal information

8.6.1 Tidal curves

For the nearest tidal stations at Hoek van Holland and Euro Platform see Chapter 9 – Zeegat van Hoek van Holland, [section 9.6.1 ‘Tidal curves’](#).

8.6.2 Tidal streams

The predictions in the table refers to HW Hoek van Holland.

Entrance Buitenhaven (Stellendam)		51°49.9'N	04°02.3'E
Time	Direction	Spring Rate	Neap Rate
-06	309°	0.8 kn	0.3 kn
-05	311°	0.6 kn	0.4 kn
-04	310°	0.5 kn	0.4 kn
-03	306°	0.6 kn	0.4 kn
-02	304°	0.6 kn	0.3 kn
-01	273°	0.5 kn	0.3 kn
HW	301°	0.4 kn	0.2 kn
+01	294°	0.2 kn	0.0 kn
+02	297°	0.1 kn	0.1 kn
+03	038°	0.1 kn	0.2 kn
+04	283°	0.2 kn	0.1 kn
+05	312°	0.1 kn	0.4 kn
+06	308°	0.7 kn	0.3 kn

Cautions

- It is strongly emphasized that the stream atlases show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand waves, etc.), deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels; this depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks the tidal stream flows through the channels; the direction of the stream follows the bearings of the banks. After sufficient flooding the tidal stream will cross the banks.
- For the tidal rivers, the only important directions are upstream and downstream. Near basins, docks, secondary waterways, and similar waters, the tidal stream pattern may be complicated.
- Haringvliet sluices
During extremely high Rhine-discharges of more than 6000 m³/s at Lobith, the Haringvliet sluices will be fully opened. In that case, it is impossible to keep the discharge through the Nieuwe Waterweg at a constant level. During sluicing, strong currents may occur in the vicinity of the Haringvliet sluices.

8.7 Rules | Regulations

See Chapter 2 – Navigation | Traffic safety, [section 2.13 ‘Shipping regulations’](#).

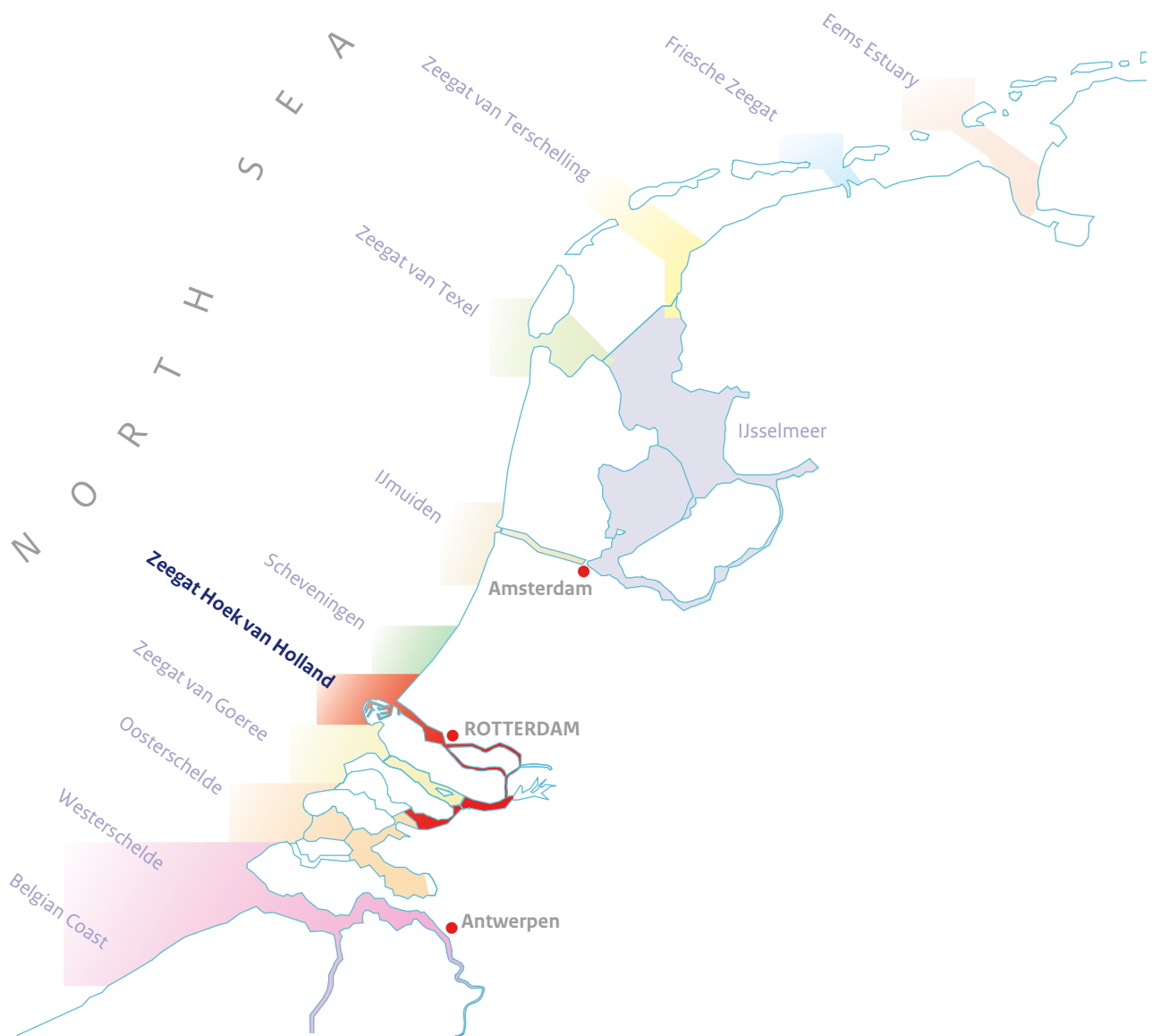
8.8 Port information

8.8.1 Stellendam

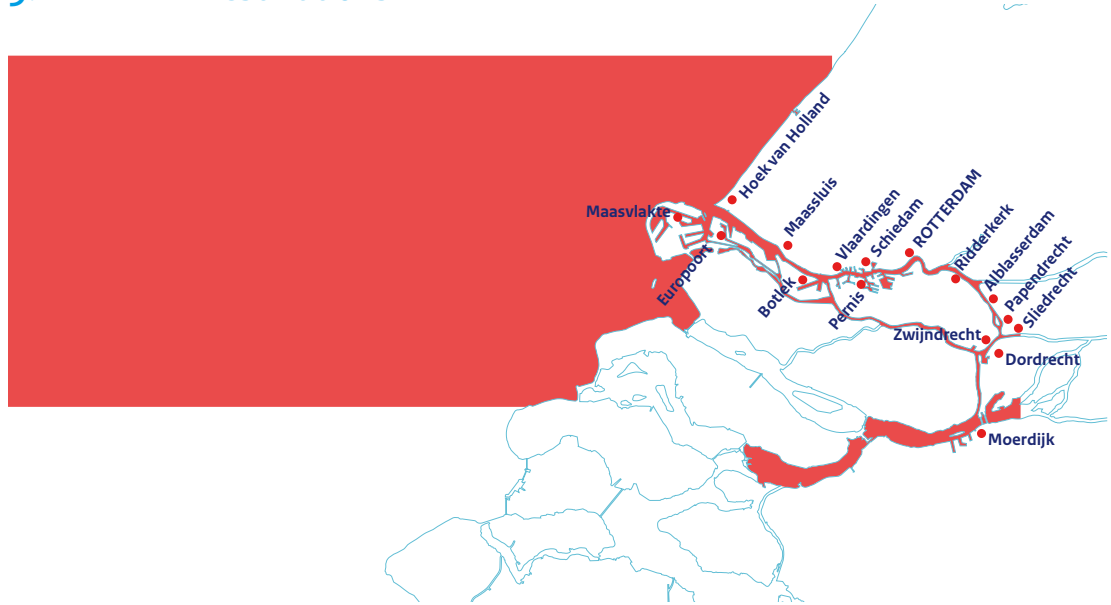
	Buitenhaven	Buitenhaven
Facilities		
Cargo	Fish. The harbours are also used as approach channels to Haringvliet or open sea via Goereese Sluis	
Bunker	Fuel, Lubricating oil, Potable water	
Repairing	Small repairs has to be reported and approved by local authorities	
Port reception	Oil waste, Garbage and Chemicals	
Mooring	Tugboats and boatmen available	
Restrictions	Speed: 9 km/h	

9

Zeegat van Hoek van Holland



9.1 Destinations



9.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - 'Catalogue of Nautical Charts and Nautical Publications'. This publication can be downloaded from: www.defensie.nl/hydro

9.3 Communication

9.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods

Who	All vessels with a gross tonnage of 300 tons or more carrying dangerous goods.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	See www.portbase.com/en/services
When	As soon as possible after departure previous port.

Notification of health

Who	All vessels arriving from foreign ports including passenger vessels.
To	Harbour Master Rotterdam E-mail: porthealthauthority@portofrotterdam.com Fax: +31(0)10 252 1600
What	Maritime Declaration of Health
When	ETA – 24h at Pilot boarding point

Notification of waste

Who	All vessels.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	Advance Notification Form for waste delivery to port facilities.
When	ETA - 24h at Pilot boarding point

Notification of ship's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passenger vessels.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	X6
When	ETA - 24h at Pilot boarding point
Remarks	■ Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage; ■ The following vessels do not have to report: warships and troop transporting vessels - vessels without propulsion - wooden vessels with primitive construction - fishing vessels.
Note	See also section 9.3.3 'Explanation of codes' .

Customs

Who	All vessels with a gross tonnage of more than 300 tons.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	A - I - K - W
When	ETA - 24h at Pilot boarding point
Note	See also section 9.3.3 'Explanation of codes' .

Immigration

Who	All vessels with a gross tonnage of more than 300 tons.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	A - I - K
When	ETA - 24h at Pilot boarding point
Note	See also section 9.3.3 'Explanation of codes' .

Transit

Who	All vessels, except vessels with a length of 20m or less, which are located in the VTS areas.
To	appropriate Traffic Centre
What	A - D - X5
When	When crossing a VTS sector boundary.
Note	See also section 9.3.3 'Explanation of codes' .

ETA

Who	All vessels with a draught of more than 17.40m and LNG carriers with a length of more than 180m.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	A - B - I - J - O - P - Q - T1 - T2 - U - W - X3 PEC particulars if applicable
When	■ ETA – 48h at Pilot boarding point; ■ Deviations in ETA > 30 minutes must be reported immediately.
Note	See also section 9.3.3 'Explanation of codes'.

ETD

Who	All vessels with a gross tonnage of more than 300 tons.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	A - B - I - J - O - P - Q - T1 - T2 - U - W - X3 PEC particulars if applicable
When	■ ETA – 24h at Pilot boarding point; ■ Deviations in ETA > 30 minutes must be reported immediately.
Note	See also section 9.3.3 'Explanation of codes'.

Who	All vessels with a draught of more than 17.40m, LNG carriers and vessels using a pilot and/or tugs.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	A - J - K - O - Q - T1 - T2 - U - W - X3 PEC particulars if applicable
When	■ ETD – 12h (departure/shifting); ■ Deviations in ETD > 30 minutes must be reported immediately.
Note	See also section 9.3.3 'Explanation of codes'.

Who	All vessels with a gross tonnage of more than 300 tons.
To	Harbour Master Rotterdam via agent (www.portbase.com)
What	A - J - K - O - Q - T1 - T2 - U - W - X3 PEC particulars if applicable
When	■ ETD – 6h (departure/shifting); ■ Deviations in ETD > 30 minutes must be reported immediately.
Note	See also section 9.3.3 'Explanation of codes'.

9.3.2 Request for a pilot

Who	All vessels with a draught of more than 17.40m and LNG carriers.
To	via agent (www.portbase.com)
What	A - B - O - Q
When	ETA – 12h at Pilot boarding point.
Note	See also section 9.3.3 'Explanation of codes'.

Who	All vessels with a gross tonnage of more than 300 tons.
To	via agent (www.portbase.com)
What	A - B - I - O - Q
When	ETA – 6h at Pilot boarding point.
Note	See also section 9.3.3 'Explanation of codes'.

9.3.3 Explanation of codes

Code	Explanation
A	Vessel: Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event: A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position: True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, breadth, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

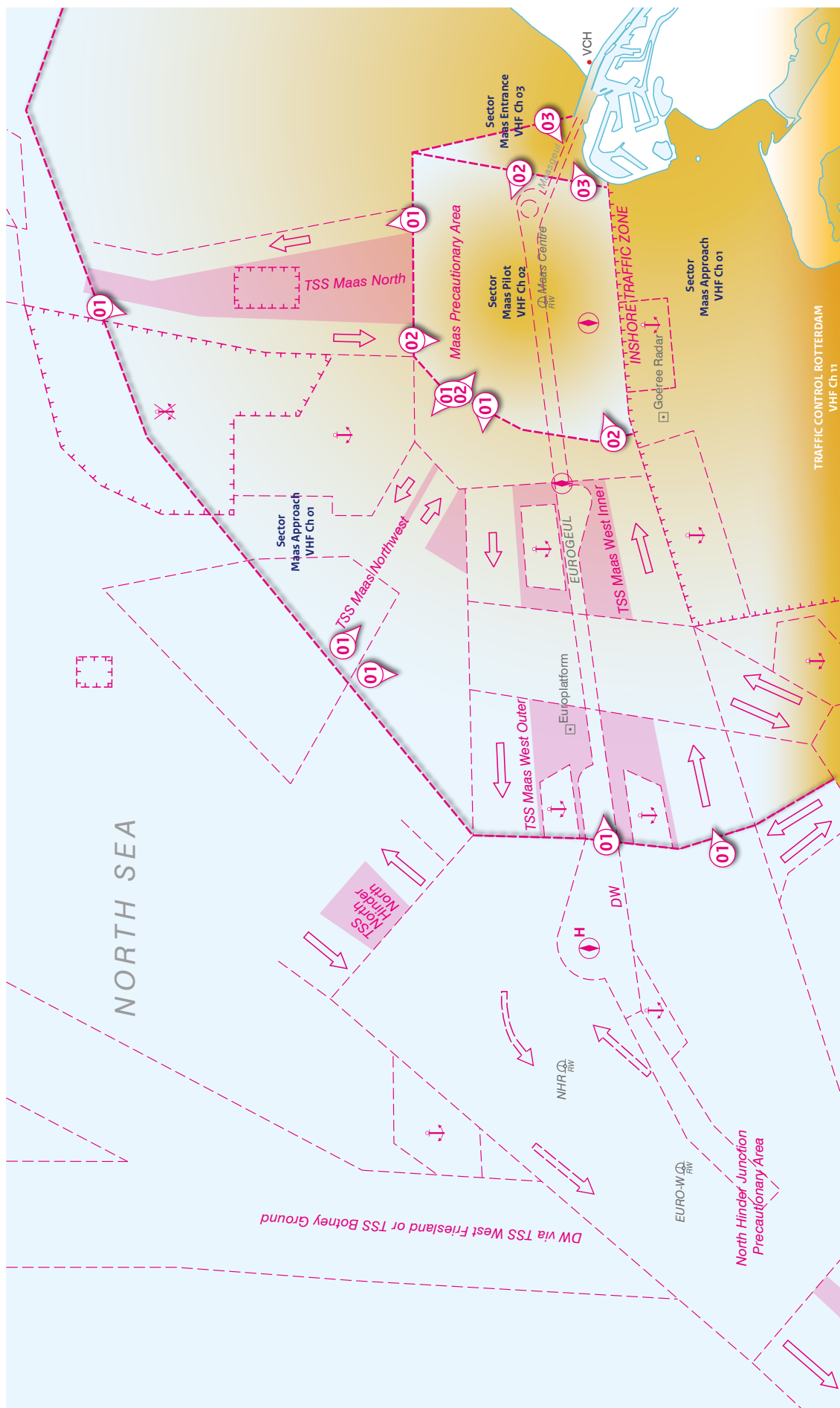
9.3.4**Vessel Traffic Services**

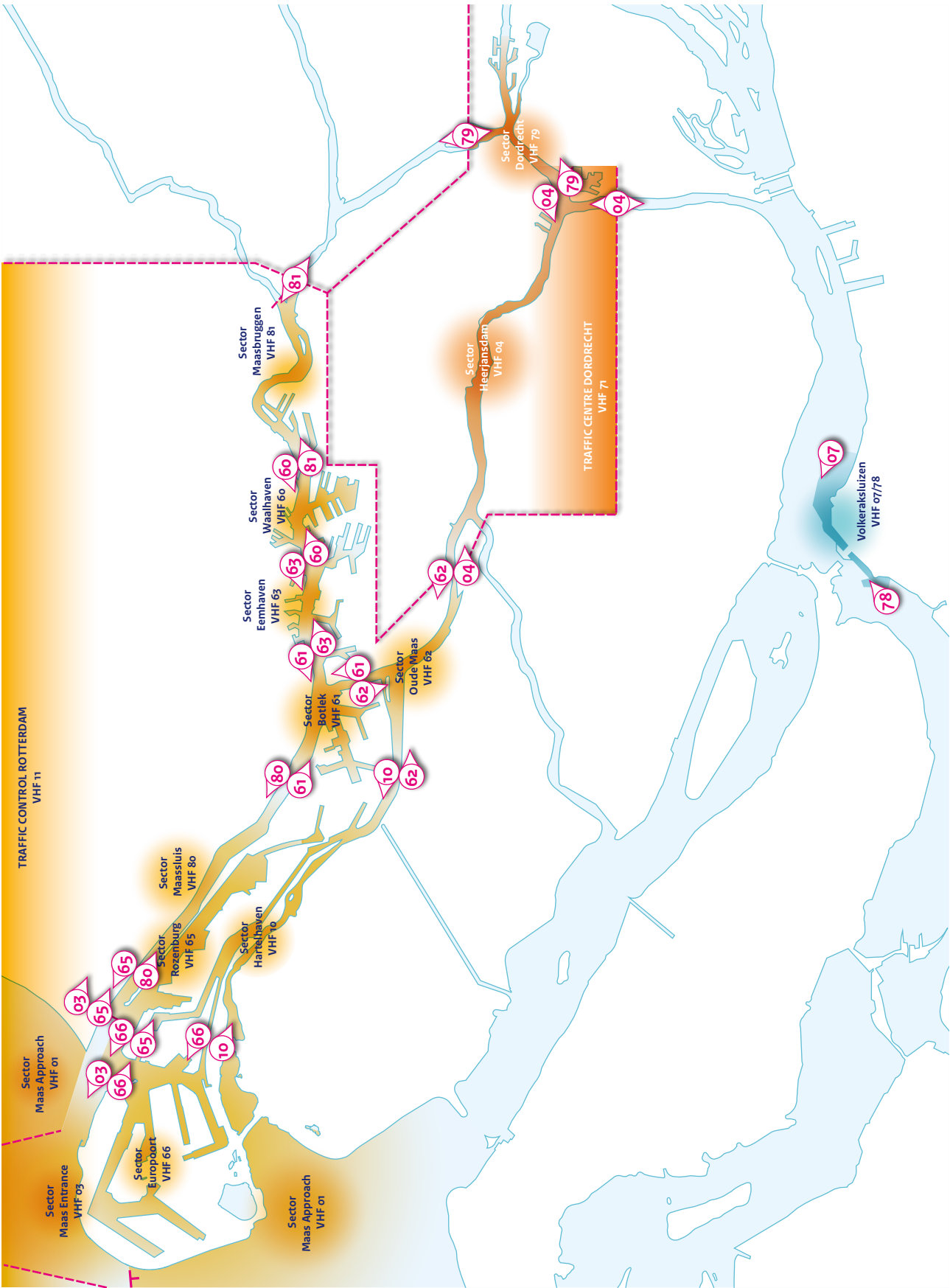
The VTS operates 24h a day and covers an area from about 38 nm offshore (beginning at Eurogeul) to about 3 nm from Brienenoord bridge. The area which is covered, is divided into two regions each with its own traffic centre. Each region is again subdivided into a number of sectors each with one VTS-operator and its own VHF Channel. The VTS consists of a network of radars, target trackers, radio direction finders, television, hydro meteorological sensors, communication equipment etc.

The information obtained by listening, or the information supplied by the VTS operator, should be used for the benefit of safe navigation. The information is not meant and should therefore not be used to override regulations in force, nor to omit measures necessary for the proper practice of seamanship. The responsibility for safe navigation will always rest with the master.

In the VTS sectors Maas Approach, Pilot Maas and Maas Entrance from the port piers towards the sea the primary language of communication is English and secondary Dutch. In all other VTS sectors, the primary language is Dutch and secondary English. In the event of communication problems between ship and shore stations, as well as between ship stations, in addition to the languages Dutch and English, German may also be used.

All vessels should maintain listening watch on the appropriate VHF channel while passing through the VTS area. No communications on the VHF channels other than those concerning safe navigation or traffic handling should be conducted.





VTS Reports – All seagoing vessels inward bound (EURO-E buoy to Dordrecht)

VHF Ch	Location	Message	To
01	- W entrance TSS Maas West Outer - W entrance Eurogeul - NW entrance TSS Maas Northwest - N entrance TSS Maas North - Entering VTS area elsewhere		Maas Approach
02	- E exit TSS Maas West Inner - SE exit TSS Maas NorthWest - S exit TSS Maas North		Pilot Maas
03	On entering the Maas Entrance sector	Message: Name vessel – call sign – position – draught – destination – any particulars	Maas Entrance
66	Calandkanaal (W-entrance)		Sector Europoort
65	- Nieuwe Waterweg (Lt buoy NW15) - Calandkanaal (Lt buoy CA8)	When: Entering VTS sector area	Sector Rozenburg
10	Hartelkanaal (Suurhoffbrug)	- Undocking procedures have commenced - It is intended to make a particular manoeuvre (crossing the fairway, entering or departing harbour basin, or any manoeuvre that deviates from the usual traffic flow)	Sector Hartelhaven / Dintelhaven
80	Nieuwe Waterweg (Distance mark 1028)		Sector Maassluis
61	Nieuwe Maas (Distance mark 1017)		Sector Botlek
62	- Hartelkanaal (Lt nr. 25) - Oude Maas (Distance mark 1005)	Passing arrangements have to be made with other vessels (alternatively, the vessel concerned may be contacted directly, but also advise the sector afterwards)	Sector Oude Maas
63	Nieuwe Maas (Distance mark 1011)		Sector Eemhaven
60	Nieuwe Maas (Distance mark 1007)		Sector Waalhaven
04	- Dordtsche Kil (Lt nr. 9) - Oude Maas (Distance mark 999.5)		Sector Heerjansdam
81	Nieuwe Maas (Distance mark 1003)		Sector Maasbruggen
79	Noord (Distance mark 978)		Sector Dordrecht

VTS Reports – All seagoing vessels outward bound (Dordrecht to EURO-E buoy)

VHF Ch	Location	Message	To
04	- Dordtsche Kil (Lt nr. 9) - Oude Maas (Uilenhaven)		Sector Heerjansdam
79	- Oude Maas (Uilenhaven) - Noord (Distance mark 978)		Sector Dordrecht
81	Nieuwe Maas (Distance mark 993)		Sector Maasbruggen
60	Nieuwe Maas (Distance mark 1003)		Sector Waalhaven
63	Nieuwe Maas (Distance mark 1007)	Message: Name vessel – call sign – position – draught – destination – any particulars	Sector Eemhaven
62	Nieuwe Maas (Distance mark 999.5)		Sector Heerjansdam
61	Nieuwe Maas (Distance mark 1011) Oude Maas (Distance mark 1005)	When: - Entering VTS sector area - Undocking procedures have commenced	Sector Botlek
80	Nieuwe Maas (Distance mark 1017)	It is intended to make a particular manoeuvre (crossing the fairway, entering or departing harbour basing, or any manoeuvre that deviates from the usual traffic flow)	Sector Maassluis
65	Nieuwe Maas (Distance mark 1028)		Sector Rozenburg
66	- Calandkanaal (Lt buoy CA8) - Hartelkanaal (Suurhoffbrug)	Passing arrangements have to be made with other vessels (alternatively, the vessel concerned may be contacted)	Sector Europoort
10	Hartelkanaal (Light nr. 25)		Sector Hartelhaven / Dintelhaven
03	Nieuwe Waterweg (Lt buoy NW15)		Maas Entrance
02	Leaving W boundary sector Maas Entrance		Pilot Maas
01	- E entrance TSS Maas West Inner - SE entrance TSS Maas Northwest - S entrance TSS Maas North		Maas Approach

Vessel Traffic Services Zeegat van Hoek van Holland

Station	VHF Ch	Traffic guidance	Traffic instructions	Navigational assistance	Shore based pilotage	General information			
Sector Maas Approach	01	✓	✓	✓					
Sector Maas Pilot	02	✓	✓	✓	✓				
Sector Maas Entrance	03	✓	✓	✓	✓				
TC Rotterdam	11		✓			✓			
Sector Europoort	66	✓	✓	✓					
Sector Rozenburg	65	✓	✓	✓					
Sector Hartelhaven-Dintelhaven	10	✓	✓	✓					
Sector Maassluis	80	✓	✓	✓					
Sector Botlek	61	✓	✓	✓					
Sector Eemhaven	63	✓	✓	✓					
Sector Waalhaven	60	✓	✓	✓					
Sector Maasbruggen	81	✓	✓	✓					
TC Dordrecht	71		✓			✓			
Sector Dordrecht	79	✓	✓	✓					

Supporting VHF-Channels

VHF Ch 11: Harbour Coordination Centre (Traffic issues)

Who: All moored seagoing vessels

When:

- Pilot requests, tugboats and/or linesmen
- The planned voyage can not be undertaken
- If incidents occur
- Emergency services are required
- Commencing/terminating special works for which permission has been granted

VHF Ch 14: Harbour Coordination Centre (Operational issues)

Who: All moored seagoing vessels

When: If permission is required to execute special works such as;

- Lowering lifeboats
- Diving activities
- Lightering activities with floating cranes
- Bunkering etc.

VHF Ch 19: Harbour Coordination Centre

What: Weather reports every H + 50 when expected wind force >8Bft.

Note: It is recommended to listen to this channel when moored.

9.3.5 Communication with helicopter

All communication to transfer a pilot by helicopter will be on the VHF sector channel (sector Maas Approach VHF Ch 01 - sector Maas Pilot VHF Ch 02).

The helicopter will contact the vessel on VHF when within range. The helicopter may request the vessel to change to another VHF Channel if radio traffic requires this. In other situations the pilot helicopter will select the appropriate VHF Channel. All instructions from the helicopter pilot to the vessel and vice versa will be on this frequency. The call sign of the helicopter is 'Pilot Helicopter' followed by its registration letters. As soon as VHF contact is established (normally initiated by the helicopter), the vessel shall advise the helicopter pilot of its position, course, speed (when under way), the actual wind direction and speed over the deck, pitch, roll and condition of deck (e.g. dry, spray, wet, etc.). The helicopter pilot will confirm the acceptability of those conditions, or ask for a possible change in heading and/or speed.

In case of radio communication failure, the helicopter will circle the ship. The ship, by use of an Aldis hand-signalling lamp directed at the helicopter (applicable day and night), will indicate:

- A steady white light, if the vessel is ready to receive the helicopter
- A series of short flashes, if the vessel cannot receive the helicopter for an undetermined period of time up to a maximum delay of 15 minutes
- A prolonged series of morse code letter 'N', if the vessel cannot receive the helicopter for a period of time of more than 15 minutes

9.3.6 Communication Locks

See section 9.5.6 'Locks'.

9.3.7 Communication bridges

See section 9.5.7 'Bridges'.

9.4 Pilotage

9.4.1 Local pilotage

Compulsory pilotage

Pilotage in this region is compulsory for the following fairways:



Exemptions compulsory pilotage

See [Chapter 2 – Navigation | Traffic Safety, section 2.5. ‘Pilotage’ \(The Netherlands\)](#).

Request for a pilot

See section [9.3.2 ‘Request for a pilot’](#).

Pilot vessel cruising stations**Boarding/unboarding station for vessels with draught up to 17.39m and LNG-carriers with a length of $\leq$ 180m**

- Embarkation of the pilot will take place by small/large tender or swath 2 nm west south-west of Maas Center Lt buoy: 1 pilot boarding. Vessels with a draught > 14.30m or length > 375m the pilot normally boards a little earlier;
- Vessels bound for Stellendam (Goereese Sluis) and Scheveningen may also embark the pilot here;
- Disembarkation of the pilot will take place at the position of the MO Lt buoy.

Boarding/unboarding station for LNG-carriers with a length of > 180m

- Embarkation will take place by small/large tender or swath abeam of E9 Lt buoy: 2 pilots boarding;
- Disembarkation of 2 pilots will take place near the MNW3-MW4 Lt buoy.

How to recognize the pilot cutter, tenders, swath

- Pilot cutter: Located 1 nm south of the Maas Center Lt buoy: black vessel with yellow and white superstructure, with the word
- ‘Pilot’ in white letters on either side;
- Small tender: Yellow open tender surrounded by a black fender;
- Large tender: Yellow tender with a white superstructure, with the word ‘Pilot’ in black letters on either side;
- SWATH: Twin hull yellow tender with a white superstructure, with the word ‘Pilot’ in black letters on either side.

How to prepare the vessel for boarding the pilot

- By tender: Vessels with a freeboard of over 9.0m must provide an accommodation ladder in addition to the pilot ladder. Generally, pilots refuse to use mechanical pilot hoists or other constructions that do not comply with the above-mentioned regulations;
- By small tender: Pilot ladder 2 ft above the water, speed 4 kn;
- By large tender: Pilot ladder 6 ft above the water, speed 5-6 kn;
- By swath: Pilot ladder to be adjusted according instructions, speed 8-10 kn.

9.4.2 Shore based pilotage (SBP)**General information**

See [Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Routes

Shore based pilotage is only available between the pilot boarding station near Maas Centre Lt buoy and the Traffic station at Hoek van Holland.

Masters obligations

See [Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Excluded from SBP

Excluded from SBP are:

- Vessels with a draught of more than 14.30m in sea water;
- Vessels that require a pilot because of their condition;
- Vessels without sufficient communication;
- Vessels that appear or have appeared not to be fit for SBP;
- Tankers with a length more than 125m;
- Tankers with a length more than 125m loaded with dangerous goods in bulk of IMO class 2,3 and 6, unless the cargo is completely miscible with water, e.g. alcohol;

- Vessels with a master who does not speak adequate Netherlands or English, or who has not entered the port of Rotterdam at least six times in the past four years;
- Vessels that are suitable for boarding a pilot by helicopter;
- Departing vessels with a length over 125m or a draught of more than 9m.

The entry time for vessels longer than 125m and/or a draught of more than 9m depends on hydrological and meteorological conditions. Bear in mind that vessels can still be exempted from SBP, taken all circumstances into consideration. This applies in particular to vessels longer than 175m and with a draught of more than 9m.

Communication

See section '[Vessel Traffic Services Zeegat van Hoek van Holland](#)'.

9.4.3

Helicopter pilotage

Boarding station for vessels with draught up to 17.39m

- For vessels coming from the north: in the southbound lane of TSS Maas North, exact position will be advised via VTS: 1 pilot boarding;
- For vessels coming from the west: in the eastbound lane of TSS Maas West Inner / Outer, exact position will be advised via VTS: 1 pilot boarding.

The decision on whether the pilot comes on board via a tender or helicopter is made by the Pilot. If pilotage is suspended, no additional costs will be charged for using the helicopter.

Boarding/unboarding station for vessels with a draught between 17.40m and 22.55m

At rendezvous point, (51°59.0'N, 003°00.0'E) via helicopter (2 pilots boarding/unboarding).

How to recognize the helicopter

Helicopter is white with orange and red stripes.

9.4.4

Deep sea pilotage

IMO Resolution A.1080(28) recommends the use of adequately qualified and licensed deep sea pilots (DSP). It must be noted that this recommendation becomes even more pertinent with the increased traffic on the North Sea. Therefore the Ministry of Infrastructure and Water Management, the Netherlands Coast Guard and the Port of Rotterdam Authority strongly urge both owners and charterers of VLCC (Very Large Crude Carriers) transiting the North Sea to make use of a DSP.

The following circumstances call for the use of a DSP:

- VLCC approaching the Pilot Boarding Place from the South need to pass the English Channel. An area well known for many crossing ferries, restricted visibility, storms, shallow waters, navigational hazards and limited room to manoeuvre.
- VLCC approaching the Pilot Boarding Place from the South and North encounter large wind farm areas, also restricting the manoeuvring space.
- For the embarkation of the local pilot, VLCC with a draught of 17.40m or more make use of the pilot boarding place which is situated at a distance of 40 nm from the entrance to the Port of Rotterdam, close to the Precautionary Area North Hinder Junction, a very busy shipping area.
- The local pilot boards by helicopter, requiring the ship to maintain a certain course and speed and thereby making use of the specialised knowledge and expertise of a DSP.
- There is no Vessel Traffic Service available in this area.
- In case an incident does occur, the DSP is trained to make swift contact with the Coast Guard centre and subsequently an Emergency Towing Vessel to keep the VLCC away from shallow waters, wind farms and other potential dangers to navigation.

See [Chapter 2 – Navigation | Traffic Safety, section 2.7 'Deep sea pilotage'](#) for more information.

9.4.5

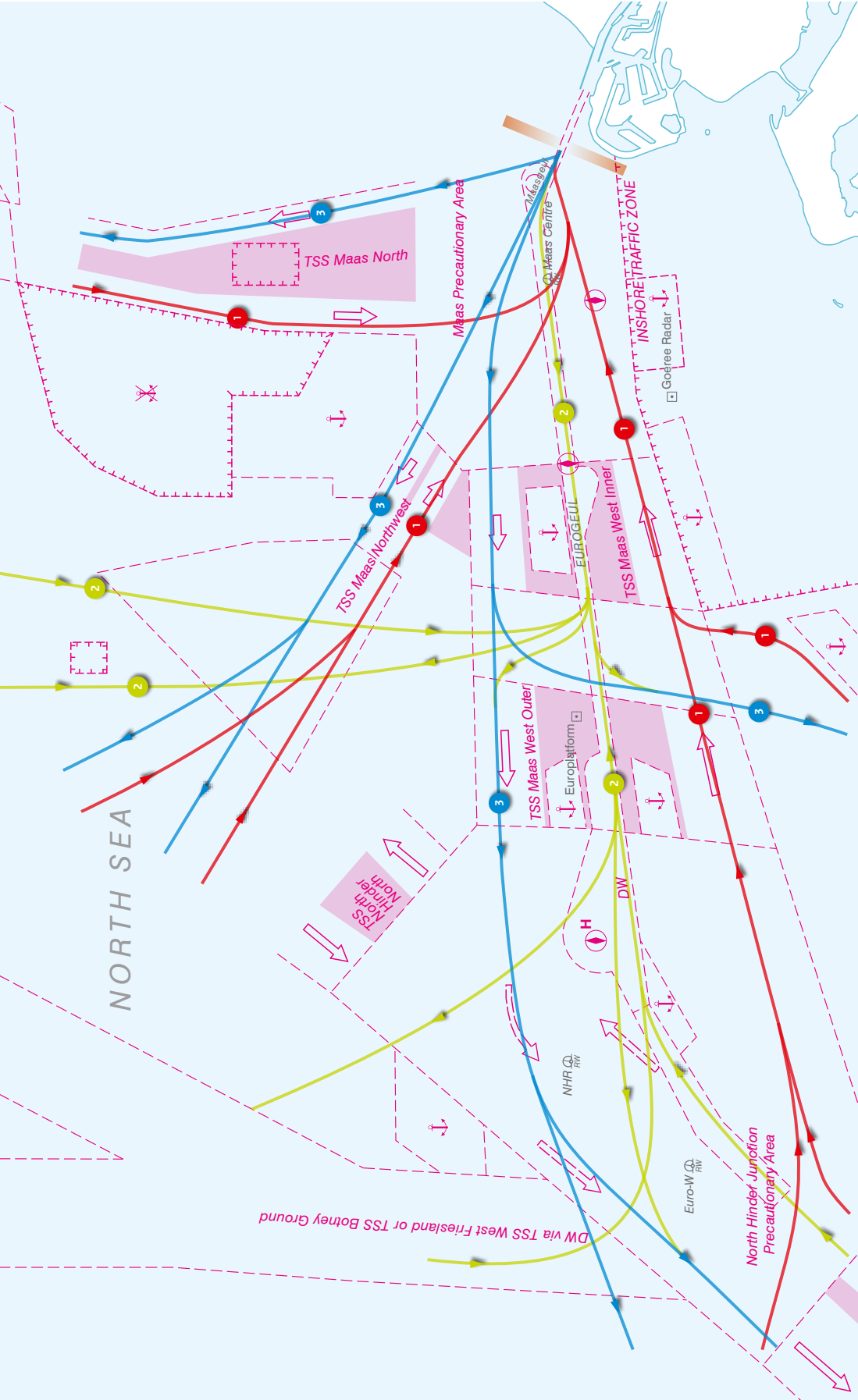
Boarding arrangements

Boarding by pilot vessel

See [Chapter 2 – Navigation | Traffic Safety, section 2.5.6 'Pilot boarding arrangements'](#).

9.5 Sailing directions

9.5.1 Zeegat van Hoek van Holland approach



1 – Inbound traffic with a draught up to 14.29m**Inbound from a western and southern direction**

- These vessels do not receive a Plan of Entry, and can enter at any time (except in case of tidal windows);
- Vessels should not use the DW-route Eurogeul which is primary intended for vessels with draughts between 17.40m and 22.55m;
- The use of Maasgeul is not compulsory;
- Vessels follow the TSS south of Eurogeul (Maas West Outer and/or Maas West Inner);
- Keep the pilot cutter on the lee side unless advised otherwise;
- When entering the outer breakwaters of Hoek van Holland tidal cross stream should be reckoned with. During maximum tidal stream a minimum speed of 10 kn is advised in order to make course corrections.

Inbound from a northern or northwestern direction

- These vessels do not receive a Plan of Entry, and can enter at any time (except in case of tidal windows);
- Vessels should not use the DW-route Eurogeul which is primary intended for vessels with draughts between 17.40m and 22.55m;
- The use of Maasgeul is not compulsory;
- Vessels follow the TSS Maas North or Maas North West;
- When crossing the Maasgeul keep the Maas Center Lt buoy on the portside;
- Keep the pilot cutter on the lee side unless advised otherwise;
- When entering the outer breakwaters of Hoek van Holland tidal cross stream should be reckoned with. During maximum tidal stream a minimum speed of 10 kn is advised in order to make course corrections.

Inbound LNG-carriers

- These vessels do not receive a Plan of Entry, and can enter at any time (except in case of tidal windows);
- LNG-carriers length ≤ 180m must embark 2 nm southwest of the Maas Center Lt buoy;
- LNG-carriers length > 180m must embark the pilot in the Eurogeul between the E9 and E11 Lt buoys;
- LNG-carriers length > 180m follow the TSS Maas West Outer and enter Eurogeul between E5 and E7 Lt buoy;
- Keep the pilot cutter on the lee side unless advised otherwise;
- When entering the outer breakwaters of Hoek van Holland tidal cross stream should be reckoned with. During maximum tidal stream a minimum speed of 10 kn is advised in order to make course corrections.

2 – DW-route to / from Hoek van Holland**General**

Vessels with a draught between 17.40m and 22.55m are channel bound and therefore obliged to make use of the Eurogeul and Maasgeul.

See also HP8 'Deep Draught Planning Guide'. This guide is intended for vessels with a draught between 20.7m and 22.55m which are sailing from Greenwich Buoy to Europoort..

Inbound vessels with a draught between 17.40m and 19.99m

- These vessels receive a Plan of Entry at least 6h before arrival. This plan indicates the times at which the vessel should be at the rendez-vous point (51°59,0'N 03°00,0'E) and is expected to pass the lower Leading Lt (112°) at the northwest end of Splitsingsdam;
- Entry time depends on traffic (except in case of tidal windows and in case of extreme wind and/or wave conditions);
- If more than one vessel with a draught over 17.40m is scheduled to navigate in the Eurogeul and Maasgeul, an interval of at least 45 minutes is prescribed between these vessels;
- The pilots will confirm the Plan of Entry by a Sailing Plan. After confirmation by the harbour master, permission will be granted by Traffic Control;
- Once the pilots are on board, a deviation of more than 15 minutes in the expected passing time of the lower Leading Lt (112°) must be reported to the appropriate sector channel;

- The Eurogeul is entered via the Eurogeul Approach Area near the Euro-E buoy;
- The planned speed for the Eurogeul is about 10 kn and for the Maasgeul about 8 kn.

Inbound vessels with a draught between 20.00m and 21.95m

- These vessels receive a Plan of Entry at least 6h before arrival. This plan indicates the times at which the vessel should be at the rendez-vous point (51°59.0'N 03°00.0'E) and is expected to pass the lower Leading Lt (112°) at the northwest end of Splitsingsdam;
- Entry time depends on traffic and vertical tide, time of arrival will be around HW Hoek van Holland;
- If more than one vessel with a draught over 17.40m is scheduled to navigate in the Eurogeul and Maasgeul, an interval of at least 45 minutes is prescribed between these vessels;
- The pilots will confirm the Plan of Entry by a Sailing Plan. After confirmation by the harbour master, permission will be granted by Traffic Control;
- Once the pilots are on board, a deviation of more than 15 minutes in the expected passing time of the lower Leading Lt (112°) must be reported to the appropriate sector channel;
- The Eurogeul is entered via the Eurogeul Approach Area near the Euro-E Buoy;
- The minimum speed to enable passing Eurogeul and Maasgeul is 7 kn over the ground;
- The maximum speed will be given, with a maximum of 11 kn over the ground to prevent squat in the Eurogeul.

Inbound vessels with a draught between 21.96m and 22.55m

- These vessels receive a Plan of Entry at least 6h before arrival. This plan indicates the times at which the vessel should be at the rendez-vous point (51°59.0'N 03°00.0'E) and is expected to pass the lower Leading Lt (112°) at the northwest end of Splitsingsdam;
- Entry time depends on traffic and vertical tide and horizontal tide, and the time of arrival will be around HW Hoek van Holland. It is advised to avoid a cross current at the Maas Entrance of more than 1,7 kn, because a maximum drift angle of 18° and a maximum speed over the ground of 7 kn or a maximum speed through the water of 5,5 kn are the acceptable limits;
- If more than one vessel with a draught over 17.40m is scheduled to navigate in the Eurogeul and Maasgeul, an interval of at least 45 minutes is prescribed between these vessels;
- The pilots will confirm the Plan of Entry by a Sailing Plan. After confirmation by the harbour master, permission will be granted by Traffic Control;
- Once the pilots are on board, a deviation of more than 15 minutes in the expected passing time of the lower Leading Lt (112°) must be reported to the appropriate sector channel;
- The Eurogeul is entered via the Eurogeul Approach Area near the Euro-E Buoy;
- The minimum speed to enable passing Eurogeul and Maasgeul is 7 kn over the ground;
- The maximum speed will be given, with a maximum of 11 kn over the ground to prevent squat in the Eurogeul.

Inbound vessels with a draught between 14.30m and 17.39m

- These vessels are not channel bound but may enter the Eurogeul at the beginning near Euro-E buoy or when coming from a northern direction between the E3 and E5 buoys or when coming from western to southern directions on a position as instructed by the Port Authorities;
- The use of Maasgeul is not compulsory, but strongly recommended;
- Contact Maas Approach on VHF Ch 01 before entering the Eurogeul;
- These vessels should stay well clear of vessels constrained by their draught;
- These vessels will not receive a Plan of entry;
- Entry time depends on traffic (except in case of a tidal window);
- These vessels can pass Maas Centre buoy and the pilot cutter on the N-side;
- When entering the outer breakwaters of Hoek van Holland tidal cross stream should be reckoned with. During maximum tidal stream a minimum speed of 10kn is advised in order to make course corrections;
- If the Eurogeul is not used see the route description nr. 1.

Outbound vessels with a draught between 17.40m and 21.50m

- Maximum draught on departure is 21.50m;
- These vessels receive a Plan of Departure at least 6h before departure. This plan indicates the times at which the vessel is expected to pass the lower Leading Lt (112°) at the northwest end of Splitsingsdam;
- Departure time depends on traffic and tide;
- If more than one vessel with a draught over 17.40m is scheduled to navigate in the Eurogeul and Maasgeul, an interval of at least 45 minutes is prescribed between these vessels;
- The pilots will confirm the Plan of Departure by a Sailing Plan. After confirmation by the harbour master, permission will be granted by Traffic Control;
- Once the pilots are on board, a deviation of more than 15 minutes in the expected passing time of the lower Leading Lt (112°) must be reported to the appropriate sector channel.

Outbound vessels with a draught between 14.30m and 17.39m

- These vessels do not receive a Plan of Departure;
- Departure time depends on traffic;
- If the Eurogeul is used, leave the Eurogeul between E5 and E3 Lt buoys;
- Vessels using the Eurogeul should stay well clear of vessels constrained by their draught. Contact Maas Approach on VHF Ch 01 before entering the Eurogeul;
- If the Eurogeul is not used see the route description nr 3;
- The use of Maasgeul is not compulsory but strongly recommended

Eurogeul Approaching Area

The Eurogeul Approaching Area is entered from the DW-route.

Pilotage by helicopter takes place in the W-ly part of the approaching area.

When a vessel according to its plan of entry, has to wait some hours for the opening-time of the tidal window, she may go at anchor in the Short term anchorage (2).

If time between the opening of the tidal window and arrival is too brief for an anchor manoeuvre, waiting is done in the western part the approaching area.

If a vessel is going at anchor for a longer period of time, the Long term anchorage (1) may be used. In this anchorage vessels can stay under the most extreme conditions.

Eurogeul and Maasgeul

The total length of Euro- and Maasgeul up to the breakwaters at Hoek van Holland, is 31 nm.

Eurogeul is 25 nm long and 600m wide.

Maasgeul is 6 nm long, while the width decreases from 600m at Maas Centre Lt buoy to 500m at the harbour entrance.

Along Eurogeul are three turning-places with a diameter of 2700m. The first one is found in Maas West outer TSS at the entrance of Eurogeul. The second is located halfway the S side of Eurogeul between E7 and E9 Lt buoys. In case of emergencies this turning-place may serve as an emergency anchorage for vessels with a draught up to 21.35m.

The third turning-place is found NE of MG Lt buoy. On the W side of the last mentioned turning-place is a circular part with a diameter of 1600m, where in case of emergencies a deep draught vessel can anchor to await one tide.

On both sides of Eurogeul lies a 300m wide shoulder. For safety's sake overtaking and meeting in the channel should be avoided. When overtaking and meeting manoeuvres are inevitable, the shoulders can be made use of. Sufficient under keel clearance should be taken into account. Vessels drawing more than 21.35m should remain within the 600m wide Eurogeul at all times.

Maasgeul has no shoulders and is navigated in the Leading Lts of 112°.

Within radar range of Pilot Maas there is a traffic control system, and after MG Lt buoy deep draught vessels are escorted by a patrol vessel. The sea-room available is limited, however the pilots have been trained to cope with close quarter situations, engine breakdowns and how to carry out emergency manoeuvres including turning around where this is possible.

This experience can be useful if there is a danger of collision, notwithstanding the fact that the deep draught vessel is exhibiting the shape or lights prescribed in Rule 28 of the Collregs.

In some emergencies in Maasgeul or the harbour entrance a vessel will be directed to the Emergency Anchorage for deep draught Vessels near MG Lt buoy.

3 – Outbound vessels with a draught up to 14.29m

Outbound traffic in a western and southern direction

- These vessels do not receive a Plan of Departure, and can depart at any time (except in case of a tidal window);
- The use of Maasgeul is not compulsory;
- Vessels should not use the DW-route Eurogeul which is primary intended for vessels with draughts between 17.40m and 22.55m;
- Pilot vessel and Maas Center Lt buoy must be passed on the north side;
- Follow the TSS north of Eurogeul (Maas West Inner and Maas West Outer).

Outbound vessels in a northern and northwestern direction

- These vessels do not receive a Plan of Departure, and can depart at any time (except in case of a tidal window);
- The use of Maasgeul is not compulsory;
- Pilot vessel and Maas Center Lt buoy must be passed on the north side;
- Follow the TSS Maas North or Maas North West.

Outbound vessels with a draught between 14.30m and 17.39m

These vessels are not channel bound but may use the DW-route Eurogeul. The use of Maasgeul is not compulsory, but strongly recommended. For more information see route description nr 2 = DW-route to / from Hoek van Holland.

If these vessels do not use the Eurogeul they should follow the TSS as mentioned for vessels with a draught up to 14.29m (see above).

9.5.2

Notes

Entry requirements for vessels bound for Dordrecht

Seagoing vessels with a length > 175m and/or a beam > 25m and/or 88dm < draught < 94.5dm (in fresh water) are not allowed to navigate to or from Dordrecht harbour (via Oude Maas and Krabbeggeul) without permission of the Regional Traffic Centre (RTC) Dordrecht or the Harbour Coordination Centre (HCC) Rotterdam.

The request must be submitted in writing, at least 24h before arrival Oude Maas.

Maximum draught

The maximum draught for seagoing vessels bound for or leaving Dordrecht harbour may not exceed 94.5dm (in fresh water).

Overhead clearance

The maximum overhead clearance (Oude Maas) stands at 43m with respect to MHWS.

Keel clearance

On the crossing from Maas Centre Lt buoy to the Krabbeggeul entrance v.v. seagoing vessels must have a keelclearance of at least 10% or 5% respectively at all times.

Right of way

Seagoing vessels with a length > 135m or a draught > 70dm which are showing day (black cylinder) or night signs (three red lights vertically) in accordance with rule 10.03 of the 'Binnenvaartpolitiereglement' (1984) have right of way. On the waterways Maasmond, Nieuwe Waterweg, Nieuwe Maas, Beerkanaal, Calandkanaal draught > 90dm).

Tidal restrictions

Bound for Dordrecht harbour tidal restrictions are in force for seagoing vessels with a length = 150m and/or a beam = 25m and/or a draught > 7.5m. In general, The Botlek Bridge will be passed in slack water. Therefore the pilot will board incoming vessels at about 1h30m after HW Hoek van Holland.

Leaving Dordrecht harbour tidal restrictions are in force for seagoing vessels with a length = 150m and/or a beam = 25m and/or draught > 8.8m.

Detailed information on tidal restrictions can be obtained from the Harbour Coordination Centre in Rotterdam. A special permission must be obtained from the Netherlands Ministry of Transport and Public Works when length between perpendiculars is exceeding 175m or width is more than 25m.

All draughts are referred to as fresh water draught.

Entry requirements for vessels bound for Moerdijk

Seagoing vessels on the crossing from Dordtsche Kil via Hollands Diep and Zuid Hollandsch Diep to Moerdijk harbour, with a length > 175m and/or a width > 25m and/or 88dm < draught < 94.5 dm (in fresh water) are not allowed to navigate to or from Dordrecht harbour (via Oude Maas and Krabbegeul) without permission of the Regional Traffic Centre (RTC) Dordrecht or the Harbour Coordination Centre (HCC) Rotterdam. The request must be submitted in writing, at least 24h before arrival Oude Maas.

Maximum draught

The maximum draught for seagoing vessels bound for or leaving Moerdijk harbour stands at 80dm (in fresh water) +/- the expected waterlevel with respect to NAP at Moerdijk and may not exceed a maximum draught of 84dm in fresh water.

Keel clearance

On the crossing to Moerdijk harbour v.v. seagoing vessels must have a keelclearance of at least 10%. Exemption is made on the crossing from Willemsdorp to Moerdijk harbour v.v. where seagoing vessels may have a keelclearance of at least 5%. In this case vessels are obliged to make use of tugboat assistance.

Right of way

Seagoing vessels with a length > 135m or a draught > 55dm which are showing day (black cylinder) or night signs (three red lights vertically) in accordance with rule 10.03 of the 'Binnenvaartpolitiereglement' (1984) have right of way.

Tidal restrictions

Tidal restrictions are in force for inward- and outward bound seagoing vessels with a length = 150m and/or a width = 25m and/or draught > 88dm. In general, the Botlek Bridge will be passed at slack water. Therefore the pilot will be board incoming vessels 1h30m after HW Hoek van Holland.

Detailed information on tidal restrictions can be obtained from the Harbour Coordination Centre in Rotterdam. Special permission must be obtained from the Netherlands Ministry of Transport and Public Works when length between perpendiculars exceeds 175m or beam is more than 25m.

Required under keel clearance (UKC)**Vessels with a draught up to 17.40 m**

- rivers: 10% of the vessels draught
- Beerkanaal and Calandkanaal: 1.00m
- berth: always afloat
- For certain container vessels destined for Waalhaven and Eemhaven: 1.00 m is sufficient if various conditions are met

Vessels with a draught between 17.40m and 22.55m

Arrival:

The Plan of Entry will have been calculated in accordance with probabilistic method. In the most unfavourable circumstances (including squat, movement of the vessel and other uncertainties), the vessel has a minimum UKC of 1.00m everywhere. Under normal circumstances, the vessel should have considerable more.

Departure:

Because the vessel is sailing against the incoming tide, the maximum draught on departure is 20.75m. In port basins and Calankanaal, the vessel must have a UKC of 1.00m. The Plan of Departure will have calculated using a deterministic method, and will guarantee a minimum UKC of 10% of the vessel's draught in the Maas Entrance area, and 15% in the Maasgeul and Eurogeul. Berth: Recommended 0.50m UKC.

Visibility

Whenever visibility decreases to less than 700m on any part of the intended route, pilotage might be compulsory. When in a part of the Rotterdam area visibility decreases to less than 500m, Traffic Control will enforce the following rules:

- Visibility between 200m and 500m: if the vessel requires tugs, Traffic Control will consult the pilot association and tugboat companies as to whether the vessel can sail;
- Visibility less than 200m; Traffic Control will always contact the pilot as to whether the vessel can sail;
- Starboard to starboard passing arrangements are forbidden.

Traffic guidance is deemed necessary by Rotterdam VTS when visibility is less than 1000m on the river or less than 2000m in the approach area and Europoort.

Dredgers

Dredgers operate in all waterways. They show the signals in accordance with the COLREGS. Dredgers will keep clear of vessels showing the signs for vessels constrained by their draught. Other vessels should give the dredger a wide berth when passing and should make this intention clear in order not to interrupt the dredging operations.

Draught signs

Vessels with a draught of 9m or more, whilst in the Maas Entrance area, Nieuwe Waterweg, Nieuwe Maas, Beerkanaal and Calandkanaal, including the port basins and fairways, are considered to be restricted in their manoeuvrability and must show the signal required by rule 28 of the COLREGS.

Vessels with a draught of 7m or more or with a length of 135m or more, whilst in Oude Maas, must also show the above mentioned signal.

Draught restricted vessels have the right of way in accordance with rule 10.03 of the Inland Navigation Police Regulations (BPR).

Precautionary areas

See Chapter 2 – Navigation | Traffic Safety, section 2.3.3 'Routeing measures off the Netherlands coast'.

Maasgeul - crossing/fishing

Through-going traffic should avoid the precautionary area and cross the traffic flow to and from the Maas Entrance perpendicularly vessels requiring to cross the Maasgeul channel are recommended to do so in an area between MN1 buoy and MV buoy. Before crossing, these vessels should report to the VTS sector Maas Entrance, VHF channel 03 and report name, position and course, and maintain a listening watch while crossing. Crossing vessels should be fitted with a radar reflector. Sailing vessels are advised whenever possible to have their engines on standby or actually running to ensure a fast crossing, and if sailing together they should cross in a group due account must be taken that large vessels constrained by their draught to the deep water channel and showing the appropriate signals in accordance with the International Regulations for Preventing Collisions at Sea (1972) (day-time 1 black cylinder, nighttime 3 red lights) are unable to give way to other vessels.

Fishing:

- Vessels engaged in fishing may not stay in the Maasgeul area 'Anchoring prohibited' as indicated on large scale nautical charts.

9.5.3**Anchorage****Anchorage 1**

Anchorage 1 is a long term anchorage for vessels with a draught between 17.40m and 22.55m which have to wait for more than 24h before they may enter Eurogeul. If the wind increases to 9 Bft, it is recommended to depart from the anchorage ahead of time and keep the vessel going, specially during northwesterly winds. VHF Ch 01 ('Maas approach') has a poor reception in this area, use telephone instead (+31) 10 252 2803).

Anchorage 2

Anchorage 2 is a short term anchorage for vessels with a draught between 17.40m and 22.55m which have to wait less than 24h before they may enter Eurogeul. If the wind increases to 9 Bft, it is recommended to depart from the anchorage ahead of time and keep the vessel going, specially during northwesterly winds. VHF Ch 01 ('Maas approach') has a poor reception in this area, use telephone instead (+31) 10 252 2803).

Anchorage 3 North

Anchorage 3 North is an anchorage for vessels with a draught between 14.30m and 17.39m. Worst swell conditions occur during NW gales (8 Bft). Recommended UKC in these conditions for tankers (Max. 305m x 46m x 17.4m [LxWxD]) = 3.2m. If the wind increases to 9 Bft, it is recommended to depart from the anchorage ahead of time and keep the vessel going, specially during northwesterly winds. Listening watch on VHF Ch 01 'Maas Approach'.

Anchorage 3 East

Anchorage 3 East is an anchorage for LNG-carriers only. Worst swell conditions occur during NW gales (8 Bft). Recommended UKC in these conditions for tankers (Max. 305m x 46m x 17.4m [LxWxD]) = 3.2m. If the wind increases to 9 Bft, it is recommended to depart from the anchorage ahead of time and keep the vessel going, specially during northwesterly winds. Listening watch on VHF Ch 01 'Maas Approach'.

Anchorage 3 South

Anchorage 3 South is an anchorage for vessels with a draught between 14.30m and 17.39m. Worst swell conditions occur during NW gales (8 Bft). Recommended UKC in these conditions for tankers (Max. 305m x 46m x 17.4m [LxWxD]) = 3.2m. If the wind increases to 9 Bft, it is recommended to depart from the anchorage ahead of time and keep the vessel going, specially during northwesterly winds. Anchorage 3 North is preferred over Anchorage 3 South (due to SW winds a vessel can drift into Eurogeul). Listening watch on VHF Ch 01 'Maas Approach'.

Anchorage 4 East

Anchorage 4 East is an anchorage for vessels coming from the west and south. There are separated anchor berths for vessels up to 180m and up to 300m.

Worst swell conditions occur during northwesterly gales (8 Bft). Wind force 9 Bft: it is recommended to depart from the anchorage ahead of time and keep the vessel going, specially during northwesterly winds.

Recommended under keel clearance (UKC) in these conditions are:

- Tankers maximum 250x43x14.5 (LxWxD): UKC = 2.8m
- Bulk carriers maximum 190x23x10 (LxWxD): UKC = 4.0m
- Container vessels maximum 180x25x10 (LxWxD): UKC = 5.9m
- Container vessels maximum 350x43x14.5 (LxWxD): UKC = 3.6m

Listening watch on VHF Ch.01 'Maas Approach'. When weighing the anchor contact 'Pilot Maas' on VHF Ch 02

Anchorage 4 West

Anchorage 4 West is an anchorage for vessels coming from the west and south. There are separated anchor berths for vessels smaller than 180m (Q - Z5) and for vessels larger than 180m (A - P).

Worst swell conditions occur during northwesterly gales (8 Bft). If the wind increases to 9 Bft, it is recommended to depart from the anchorage ahead of time and keep the vessel going, specially during northwesterly winds. Recommended under keel clearance (UKC) in these conditions are:

- Tankers maximum 250x43x14,5 (LxWxD): UKC= 2.8m
- Bulk carriers maximum 190x23x10 (LxWxD): UKC = 4.0m
- Container vessels maximum 180x25x10 (LxWxD): UKC = 5.9m
- Container vessels maximum 350x43x14.5 (LxWxD): UKC = 3.6m

Listening watch on VHF Ch 01 'Maas Approach'.

Anchorage 5

Anchorage 5 is an anchorage for vessels coming from the north and northwest. There are separated anchor berths for vessels up to 180m and up to 350m.

Worst swell conditions occur during northwesterly gales (8 Bft). If the wind increases to 9 Bft, it is recommended to depart from the anchorage ahead of time and keep the vessel going, specially during northwesterly winds.

Recommended under keel clearance (UKC) in these conditions are:

- Tankers maximum 250x43x14.5 (LxWxD): UKC= 3.6m
- Bulk carriers maximum 190x23x10 (LxWxD): UKC = 4.7m
- Container vessels maximum 180x25x10 (LxWxD): UKC = 5.9m
- Container vessels maximum 350x43x14.5 (LxWxD): UKC = 4.4m

Listening watch on VHF Ch 01 'Maas Approach'.

Emergency Anchorage

This anchorage has a diameter of 1600m and can be used by vessels with a draught of 17.4m or more in case of an emergency.

9.5.4 Zeegat van Hoek van Holland



1 – Maasmond

Maasmond is the area which runs from the heads of the outer moles to Splitsingsdam and is entered with the help of Leading Lts (112°). Splitsingsdam divides the channel into a N branch leading to Nieuwe Waterweg and a S branch leading to Calandkanaal. Maasmond is marked by Lt buoys and Leading Lts to enter Nieuwe Waterweg (107°) and Calandkanaal (116°).

2 – Nieuwe Waterweg

Nieuwe Waterweg runs from Hoek van Holland to its junction with Oude Maas (approximate 9 nm) from where it becomes Nieuwe Maas.

The channel is marked by Lt beacons and in some places with Leading Lts and gives access to the harbour areas of Hoek van Holland, Botlek and Maassluis.

3 – Calandkanaal

Calandkanaal gives access to the harbour area of Europoort and via Beerkanaal to the harbour area of Maasvlakte. The channel is entered with the help of Leading Lts (116°) and runs in a generally SE direction to Rozenburgsesluis which gives access to Hartelkanaal. The channel is well marked by Lt beacons.

4 – Beerkanaal

Beerkanaal gives access to the harbour area of Maasvlakte and is entered with the help of Leading Lts (192,5°).

On the S end Beerkanaal runs to the entrance of Hartelkanaal which gives access (inland craft and small seagoing vessels) to Rozenburgsesluis (Calandkanaal) and joins Oude Maas on its E end.

5 – Hartelkanaal

Hartelkanaal runs from Maasvlakte (S end Beerkanaal) to Oude Maas and gives access to the harbour areas of Maasvlakte and Europoort (via Rozenburgsesluis).

Hartelkanaal is used by inland craft and small seagoing vessels, is well marked by Lt beacons and is crossed by three opening bridges.

6 – Nieuwe Maas

Nieuwe Maas runs from the junction with Oude Maas to Krimpen a/d Lek. Here the fairway branches off into Noord and Lek. Access is given to the harbour areas of Vlaardingen, Schiedam, Pernis and Rotterdam.

The fairway is well marked by Lt buoys and Lt beacons.

Above Rotterdam bridges spanning Nieuwe Maas. At the height of Noordereiland are three bridges which have there opening/lifting parts in the channel (S of Noordereiland) which leads through Koningshaven. Approximate 2 nm E of Koningshaven the opening bridge Van Brienenoordbrug is spanning the fairway.

7 – Oude Maas

Oude Maas runs from the junction with Nieuwe Waterweg and Nieuwe Maas to the junction with Noord and Beneden Merwede.

The fairway gives access to the harbour areas of Zwijndrecht, Dordrecht and is well marked by Lt buoys and a great number of Leading Lts. Oude Maas also gives access to Hartelkanaal. Close N and S to the entrance to Hartelkanaal two lifting bridges are spanning Oude Maas. W of the harbour area of Dordrecht Dortsche Kil joins Oude Maas. Dortsche Kil gives access to Hollandsch diep. Close N of the harbour area of Dordrecht a lifting bridge is spanning Oude Maas.

8 – Noord

Noord runs from the junction with Nieuwe Maas and Lek to the junction with Oude Maas and Beneden Merwede. The fairway is well marked by Lt beacons and gives access to the harbour area of Alblasserdam.

9 – Beneden Merwede

Beneden Merwede runs from the junction with Oude Maas and Dordtsche Kil in an E-ly direction to the harbour areas of Papendrecht and Sliedrecht.

The fairway is wel marked by Lt beacons. An opening bridge spans the river close E of the entrance.

10 – Dordtsche Kil

Dordtsche Kil runs between Oude Maas and Hollandsch Diep and forms a part of the fairways which connects the harbour areas of Antwerpen and Rotterdam. The channel is wel marked by Lt beacons and several Leading Lts.

11 – Hollandsch Diep

Hollandsch Diep is bounded on the W side by Haringvlietbrug; the E side runs beyond Moerdijkbruggen.

Through Volkeraksluizen access is given to Schelde-Rijn Verbinding (connection) and the inland waters of Zeeland.

Haringvlietbrug gives access via Haringvliet to Goereese Sluis (see Chapter 9, Zeegat van Goeree). Close W of Moerdijkbruggen Dordtsche Kil gives access to waterways leading to all harbour areas from Dordrecht to Maasvlakte.

Also close W of Moerdijkbruggen the fairway give access to the entrance of Zuid Hollandsch Diep which leads on the S side of Sassenplaat to the harbour area of Moerdijk. Hollandsch Diep is well marked by buoys and Lt buoys.

12 – Zuid Hollandsch Diep

Zuid Hollandsch Diep gives access to the harbour area of Moerdijk and is entered on the E side of Sassenplaat. Leaving the harbour area of Moerdijk in a W-ly direction is prohibited.

Therefore Zuid Hollandsch Diep is closed of by yellow can buoys.

The fairway is well marked by buoys, Lt buoys and Lt beacons.

13 – Volkerak

Volkerak is the general term to describe the fairway, which runs from Volkeraksluizen to Krammersluizen. The E part is called Noord Volkerak and is connected with Volkeraksluizen S entrance, the W part is called Zuid Vlije which leads to the N entrance of Krammersluizen (access to Oosterschelde). Zuid Vlije gives also access to Schelde-Rijn Verbinding which leads to the harbour area of Antwerpen. Volkerak is well marked with Lt buoys and Leading Lts.

14 – Schelde-Rijn Verbinding

Schelde-Rijn Verbinding joins the harbours of Antwerpen with the harbours of Rotterdam. The canal is mainly used by inland and pleasure craft, and occasionally by small seagoing vessels (maximum dimensions: length 150m; beam 23m; draught 40dm). The non-movable bridges across the Schelde-Rhine connection have a maximum clearance of 9.1m on the track Antwerp - Kreekraksluizen and on the track Kreekraksluizen - Volkerak a maximum clearance of 9.8m.

Through Volkerak and Volkeraksluizen access is given to Hollandsch Diep, Dordtsche Kil and Oude Maas. Through Volkerak and Krammersluizen, access is given to Oosterschelde.

9.5.5**Notes**

See section **9.5.2 'Notes'**.

9.5.6**Locks****Calandkanaal**

Rozenburgse sluis	
Maximum vessel dimensions	Up to the lock master
Remarks	■ Operational: 24h ■ Contact: VHF Ch 22 ■ On both sides bascule bridges are overspanning the entrances to the lock

Hollandsch Diep

Volkeraksluizen (3 locks)	
Maximum vessel dimensions	Up to the lock master
Remarks	■ Operational: 24h ■ Contact: VHF Ch 64 (administrative); VHF Ch 07 (sailing plan - coming from the north + ship to ship); VHF Ch 78 (sailing plan - coming from the south + ship to ship) ■ The locks are crossed by a road bridge. The section over the east lock is movable, but not operational in wind force 8 or more.

9.5.7

Bridges

For Haringvlietbrug see Chapter 8 – Zeegat van Goeree, [section 8.5.6 'Bridges](#).

Hartelkanaal

Suurhoffbrug (fixed bridge)	
Maximum vessel dimensions	Up to the bridge keeper
Remarks	No information
Dintelhavenbrug (two fixed bridges)	
Maximum vessel dimensions	Up to the bridge keeper
Remarks	No information
Harmsenbrug (bascul bridge and fixed part)	
Maximum vessel dimensions	Up to the bridge keeper
Remarks	■ Operational: 24h ■ Contact: ETA-report: -4h via Telephone +31(0)168 477 500; -2h via VHF Ch 22.
Hartelbrug (bascul bridge and two fixed part)	
Maximum vessel dimensions	Up to the bridge keeper
	■ Operational: 24h (except on Mon - Fri from 0645 - 0830 and from 1600 - 18.30 ■ Contact: ETA-2h on VHF Ch 22 (lock master Rozenburgsluis).

Oude Maas

Botlekbrug (lifting bridge and fixed part)	
Maximum vessel dimensions	Up to the bridge keeper
Remarks	■ Operational: 24h ■ Contact: VHF 18 ■ ETA-report: Upstream Oude Maas at Distance mark 1015 (Nieuwe Waterweg) or Distance mark 1011 (Nieuwe Waterweg) and when entering Oude Maas. - Downstream Oude Maas at O 7 Lt buoy and at Distance mark 1001.8.
Spijkenisserbrug (two lifting bridges and two fixed parts)	
Maximum vessel dimensions	Up to the bridge keeper
Remarks	■ Operational: 24h ■ Contact: VHF 18 ■ ETA-report: Upstream Oude Maas at Distance mark 1015 (Nieuwe Waterweg) or Distance mark 1011 (Nieuwe Waterweg) and at Distance mark 1005 Oude Maas. - Downstream Oude Maas at O 7 Lt buoy and O 8 Lt buoy.
Stadsbrug Dordrecht-Zwijndrecht (double bascul bridge and three fixed parts)	
Maximum vessel dimensions	Up to the bridge keeper
Remarks	■ Operational: 0000-0500; 0557; 0657; 0757 (only sat and sun); 0857; 0957; 1057; 1157; 1257; 1357; 1457; 1557; 1657; 1857; 1957; 2057; 2157; 2257; ■ Contact: ETA-1h on VHF Ch 71 or telephone +31(0)88 7970800 ■ Strong currents can occur through the bridges spans, especially on the outgoing stream and with high water level in the upper rivers. ■ The bridge is not operational when the windforce is more then 6 Bft.

Nieuwe Maas**Erasmusbrug (basculable bridge and fixed part)**

Maximum vessel dimensions	Up to the bridge keeper
Remarks	- Operational: 24h - Contact: ETA-1h on VHF Ch 20 - The opening part of the Erasmusbrug gives access to Koningshaven. This narrow fairway is used by through going traffic which can not navigate the part of Nieuwe Maas northwest of Noordereiland because of their air draught.

Willemsbrug (fixed bridge)

Maximum vessel dimensions	-
Remarks	Vessels which can not navigate through this part of Nieuwe Maas because of their air draught can use the narrow fairway Koningshaven south of Noordereiland.

Koninginnebrug (double basculable bridge) and opening bridge (lifting bridge)

Maximum vessel dimensions	Up to the bridge keeper
Remarks	- Operational: Mon - Fri: 0000-0730; 0900-1630; 1800-2359. Sat - Sun: 24 h - Contact: ETA-1h on VHF Ch 20 - The opening bridge is a lifting bridge and is always open.

Van Brienenoordbrug (basculable bridge and fixed part)

Maximum vessel dimensions	Up to the bridge keeper
Remarks	- Operational: Daily on request: 1100; 1400; 1930; 2100-0600 - Request for opening: 12h in advance via e-mail: vc-zwn-brienenoordbrug@rws.nl - Special transports 8 weeks in advance via e-mail: bijzondertransport@rws.nl - Contact: VHF Ch 20 - Not operational from winds >7 Bft (measured at Hoek van Holland)

Noord**Alblasserdambrug (basculable bridge and fixed part)**

Maximum vessel dimensions	Up to the bridge keeper
Remarks	- Operational: Mon - Fri: 0000-0715; 0915; 1000; 1100; 1200; 1400; 1600; 1815; 1900-2400. Sat - Sun: 0000-0715; 0915; 1000; 1100; 1200 1400; 1600; 1800; 1900-2400; November 1st to march 31 Mon - Fri: 0000-0715; 0915-1600; 1815-2400. Sat - Sun: 24h; - Contact: VHF Ch 22 - Not operational from winds >7 Bft (measured at Hoek van Holland).

Beneden Merwede**Merwedeburg (basculable bridge and fixed part)**

Maximum vessel dimensions	Up to the bridge keeper
Remarks	- Operational: Mon - Fri: 0000-0600; 0630; 0850; 0935; 1035; 1135; 1235; 1335; 1435; 1535; 1835; 1935-2400. Sat - Sun: 0000-0735; 0850; 0935; 1035; 1135; 1235; 1335; 1435; 1535; 1635; 1835; 1935-2400 - Contact: VHF Ch 22 - Not operational from winds >7 Bft. (measured at Hoek van Holland)

9.6

Tidal information

Online depth, tide, and weather information can be found [on the website of the Port of Rotterdam](#).

For general information see [Chapter 4 – ‘Oceanography’](#).

9.6.1

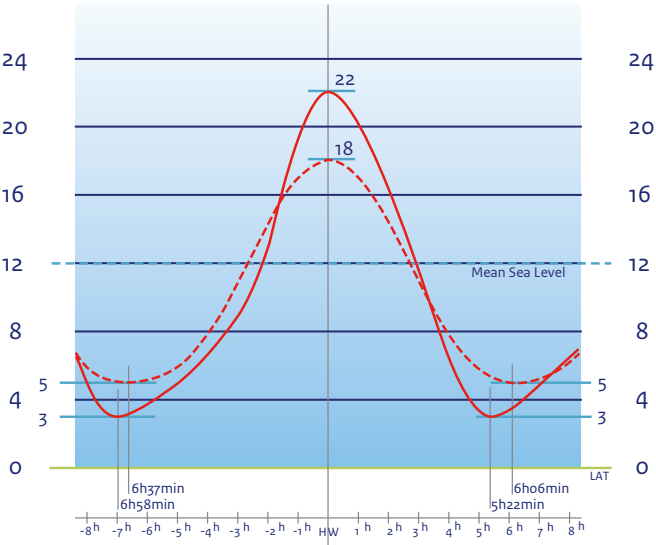
Tidal curves



Euro platform

TIDAL HEIGHT in dm
referred to LAT
51°59,9'N-03°16,6'E

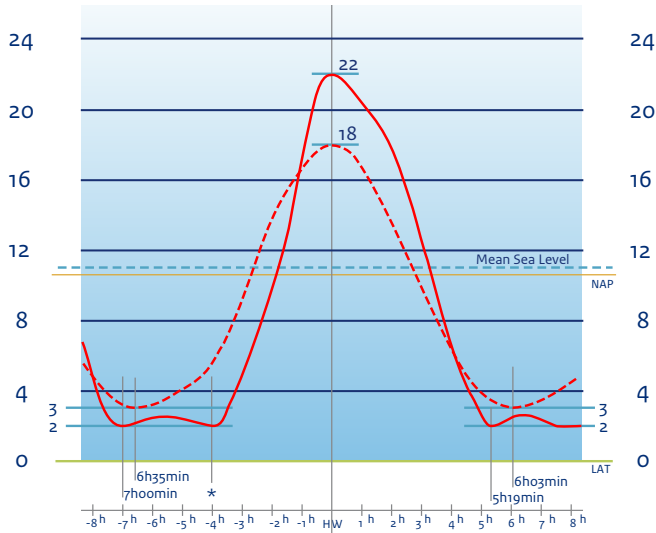
— Springs
- - - Neaps
LAT lies 12 dm below Mean Sea Level



Hoek van Holland

TIDAL HEIGHT in dm
referred to LAT
51°58,7'N-03°07,3'E

— Springs
- - - Neaps
LAT lies 11 dm below Mean Sea Level
NAP lies 0.9 dm below Mean Sea Level
*= predicted LW at the end of LW-period

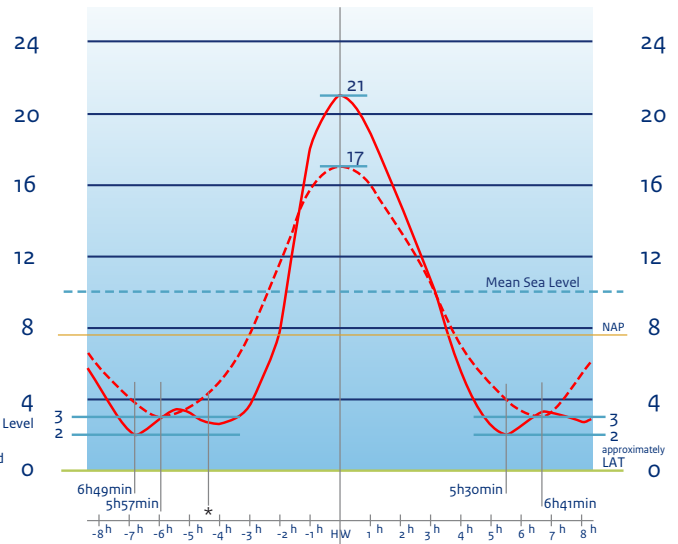


Rotterdam

TIDAL HEIGHT in dm
approximately LAT
51°55'N-04°30'E

— Springs
- - - Neaps

Approx. LAT lies 10 dm below Mean Sea Level
NAP lies 2.8 dm below Mean Sea Level
*= predicted LW at the end of LW-period

**9.6.2****Tidal streams**

The predictions in the tables refers to HW Hoek van Holland

Hoek van Holland		52°00.4'N	04°00.6'E
Time	Direction	Spring Rate	Neap Rate
-06	304°	1.4 kn	1.5 kn
-05	305°	1.6 kn	1.3 kn
-04	305°	1.2 kn	1.0 kn
-03	319°	1.0 kn	0.7 kn
-02	336°	0.5 kn	0.6 kn
-01	054°	1.8 kn	1.7 kn
HW	073°	1.9 kn	1.8 kn
+01	062°	1.6 kn	2.1 kn
+02	059°	1.6 kn	1.4 kn
+03	068°	1.1 kn	0.8 kn
+04	310°	0.9 kn	0.5 kn
+05	295°	1.2 kn	1.1 kn
+06	292°	1.2 kn	1.4 kn

Beerkanaal		51°57.7'N	04°05.1'E
Time	Direction	Spring Rate	Neap Rate
-06	347°	0.5 kn	0.4 kn
-05	006°	0.5 kn	0.4 kn
-04	000°	0.6 kn	0.5 kn
-03	006°	0.5 kn	0.4 kn
-02	339°	0.4 kn	0.3 kn
-01	276°	0.4 kn	0.2 kn
HW	352°	0.1 kn	0.2 kn
+01	029°	0.4 kn	0.4 kn
+02	033°	0.2 kn	0.3 kn
+03	022°	0.5 kn	0.5 kn
+04	031°	0.6 kn	0.6 kn
+05	014°	0.5 kn	0.7 kn
+06	002°	0.4 kn	0.5 kn

Calandkanaal		51°57.7'N	04°07.9'E
Time	Direction	Spring Rate	Neap Rate
-06	125°	0.2 kn	0.3 kn
-05	145°	0.3 kn	0.2 kn
-04	140°	0.4 kn	0.3 kn
-03	129°	0.5 kn	0.4 kn
-02	132°	0.5 kn	0.4 kn
-01	126°	0.8 kn	0.2 kn
HW	317°	0.2 kn	0.0 kn
+01	305°	0.3 kn	0.1 kn
+02	131°	0.2 kn	0.1 kn
+03	342°	0.1 kn	0.2 kn
+04	298°	0.2 kn	0.1 kn
+05	294°	0.1 kn	0.1 kn
+06	145°	0.1 kn	0.1 kn

Oude Maas (N entrance)		51°53.0'N	04°19.5'E
Time	Direction	Spring Rate	Neap Rate
-06	346°	2.5 kn	2.5 kn
-05	349°	2.1 kn	1.9 kn
-04	349°	1.9 kn	1.8 kn
-03	349°	1.8 kn	1.5 kn
-02	349°	1.7 kn	0.8 kn
-01	350°	0.9 kn	0.2 kn
HW	168°	0.6 kn	0.4 kn
+01	184°	1.5 kn	1.2 kn
+02	157°	2.0 kn	1.1 kn
+03	173°	1.6 kn	0.8 kn
+04	172°	0.8 kn	0.2 kn
+05	311°	0.1 kn	1.1 kn
+06	349°	1.6 kn	2.3 kn

Noord (N entrance)		51°52.6'N	04°37.7'E
Time	Direction	Spring Rate	Neap Rate
-06	336°	2.4 kn	2.2 kn
-05	336°	2.6 kn	2.3 kn
-04	336°	2.2 kn	2.2 kn
-03	336°	2.2 kn	2.0 kn
-02	336°	2.2 kn	1.7 kn
-01	336°	2.0 kn	0.9 kn
HW	337°	0.8 kn	0.6 kn
+01	155°	1.8 kn	1.9 kn
+02	155°	3.0 kn	1.9 kn
+03	155°	2.1 kn	1.3 kn
+04	155°	1.3 kn	0.3 kn
+05	346°	0.3 kn	0.9 kn
+06	337°	1.2 kn	1.9 kn

Noord (S entrance)		51°49.6'N	04°40.1'E
Time	Direction	Spring Rate	Neap Rate
-06	354°	1.9 kn	1.8 kn
-05	354°	2.2 kn	1.9 kn
-04	355°	1.9 kn	1.9 kn
-03	354°	1.8 kn	1.7 kn
-02	354°	1.8 kn	1.6 kn
-01	354°	1.8 kn	1.1 kn
HW	355°	1.4 kn	0.3 kn
+01	173°	1.2 kn	1.7 kn
+02	175°	2.8 kn	1.8 kn
+03	175°	2.1 kn	1.3 kn
+04	175°	1.3 kn	0.4 kn
+05	176°	0.5 kn	0.8 kn
+06	358°	1.2 kn	1.6 kn

Dordtsche Kil (N entrance)		51°47.5'N	04°37.4'E
Time	Direction	Spring Rate	Neap Rate
-06	345°	2.6 kn	2.4 kn
-05	345°	3.0 kn	2.5 kn
-04	345°	2.7 kn	2.4 kn
-03	345°	2.5 kn	2.2 kn
-02	345°	2.4 kn	1.9 kn
-01	345°	2.2 kn	1.1 kn
HW	345°	1.3 kn	0.5 kn
+01	164°	2.5 kn	2.4 kn
+02	164°	3.6 kn	2.5 kn
+03	165°	2.9 kn	2.1 kn
+04	165°	2.3 kn	1.1 kn
+05	163°	1.0 kn	0.5 kn
+06	346°	1.1 kn	1.8 kn

Dordtsche Kil (S entrance)		51°44.2'N	04°37.8'E
Time	Direction	Spring Rate	Neap Rate
-06	017°	1.9 kn	1.8 kn
-05	017°	2.2 kn	1.9 kn
-04	017°	2.0 kn	1.8 kn
-03	017°	1.8 kn	1.7 kn
-02	017°	1.7 kn	1.5 kn
-01	018°	1.7 kn	1.0 kn
HW	018°	1.2 kn	0.7 kn
+01	199°	2.0 kn	2.0 kn
+02	200°	3.2 kn	2.2 kn
+03	200°	2.6 kn	1.9 kn
+04	201°	2.1 kn	0.9 kn
+05	203°	0.9 kn	0.4 kn
+06	018°	0.9 kn	1.4 kn

Cautions

- It is strongly emphasised that stream atlases show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand waves, etc.) deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels. This depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks, the tidal stream flows through the channels; the direction of the stream follows the bearings of the banks. After sufficient flooding the tidal stream will cross the banks.
- During extremely high Rhine-discharges of more than 6000 m³/s at Lobith, the Haringvliet sluices will be fully opened. In that case, it is impossible to keep the discharge through the Nieuwe Waterweg at a constant level. During sluicing, strong currents may occur in the vicinity of the Haringvliet sluices.
- Maasgeul. Because of the construction of Maasvlakte 2, current patterns in and near the Maasgeul have changed. Changes are most noticeable during flood tide. The flood current follows the new coastal line in a northerly direction and diverts, in the vicinity of buoy MV N, in an easterly direction. In the Maasgeul the cross current, during flood tide, decreases near buoy MV N. The rate of decrease is more gradual than in the old situation. During flood tide, the depth averaged stream rates are comparable to the old situation until one hour after high water at Hoek van Holland. After that time, stream rates and directions differ from the old situation, north of Maasvlakte 2. The turn of the flood tide near the harbour entrance starts slightly earlier than in the old situation.

A remarkable change is a counter stream, which occurs after high water, between the MV-N buoy and the port entrance and just North of the new coastline of Maasvlakte 2. Seaward of the port entrance, the east-going flood stream partly bears off in a southern direction and continues in a western direction, directly under the new coastline of Maasvlakte 2. In the vicinity of MV-N, the counter stream merges with the north-going flood stream. The strength of the counter stream varies with tide, wind and river discharge. Effects of the counter current may be encountered until the Maasgeul. The counter stream is most dominant during spring tide.

During ebb tide, the tidal stream bears off in a western direction in the vicinity of the port entrance and follows the new coastal line. No further changes of any significance have been reported during ebb tide.

9.7 Rules | Regulations

See Chapter 2 - Navigation | Traffic safety, section 2.13 'Shipping regulations'.

9.8 Port information

9.8.1 Maasvlakte

Facilities	Hartelhaven Mississippihaven Amazonehaven Europahaven Yangtzekanaal 8e Petroleumhaven Nijlhaven Yukonhaven Prinses Margriethaven Prinses Amaliahaven Prinses Arianehaven Prinses Alexiahaven
Cargo	Containers, Ore, Oil, Gas
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	All harbours - Safe speed in accordance with local circumstances; - Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.2 Europoort

Facilities	Seinehaven Brittanniehaven 7e Petroleumhaven Donauhaven 5e Petroleumhaven 4e Petroleumhaven Beneluxhaven Elbehaven Dintelhaven 6e Petroleumhaven Tenneseehaven
Cargo	General cargo, Chemical products, Oil, Ro-Ro, Ore, Passengers, Agriculture products, Dry bulk
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	All harbours - Safe speed in accordance with local circumstances; - Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.3 Hoek van Holland



Facilities	
Cargo	Ro-Ro, Passengers
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Berghaven: Normally in use by government vessels, tugs, pilot vessels, harbour authorities.

9.8.4 Maassluis



Facilities	
Cargo	No discharge facilities for seagoing vessels
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	■ Safe speed in accordance with local circumstances; ■ Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.5 Botlek



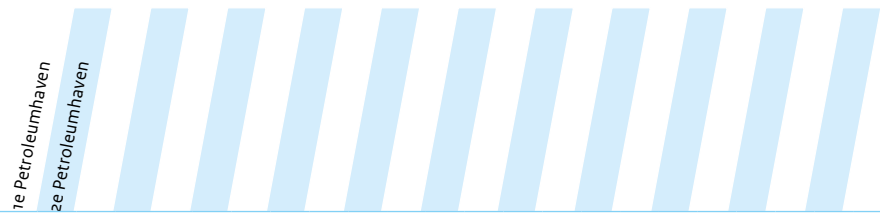
Facilities	
Cargo	Ore, Chemical products, Agriculture products, Tankcleaning, Oil, Scrap, Coal, Cokes, Minerals in bulk.
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Drydocks
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	■ Safe speed in accordance with local circumstances; ■ Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.6 Vlaardingen



Facilities	Vulcaanhaven Koningin Wilhelminahaven Hydro Agri
Cargo	Ore, Chemical products, Agriculture products, General cargo, Containers
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Slipway
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	- Safe speed in accordance with local circumstances; - Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.7 Pernis



Facilities	de Petroleumhaven de Petroleumhaven
Cargo	Ore, Chemical products
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	- Safe speed in accordance with local circumstances; - Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.8 Schiedam



Facilities	Wiltonhaven Wilhelminahaven
Cargo	General cargo
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Drydock, Floating dock
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	- Safe speed in accordance with local circumstances; - Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.9 Rotterdam

Facilities	Kortenoordsehaven Barendrechtsehaven Robbenoordsehaven St. Janshaven Pr. Willem Alexander Prinses Beatrixhaven Pr. Johan Friso 1e Eemhaven Werkhaven Heijsehaven Dokhaven Sleepboothaven Waalhaven Maashaven Koningshaven Rijnhaven Parkhaven IJsselhaven Lekhaven Keilehaven Merwehaven
Cargo	Containers, General cargo, Dry/Wet bulk, Ro-Ro, Transhipment area, Lash handling, Waiting area, Agriculture products, Fruit, Scrap
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	- Safe speed in accordance with local circumstances; - Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.10 Alblasserdam

Facilities	Alblasserdamhaven
Cargo	No cargo handling facilities
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Slipway
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	- Safe speed in accordance with local circumstances; - Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.11 Papendrecht

Facilities	Kooihaven Johanahaven Kerelhaven
Cargo	No cargo handling facilities
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Repairing and ship building
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	- Safe speed in accordance with local circumstances; - Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.12 Zwijndrecht

	Uilenhaven Schokhaven Develhaven Drechthaven Swinhaven
Facilities	
Cargo	No cargo handling facilities
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	■ Safe speed in accordance with local circumstances; ■ Visibility: less than 500m: sailing instructions by Traffic Control.

9.8.13 Dordrecht

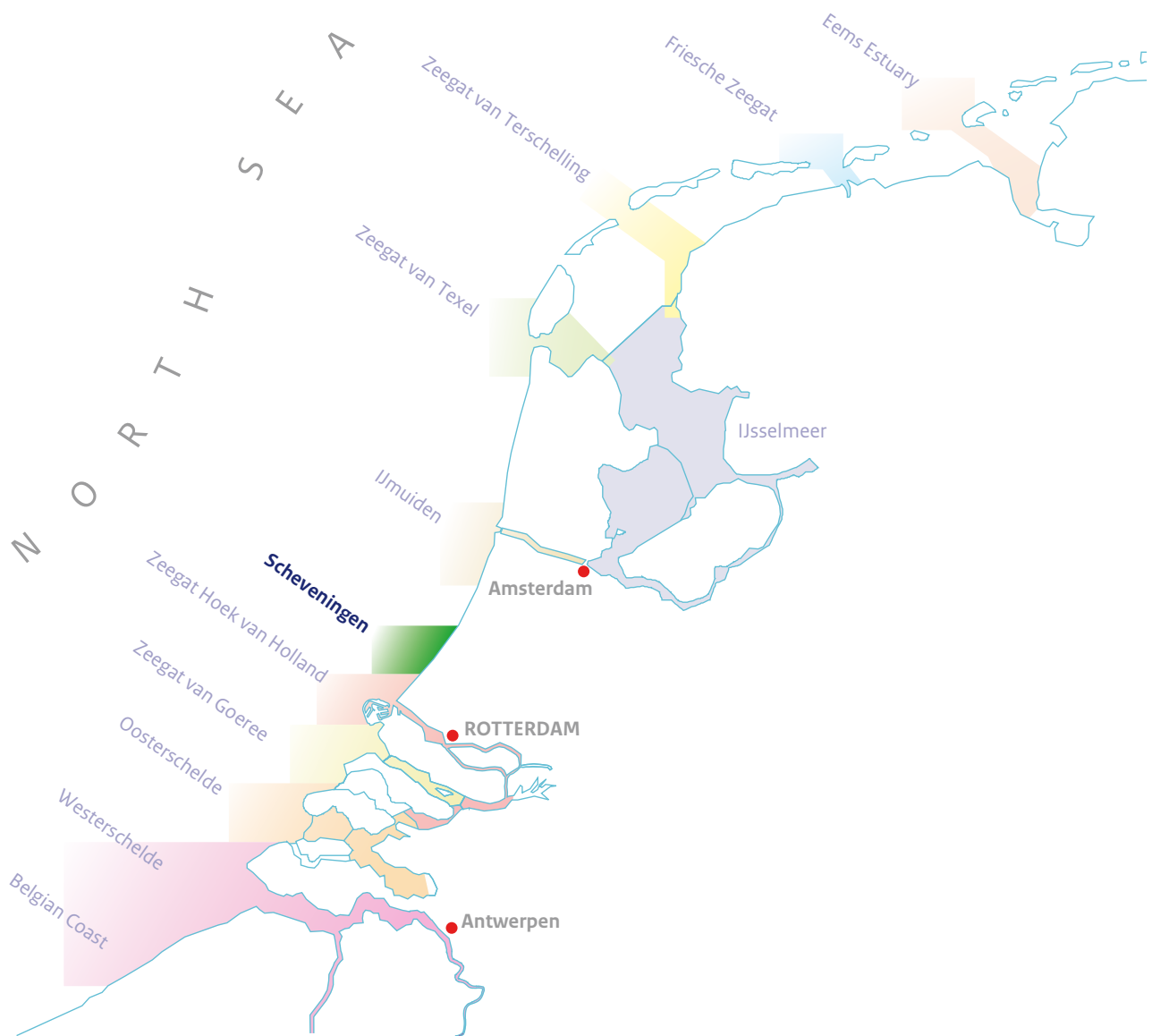
	Wilhelminahaven Julianahaven I Julianahaven II Julianahaven III Mallegat Z Mallegat N
Facilities	
Cargo	Bulk cargoes (coal, ore, cement etc.), Oil products, Waste, Sand, Shingle, General cargo, Chemical products, Transshipment area
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	■ Safe speed in accordance with local circumstances.

9.8.14 Moerdijk

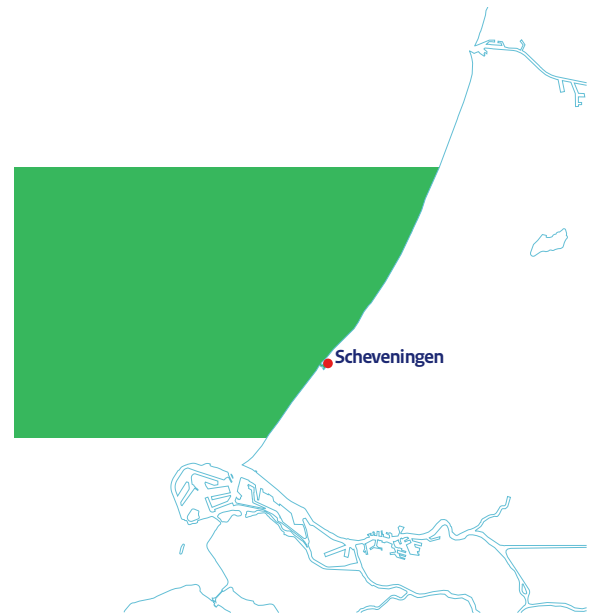
	Westelijke Insteekhaven Centrale Insteekhaven Insteekhaven Roode Vaart
Facilities	
Cargo	General cargo, Oil products, Forest products, Agriculture products, Dry bulk, Containers, Ore, Ro-Ro, Waste
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	■ Safe speed in accordance with local circumstances.

10

Scheveningen



10.1 Destination



10.2 Nautical charts

Detailed information about nautical charts and publications is given in HP7 – ‘Catalogue of Nautical Charts and Nautical Publications’. This publication can be downloaded from: www.defensie.nl/hydro

10.3 Communication

10.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods

Who	All vessels carrying noxious and dangerous goods on the way to or leaving from the harbour, an inland anchorage or load/discharge terminal.
To	Traffic Center Scheveningen via agent (www.portbase.com).
What	A - B - G - I - L - O - P - U - W
When	■ If possible at least 24h before arrival at Scheveningen Harbour, anchorage or load/discharge terminal but at the latest before entering Netherlands territorial waters; ■ Before leaving the harbour, anchorage or load/discharge terminal.
Note	See also section 10.3.3 ‘Explanation of codes’.

International Pollution Prevention Certificate

Who	All vessels.
To	Traffic Center Scheveningen via agent (www.portbase.com).
What	X7
When	ETA - 24h at Lt buoy ‘Sch’.
Note	See also section 10.3.3 ‘Explanation of codes’.

Notification of waste

Who	All oil tankers with a gross tonnage of 150 tons or more.
To	Traffic Center Scheveningen via agent (www.portbase.com).
What	Name - call sign - IMO - flag - ETA - ETD - last and next port of call - last port and date where waste has been landed - do you land all/some/no garbage at the harbour reception facilities - Waste Report form.
When	ETA - 24h at Lt buoy 'Sch' or, if departure from a port was within this 24h, as soon as possible.

Notification of vessels's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passenger vessels.
To	Traffic Center Scheveningen via agent (www.portbase.com).
What	X6
When	ETA - 24h at Lt buoy 'Sch'.
Remarks	- Only vessels that are under way to a port or anchorage in the Netherlands as part of an international voyage; - The following vessels do not have to report: warships and troop transporting vessels - vessels without propulsion - wooden vessels with primitive construction - fishing vessels.

Note See also section 10.3.3 'Explanation of codes'.

ETA/ETD

Who	All seagoing vessels except fishing vessels smaller than 50m and pleasure craft.
To	Traffic Center Scheveningen via agent (www.portbase.com) VHF Ch 21 - Email vkcscheveningen@denhaag.nl - Tel +31 70-2189476
What	A - D - G - I - O - Q - X
When	ETA - 48h but at the latest before entering Netherlands territorial waters and at least 1h before arrival.
Who	All vessels
To	Traffic Centre Scheveningen VHF Ch 21 - Email vkcscheveningen@denhaag.nl - Tel +31 70-2189476
What	A - D - G - O
When	ETA - 24h but at the latest before entering Netherlands territorial waters.

Note See also section 10.3.3 'Explanation of codes'.

Who	All seagoing vessels except fishing vessels smaller than 50m.
To	Traffic Center Scheveningen via agent (www.portbase.com) VHF Ch 21 - Email vkcscheveningen@denhaag.nl - Tel +31 70-2189476
What	A - G - O
When	ETD - 1h before departure/shifting.
Who	All vessels
To	Traffic Centre Scheveningen VHF Ch 21
What	A - O
When	On departure

Note See also section 10.3.3 'Explanation of codes'.

Transit

Who	All vessels in the Scheveningen Approach area.
To	Traffic Station Scheveningen VHF Ch 21
What	A - D
When	When crossing the boundary of Scheveningen Approach area.
Remarks	Listening watch should be maintained during the stay in the Scheveningen Approach area.

Note See also section 10.3.3 'Explanation of codes'.

10.3.2

Request for a pilot

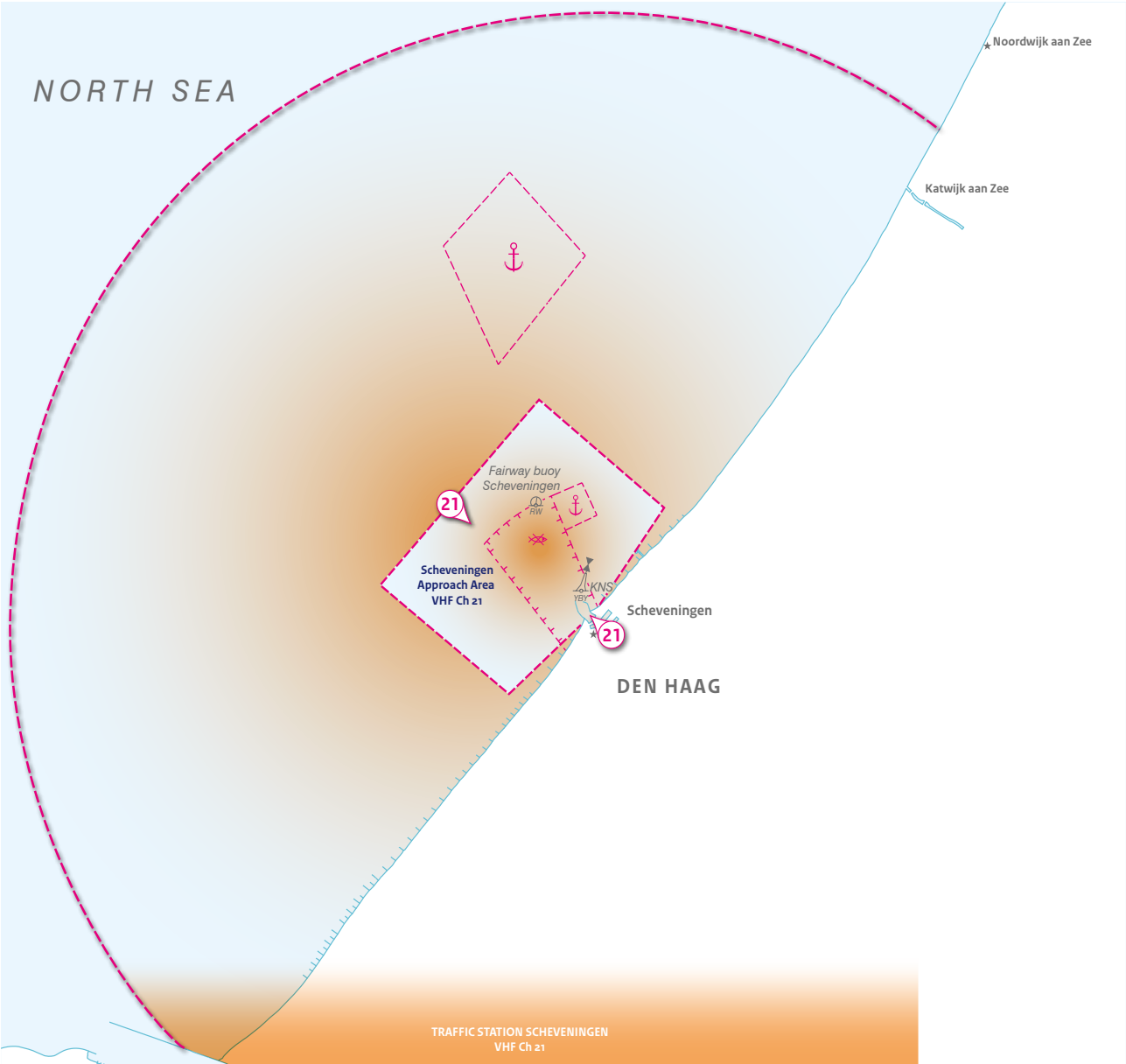
See [Chapter 9- Zeegat van Hoek van Holland, section 9.3.2 'Request for a Pilot'](#).

10.3.3 Explanation of codes

Code	Explanation
A	Vessel: Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event: A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position: True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.

Code	Explanation
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, breadth, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

10.3.4 Vessel Traffic Services



VTS reports incoming vessels

See [section 'ETA / ETD'](#)

VTS reports outgoing vessels

See [section 'ETA / ETD'](#)

Vessel Traffic Services Scheveningen

Station	VHF Ch	Traffic guidance	Traffic instructions	Navigational assistance	Shore based pilotage	General information		
Traffic Station Scheveningen	21	√	√	√				

10.4 Pilotage

10.4.1 Local pilotage

Compulsory pilotage

Pilotage in this region is compulsory for the following fairways:



Exemptions compulsory pilotage

See [Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage’ \(The Netherlands\)](#).

Request for a pilot

See [section 10.3.2 ‘Request for a pilot’](#)

10.5 Sailing directions

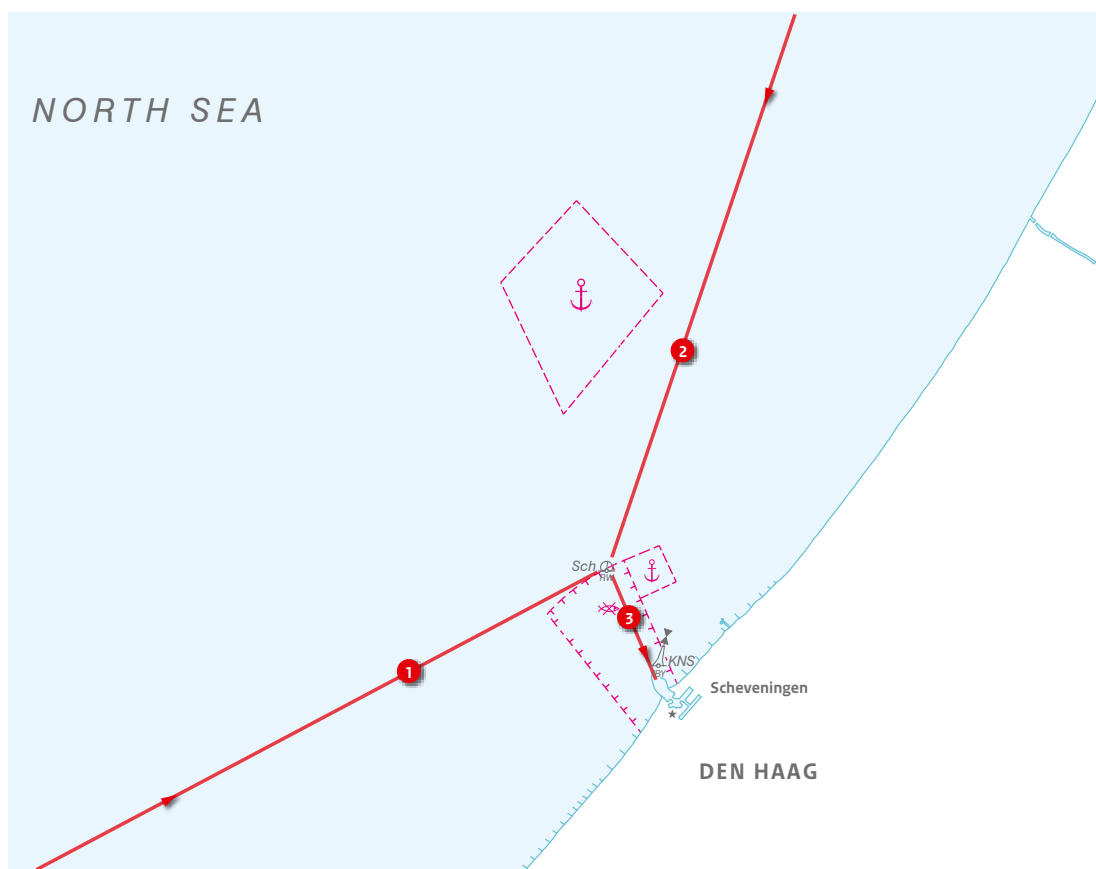
10.5.1 Scheveningen approach

1 Approaching from a westerly direction

Scheveningen can be reached from several W to SW-ly directions. Pilotage is not compulsory to enter Scheveningen Harbour but if needed the pilot will board at the pilot station approximate 2 nm SW of Maas Centre Lt buoy. From the pilot station at Hoek van Holland, Scheveningen can be reached by following a route which leads the vessel in a NE-ly direction between the MN1 and MN3 Lt buoys to a position NW of the N cardinal Lt buoy Indusbank N and the production well. From there a course is set towards the Lt buoy Sch.

2 Approaching from a northerly direction

Scheveningen can be reached from several N-ly directions. Pilotage is not compulsory to enter Scheveningen Harbour but if needed the pilot will board at the pilot station approximate 2 nm SW of Maas Centre Lt buoy.



3 From the Lt buoy 'SCH' to Scheveningen

It is dangerous to enter the harbour with strong to gale force winds from NW. Wind and sea come in from astern. Extra care will be required due to the strength of the flow seaward of the breakwaters. Because of the constriction of flow, caused by building the breakwaters out from the coast, the strength of flow is stronger some hundreds of metres from the breakwaters than further out to sea. Round about the time of HW the N going flow is strongest. It is recommended, when entering, to keep near to the upstream breakwater and not to proceed too slowly. Due to the conflux of the N-going tide and eddy which forms in the NW bowl of Buitenhaven, ships have a tendency to turn to starboard off the S breakwater. The most favourable time for entering the harbour is at the turn of the tide, this is approximately two hours before and three hours after HW Scheveningen (=HW Hoek van Holland + 00.25h). A W-cardinal buoy ('KNS') has been layed in order to mark a sandbank just north of the harbour entrance. The approach to Buitenhaven is made with the help of the 156° Leading Lts. The approach to Voorhaven is made with the help of the 131° Leading Lts.

10.5.2

Anchorage

Anchorage E of Lt buoy 'SCH'.

Vessels should report their intentions to anchor in this area to Traffic Centre Scheveningen. Maximum stay 24h (dispensation is possible).

Anchorage N of Lt buoy 'SCH'.

This anchorage may be used by vessels awaiting orders, stores etc. and can not use the anchorage close E to the Lt buoy Sch.

Vessels should report their intension to anchor in this area to Scheveningen Traffic Station.

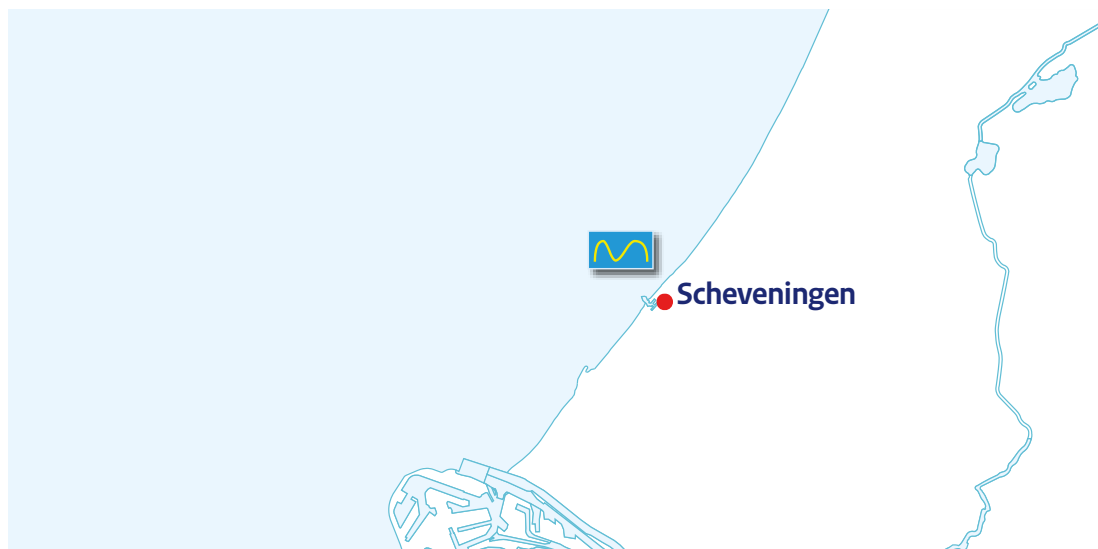
10.6

Tidal information

For general information see [Chapter 4 – ‘Oceanography’](#).

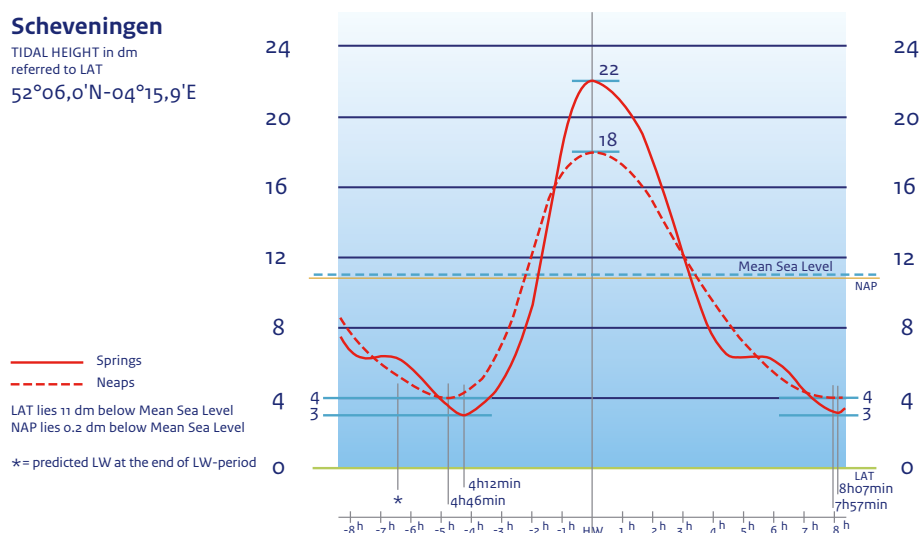
10.6.1

Tidal curve



Scheveningen

TIDAL HEIGHT in dm
referred to LAT
52°06,0'N-04°15,9'E



10.6.2

Tidal streams

The predictions in the tables refers to HW Scheveningen

Scheveningen		52°06.2'N	04°14.7'E
Time	Direction	Spring Rate	Neap Rate
-06	219°	1.1 kn	0.9 kn
-05	218°	0.9 kn	0.7 kn
-04	218°	0.6 kn	0.4 kn
-03	219°	0.3 kn	0.1 kn
-02	036°	0.3 kn	0.6 kn
-01	038°	1.6 kn	1.2 kn
HW	036°	1.5 kn	1.1 kn
+01	036°	0.8 kn	0.8 kn
+02	035°	0.5 kn	0.5 kn
+03	345°	0.0 kn	0.1 kn
+04	218°	0.6 kn	0.4 kn
+05	216°	1.0 kn	0.8 kn
+06	218°	1.2 kn	0.9 kn

Scheveningen		52°06.4'N	04°15.4'E
Time	Direction	Spring Rate	Neap Rate
-06	226°	0.9 kn	0.7 kn
-05	225°	0.7 kn	0.5 kn
-04	223°	0.4 kn	0.3 kn
-03	220°	0.2 kn	0.0 kn
-02	049°	0.4 kn	0.6 kn
-01	047°	1.5 kn	1.1 kn
HW	044°	1.4 kn	1.0 kn
+01	041°	0.7 kn	0.6 kn
+02	038°	0.4 kn	0.4 kn
+03	265°	0.1 kn	0.1 kn
+04	227°	0.7 kn	0.5 kn
+05	223°	0.9 kn	0.7 kn
+06	225°	1.0 kn	0.8 kn

Scheveningen		52°06.5'N	04°15.2'E
Time	Direction	Spring Rate	Neap Rate
-06	223°	1.1 kn	0.9 kn
-05	222°	0.9 kn	0.7 kn
-04	221°	0.6 kn	0.4 kn
-03	220°	0.3 kn	0.1 kn
-02	047°	0.3 kn	0.6 kn
-01	044°	1.6 kn	1.2 kn
HW	042°	1.6 kn	1.1 kn
+01	039°	0.9 kn	0.8 kn
+02	037°	0.5 kn	0.5 kn
+03	336°	0.1 kn	0.1 kn
+04	225°	0.6 kn	0.5 kn
+05	221°	1.1 kn	0.8 kn
+06	222°	1.2 kn	0.9 kn

Cautions

- The tables ([section 10.6.2](#)) show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty;
- Depending on position and local bottom properties (e.g., channels, sand waves etc.), deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels; this depends on their cross-sections in areas that lie above the momentary water level;
- In areas with banks the tidal stream flows through the channels; the direction of the stream follows the bearings of the banks; after sufficient flooding the tidal stream will cross the banks.

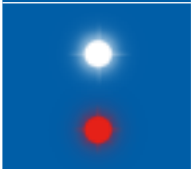
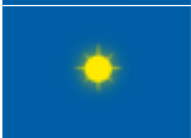
10.7 Rules | Regulations

See [Chapter 2 – Navigation | Traffic safety, section 2.13 ‘Shipping regulations’](#).

10.8 Signals

10.8.1 Traffic signals

The traffic signals are displayed from the signal mast near the traffic station. The signal ‘Departure prohibited’ is also displayed on the harbour office in the direction of through passage of 2e and 1e Haven.

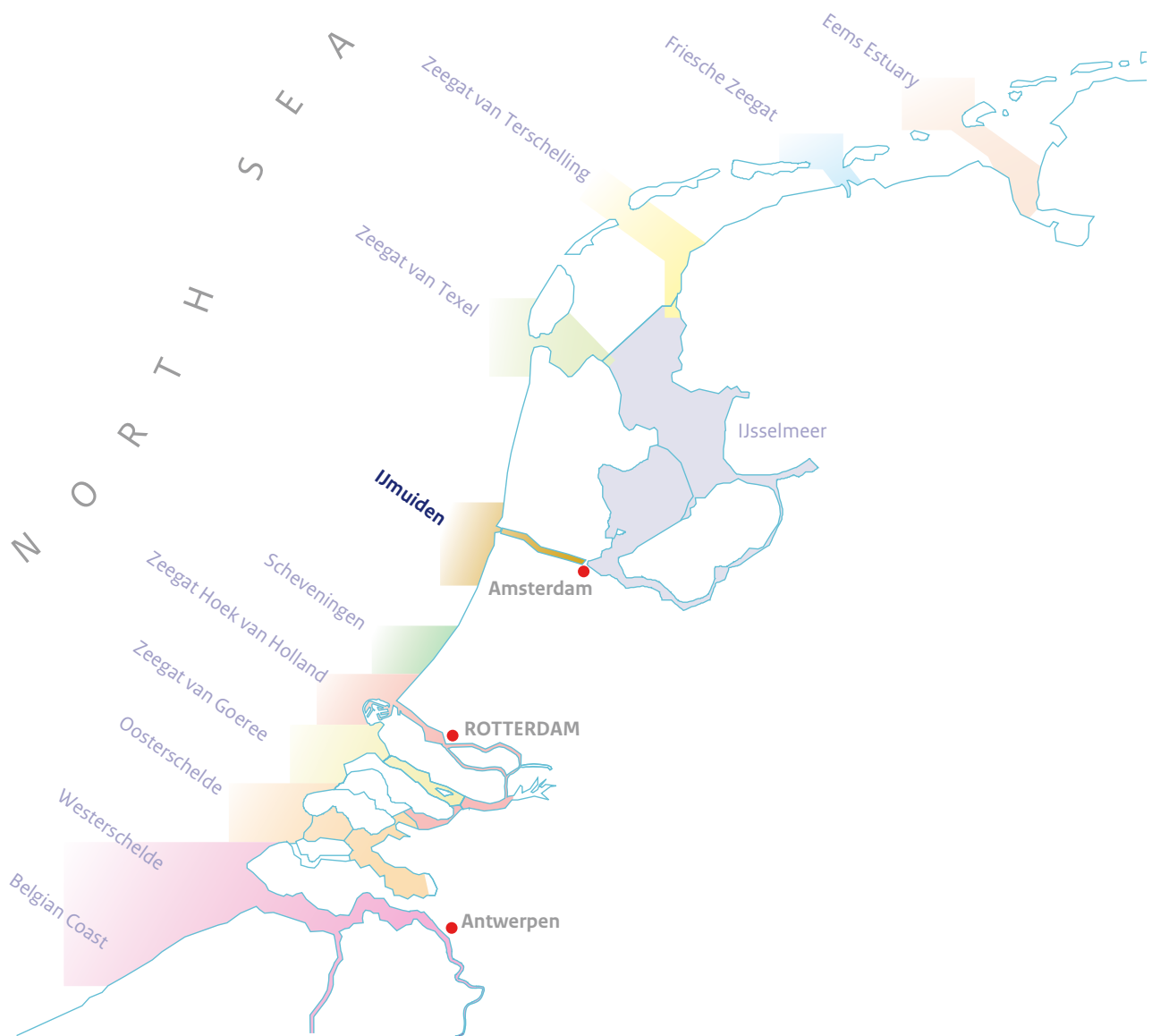
Day and night	Meaning
	Entry prohibited
	Departure prohibited
	One or more inward bound vessels are passing the breakwaters of Buitenhaven; light remains lit until inward bound vessels have left Voorhaven

10.9 Port information

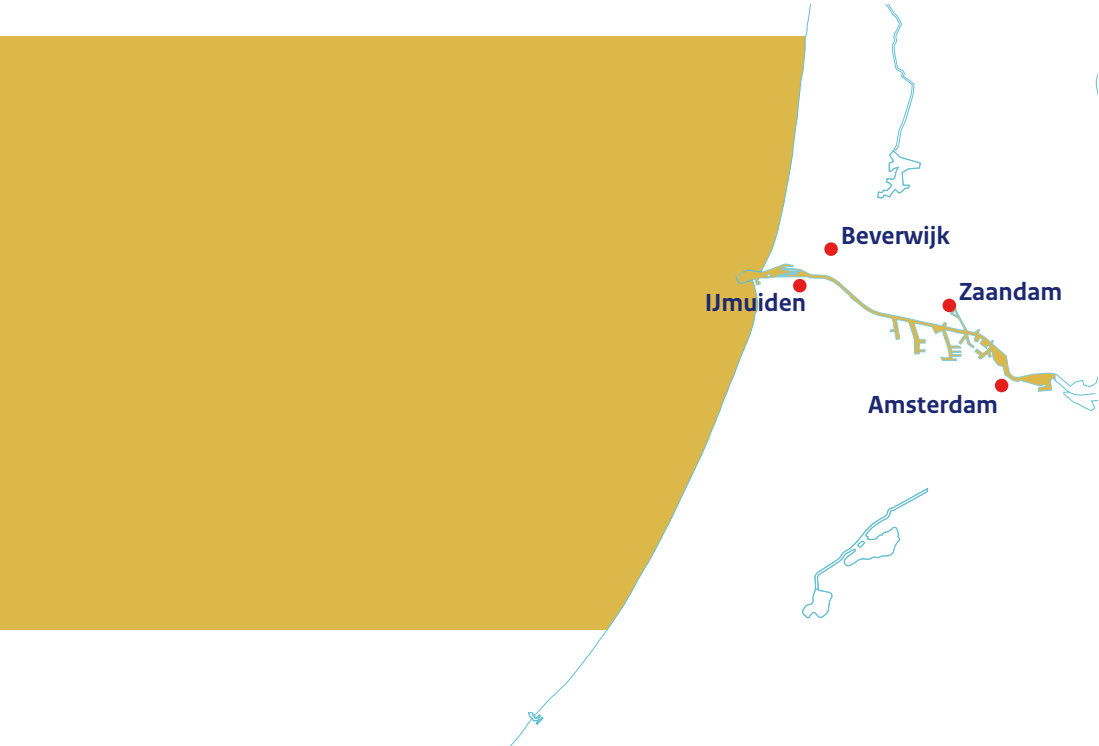
10.9.1 Scheveningen



Facilities	Voorhaven 1 ^e Haven 2 ^e Haven 3 ^e Haven
Cargo	Fish, Off Shore support, passengers
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Shore crane in the Marina, max. lifting capacity 20 Ton
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	■ Maximum speed 7 km/h; ■ 1^e Haven: Maximum LOA 145m and draught 8odm; ■ 2^e Haven: Maximum LOA 60m and draught 4odm; ■ 3^e Haven: Maximum LOA 120m and draught 4odm; ■ Vessels coming from 1^e Haven have right of way over vessels coming from 2e Haven.



11.1 Destinations



11.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - ‘Catalogue of Nautical Charts and Nautical Publications’. This publication can be dowloaded from: www.defensie.nl/hydro

11.3 Communication

11.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods	
Who	All seagoing vessels carrying noxious and dangerous goods on the way to IJmuiden - Noordzeekanaal - Amsterdam.
To	Port of Amsterdam, Harbour Master Division, department dangerous goods and environmentalcontrol via agent (myport.portofamsterdam.com) Telephone: + 31(0)20 5234600 option 2 E-mail: gsm@portofamsterdam.com
What	A - B1 - G - I1 - I2 - L - O - P - U - W
When	■ ETA -24h; ■ If < 24h on departure from last port of call but at the latest before entering the Netherlands territorial waters.
Note	See also section 11.3.3 ‘Explanation of codes’.

International Pollution Prevention Certificate

Who	All oil tankers with a gross tonnage of 150 tons or more.
To	Port of Amsterdam, Harbour Master Division, department dangerous goods and environmental control via agent (myport.portofamsterdam.com)
What	X7
When	ETA - 24h
Note	See also section 11.3.3 'Explanation of codes'.

Notification of waste

Who	All seagoing vessels
To	Port of Amsterdam, Harbour Master Division, department dangerous goods and environmental control via agent (myport.portofamsterdam.com)
What	Name - call sign - IMO - flag - ETA - ETD - last and next port of call - last port and date where waste has been landed- do you land all/some/no garbage at the harbour reception facilities - Waste Report form.
When	ETA - 24h

Notification of ship's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passengers vessels under way to a port or anchorage in the Netherlands as part of an international voyage.
To	Port of Amsterdam, Harbour Master Division, Port Office Amsterdam via agent (myport.portofamsterdam.com) Telephone: +31 (0)20 52 34 600 option 2 E-mail: portoffice@portofamsterdam.com
What	A - X6
When	ETA - 24h
	■ The following vessels do not have to report: warships and troop transporting vessels - vessels without propulsion - wooden vessels with primitive construction - fishing vessels;
Note	See also section 11.3.3 'Explanation of codes'.

ETA

Who	All seagoing vessels on the way to IJmuiden - Noordzeekanaal - Amsterdam.
To	Port of Amsterdam, Harbour Master Division, VTS Port of Amsterdam via agent (myport.portofamsterdam.com) Telephone: +31 (0)20 52 34 600 option 1 E-mail: vtsadmin@portofamsterdam.com VHF Ch: 07 'IJmuiden Approach'
What	A - B - C - G - H - I - O - P - Q - T - U - X
When	■ ETA - 48h, - 24h; ■ If < 48h on departure from last port of call but at the latest before entering the Netherlands territorial waters; ■ Deviations in ETA > 30 minutes must be reported immediately .
Note	See also section 11.3.3 'Explanation of codes'.

Who	All seagoing vessels with destination Noordzeekanaal with a: ■ draught: >13.10m and ≤13.75m in salt water; ■ draught: >13.40m and ≤14.05m in fresh water; ■ beam: >42.0m and ≤45.0m with maximum length ≥350m.
To	Port of Amsterdam, Harbour Master Division, Port Office Amsterdam via agent (myport.portofamsterdam.com) Telephone: +31 (0)20 52 34 600 option 2 E-mail: portoffice@portofamsterdam.com
What	A - B - H - O - Q - T1 - U - V - X1
When	■ ETA - 24h before locking through Noordzeesluizen; ■ Deviations in ETA > 30 minutes must be reported immediately.
Remarks	Request for exemption locking through Noordzeesluizen.
Note	See also section 11.3.3 'Explanation of codes'.

Who	All seagoing vessels with a draught >14.10m and ≤17.80m (due to admission policy).
To	Port of Amsterdam, Harbour Master Division, VTS Port of Amsterdam via agent (myport.portofamsterdam.com) Telephone: +31 (0)20 52 34 600 option 1 E-mail: vtsadmin@portofamsterdam.com VHF CH: 07 'IJmuiden Approach' 'Amsterdam pilots' via agent (Electronic Data Interchange - EDI) Telephone: +31 (0)255 56 45 00 E-mail: pilots.amsterdam@loodswezen.nl
What	A - C - G - J - O - P - Q - T1 Actual Displacement (mt) - Metacentric height GM (m) - Free surface correction GG' (m)
When	■ ETA -72h, -24h, -8h, and -3h prior to arrival at the helicopter pilot rendezvous position (52°29'40N 03°47'40E). ■ Deviations in ETA >30 minutes must be reported immediately.
Remarks	Vessels are channel bound (IJ-geul). See also section 11.6.2.2.
Note	See also section 11.3.3 'Explanation of codes'.

Who	All seagoing vessels with a draught.
To	Port of Amsterdam, Harbour Master Division, VTS Port of Amsterdam via agent (myport.portofamsterdam.com) Telephone: +31 (0)20 52 34 600 option 1 E-mail: vtsadmin@portofamsterdam.com VHF Ch: 07 'IJmuiden Approach' 'Amsterdam pilots' via agent (Electronic Data Interchange - EDI) Telephone: +31 (0)255 56 45 00 E-mail: pilots.amsterdam@loodswezen.nl
What	A - C - G - J - O - P - Q - T1
When	■ ETA -12h, -6h, -3h, -1h, at racon buoy 'IJMC' (52° 28'.5N 04° 23'.8E); ■ Deviations in ETA >30 minutes must be reported immediately.
Note	See also section 11.3.3 'Explanation of codes'.

ETD

Who	All seagoing vessels with a draught >14.10m and ≤17.80m.
To	Port of Amsterdam, Harbour Master Division, VTS Port of Amsterdam via agent (myport.portofamsterdam.com) Telephone: +31 (0)20 52 34 600 option 1 E-mail: vtsadmin@portofamsterdam.com VHF Ch: appropriate Traffic Centre 'Amsterdam pilots' via agent (Electronic Data Interchange - EDI) Telephone: +31 (0)255 56 45 00 E-mail: pilots.amsterdam@loodswezen.nl
What	A - C - G - J - O - P - Q - T ₁ Actual Displacement (mt) - Metacentric height GM (m) - Free surface correction GG'(m) - Rolling period (s)
When	■ ETD -24h, -8h, -4h, on departure/shifting; ■ Deviations in ETD > 30 minutes must be reported immediately.
Remarks	Vessels are channel bound (IJ-geul). See also section 11.6.2.2.
Note	See also section 11.3.3 'Explanation of codes'.

Who	All seagoing vessels with a draught ≤14.10m.
To	Port of Amsterdam, Harbour Master Division, VTS Port of Amsterdam via agent (myport.portofamsterdam.com) Telephone: +31 (0)20 52 34 600 option 1 E-mail: vtsadmin@portofamsterdam.com VHF Ch: appropriate Traffic Centre 'Amsterdam pilots' via agent (Electronic Data Interchange - EDI) Telephone: +31 (0)255 56 45 00 E-mail: pilots.amsterdam@loodswezen.nl
What	A - C - G - J - O - P - Q - T ₁
When	■ ETD -24h, -8h, -4h on departure/ shifting; ■ Deviations in ETD > 30 minutes must be reported immediately.
Note	See also section 11.3.3 'Explanation of codes'.

Transit

Who	All vessels > 20m which are in the VTS area
To	appropriate Traffic Centre
What	A - D
When	When crossing a VTS sector boundary
Note	See also section 11.3.3 'Explanation of codes'.

11.3.2**Request for a pilot**

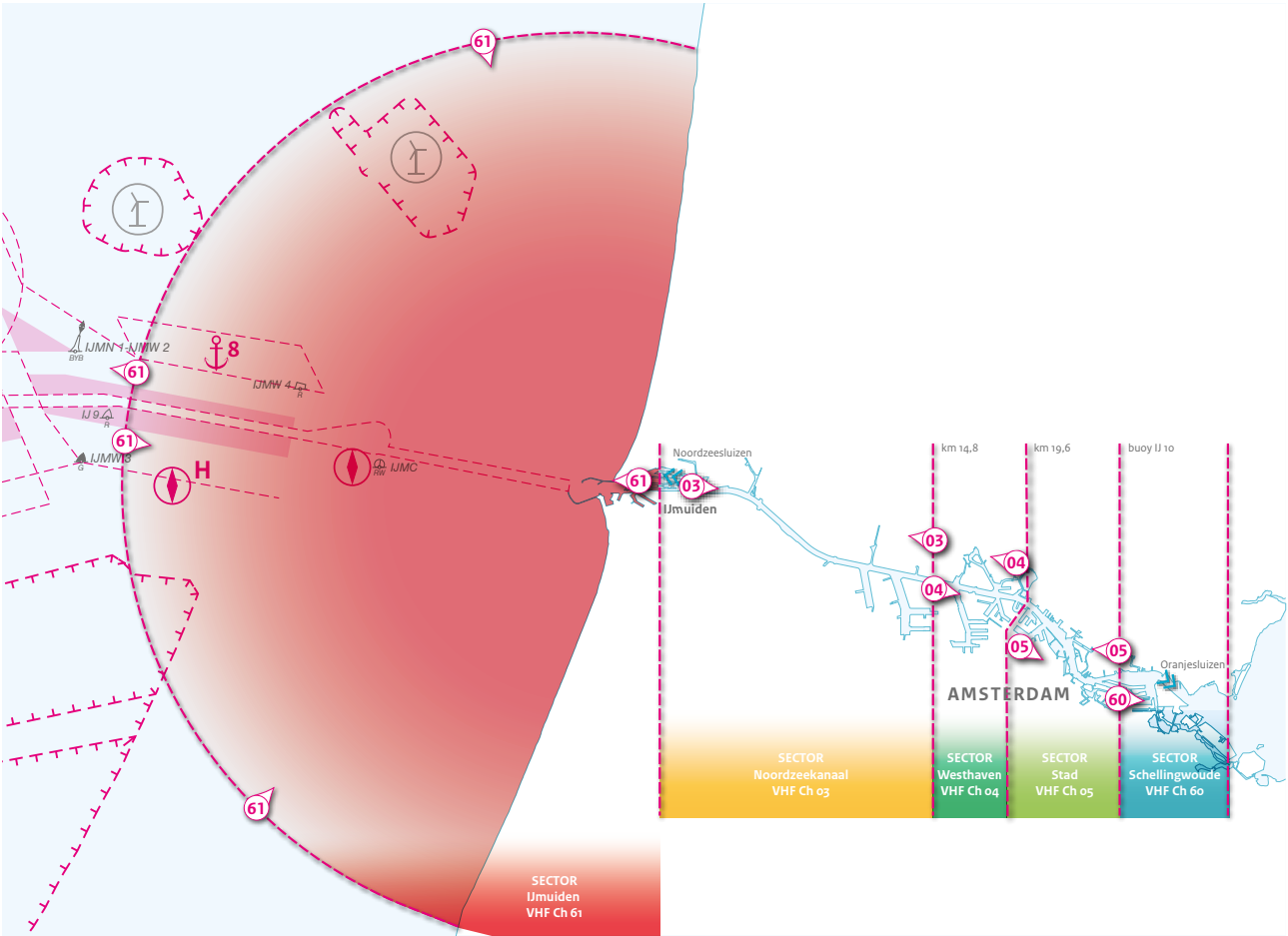
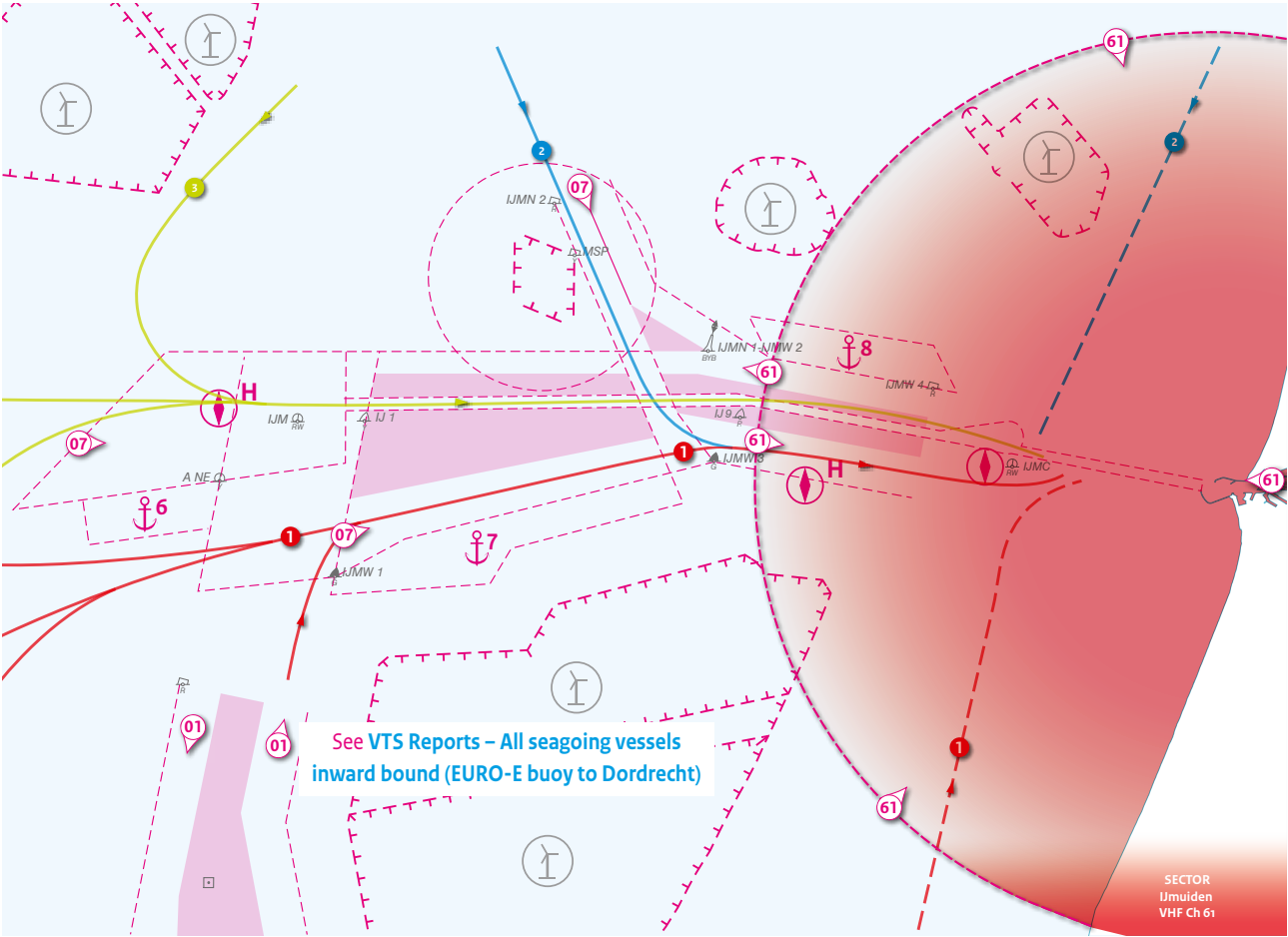
See sections 11.3.1 'ETA' and 11.3.1 'ETD'.

11.3.3 Explanation of codes

Code	Explanation
A	Vessel: Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event: A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position: True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, breadth, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

11.3.4 Vessel Traffic Services



VTS Reports – All seagoing vessels larger than 20m

VHF Ch	Location	Message	To
07	Operational from open sea up to the outer breakwaters of IJmuiden Harbour.	First contact has to be made on this supporting channel in order to verify information concerning ship and cargo. Vessels will receive information about: berthing; traffic planning; pilotage; if applicable advice about anchoring.	IJmuiden aanloop (Supporting VHF Channel)
61	On entering/leaving and all other special manoeuvres inside a circular area with a radius of 12 nm off the pierheads, and the fairways W of the Noordzeesluizen including the harbours inside this area	Name, Call sign and position.	Sector IJmuiden
03	■ On entering/leaving sector areas;	Name, position, destination, any other particulars.	Sector Noordzeekanaal
04	■ When docking/undocking procedures have been completed/have commenced;		Sector Westhaven
05	■ When it is intended to make a special manoeuvre (crossing the fairway, entering/leaving a harbour basin, any manoeuvre that deviates from the usual traffic flow);		Sector Stad
60	■ When passing arrangements have to be made with other vessels.		Sector Schellingwoude

Vessel Traffic Services IJmuiden – North Sea Canal – Amsterdam

Station	VHF Ch	Traffic guidance	Traffic instructions	Navigational assistance	Shore based pilotage	General information			
Sector IJmuiden	61	✓	✓	✓					
Sector Noordzeekanaal	03	✓	✓	✓					
Sector Westhaven	04	✓	✓	✓					
Sector Stad	05	✓	✓	✓					
Sector Schellingwoude	60	✓	✓	✓					

Supporting VHF Channels**VHF Ch 68: Traffic Information**

To obtain further information on:

- The current journey through the region
- Berth information
- Infrastructural information, such as works in progress on the fairway, constructions etc.
- Reports on ships particulars and intentions during the journey, i.e. entering oil harbours or passing reporting points
- Completing formalities after traffic incidents

VHF Ch 14: Port Information

Maritime VHF Ch for vessels moored in port and for administration tasks imposed by the harbour master and the Regional Port Legislation North Sea Canal Area. On this channel the port user can make the reports mentioned in the Regional Port Legislation such as:

- Commencing and terminating activities for which permission was necessary
- Commencing and terminating bunkering, board to board discharging, collecting waste, cleaning etc.
- Questions concerning the provisions of port services
- Request for exemptions, reporting breakdowns on board
- Completing formalities concerning (surface) pollutions and incidents

11.3.5 Communication during Shore Based Pilotage (SBP)

Fairway	SBP advice from	VHF Ch
The limit of Shore Based Pilotage for inward-bound traffic is 3 nm W of the outer breakwaters. For outbound-traffic the reverse applies basically.	IJmuiden Pilot	19

11.3.6 Communication with locks

Location	Locks	VHF Ch
IJmuiden	IJmuiden Locks	22
Amsterdam	Oranjesluizen	18

11.3.7 Communication with helicopter

All communication with the pilot station takes place via Traffic Centre IJmuiden. See section [‘Vessel Traffic Services IJmuiden – North Sea Canal – Amsterdam’](#).

- Traffic Centre IJmuiden will inform the helicopter about the position of the vessel;
- Traffic Centre IJmuiden will inform the vessel about the time of departure and the time of arrival of the helicopter above the vessel;
- The helicopter will contact the vessel within a range of 3 nm. As soon as the VHF-connection between vessel and helicopter has been established the vessel passes on the following to the helicopter pilot: the position, course and speed (if traveling), the actual wind direction and speed across the deck, pitching and/or rolling, conditions on deck (dry, spray, wet);
- The pilot will confirm whether he accepts the conditions passed on or will ask if the vessel can change her course and/or speed;
- The pilot can request the vessel at all times to switch to another VHF-Ch when considered necessary;
- The helicopter’s call sign is the word ‘HELICOPTER’ followed by its registration letters as stated earlier by Traffic Centre IJmuiden.

11.3.8 Communication with pilot vessel

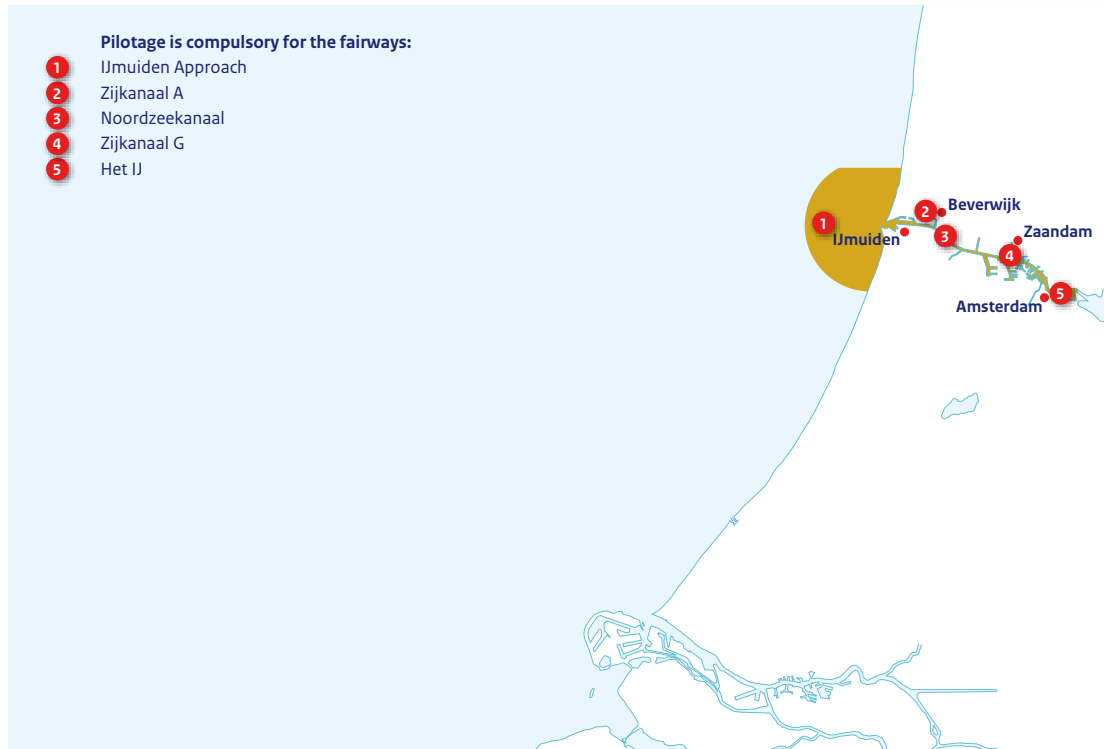
All communication with the pilot vessel takes place via IJmuiden Port Control.

11.4 Pilotage

11.4.1 Local pilotage

Compulsory pilotage

Pilotage in this region is compulsory for the following fairways:



Exemptions compulsory pilotage

See [Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Request for a pilot

See section [11.3.2 ‘Request for a pilot’](#).

Pilot vessel cruising station

Pilot boards between 3 to 8 nm W of the harbour entrance. The exact Pilot boarding place depends on the vessel’s draught and size and also the prevailing weather conditions:

- draught less than 8m: 3 nm W of breakwaters;
- draught 8 to 10m: 4 nm W of breakwaters;
- draught 10 to 13.1m: 6 nm W of breakwaters;
- draught 13.1 to 14.1m: 8 nm W of breakwaters.

11.4.2 Shore Based Pilotage

General information

See [Chapter 2 – Navigation | Traffic Safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Routes

The limit of Shore Based Pilotage for inward-bound traffic is 3 nm W of the outer breakwaters. For outbound-traffic the reverse applies basically.

Masters obligations

See [Chapter 2 – Navigation | Traffic safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Excluded from SBP

Vessels with a length over 125 m are excluded from SBP. However this length may be varied upwards and downwards. This depends on the following circumstances:

- the weather;
- the nature and equipment of the ship;
- the local knowledge of the ship’s master;
- the quality of communication.

Vessels carrying dangerous goods may be piloted by SBP. The final decision on whether a ship is allowed to make use of SBP is taken in consultation between the Traffic Centre and the Pilotage authority.

11.4.3**Helicopter pilotage****Boarding station for channel bound vessels (draught > 14.1m)**

Pilots will always board channel bound vessels by helicopter, near the rendez-vous position at approximate 52°29.4'N 03°47.4'E. The exact position of boarding will be arranged in consultation between the helicopter and the vessel.

Before approaching the rendez-vous position, vessels are advised, depending from which direction they come, to approach the waypoint in position 52°30'N 03°45'E. From this point they can proceed to the rendez-vous position. Channel bound vessels are boarded by two pilots.

Boarding station for non channel bound vessels

Pilots can be transferred to and from seagoing vessels in an area with a radius of 2 nm around approximate position 52°28.1'N 04°14.0'E.

11.4.4**Deep sea pilotage**

See [Chapter 2 – Navigation | Traffic safety, section 2.7 ‘Deep sea pilotage’](#).

11.4.5**Boarding arrangements****Boarding by pilot vessel**

See [Chapter 2 – Navigation | Traffic Safety, section 2.5.6 ‘Pilot boarding arrangements’](#).

11.5**Sailing directions****11.5.1****General information**

Buitenhaven of IJmuiden can be reached by vessels with a draught of 16.9m in salt water.

The lighter facilities at the IJ-palen (N-side Noorder Buitenkanaal) can be reached by vessels with a maximum draught of 17.8m in salt water.

Vessels constrained by their draught (draught in salt water more than 14.1m) are considered to be channel bound. That is to say, these vessels should approach IJmuiden via the Approach area and IJ-geul successively.

The major port of Amsterdam can be reached via Noordzeekanaal by vessels with the following maximum dimensions:

Without exemption

- length: 325m;
- beam: 42m;
- draught: ≤13.1m in salt water.
≤13.4m in fresh water

With exemption

Under certain conditions (= combination of draught, beam, E-going or W-going) vessels may exceed the maximum dimensions allowed when permission is granted by the harbour master. Request for exemptions are to be forwarded, via www.portofamsterdam.com, 3 days in advance of the estimated time of passage through the locks.

- length: >325m;
- beam: >42m;
- draught: >13.1m in salt water;
>13.4m in fresh water.

For more information contact:

Port of Amsterdam

Divisie Havenmeester

Telephone : +31(0)205234600 (option 2)

E-mail : portoffice@portofamsterdam.com

Website: www.portofamsterdam.com

Oversized vessels:

- Fairways west of Noordzeesluizen: draught ≥ 10m or length ≥ 180m (length ≥ 150m Zuider Buitenkanaal);
- Noordzeekanaal including Branch canals, harbours and 'IJ' up to E-side entrance Mercuriushaven: draught ≥ 10m or length ≥ 180m;
- Voorzaan northwards to Den Uylbrug (including harbours): draught ≥ 8m or length ≥ 150m;
- 'IJ', eastward of E-side entrance Mercuriushaven (including harbours): draught ≥ 6m or length ≥ 150m.

Oversized vessels should, in addition to the lights as prescribed for power driven vessels (Collregs. Rule 23), exhibit where they can best be seen three all-around red lights in a vertical line or a black cylinder (Collregs. Rule 28).

Branch canals, harbour entrances and objects moored in the canal, should be passed at reduced speed. The objects mentioned are usually marked by day by a red-white flag and at night by a red light and below it a white light.

Sluicing

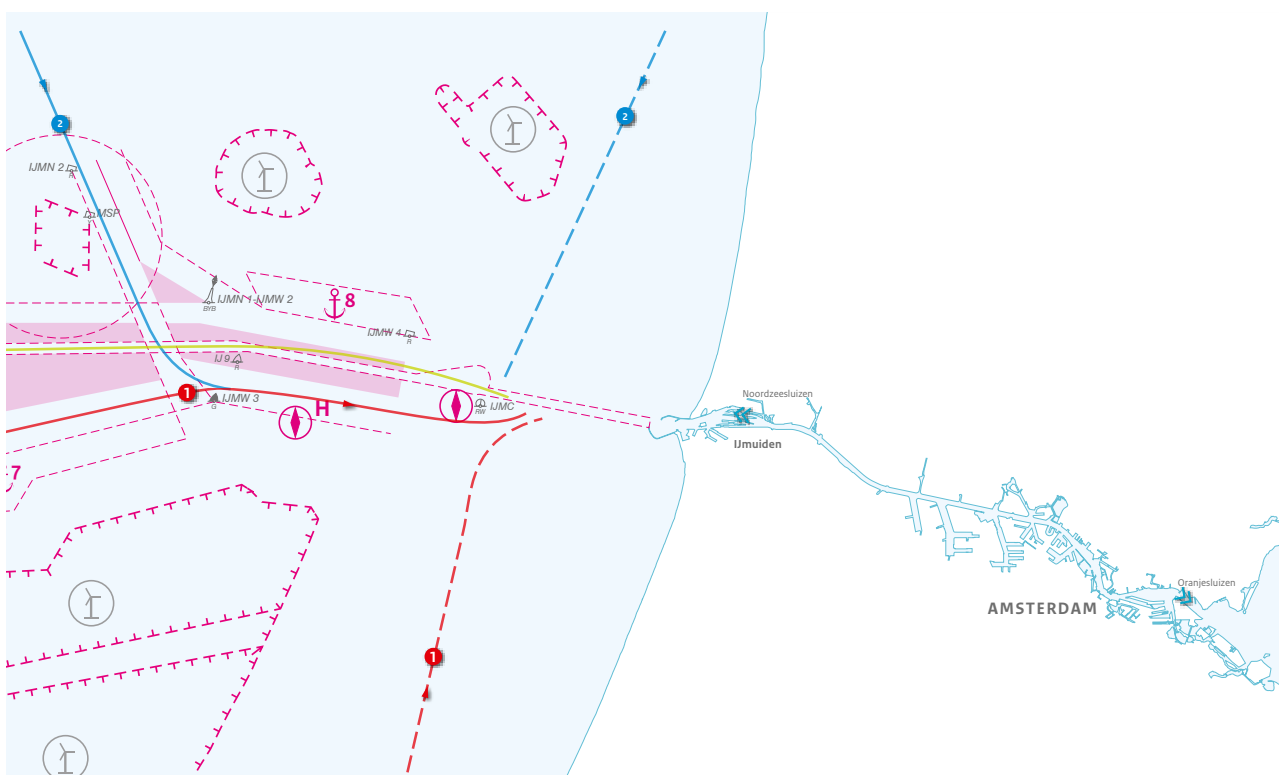
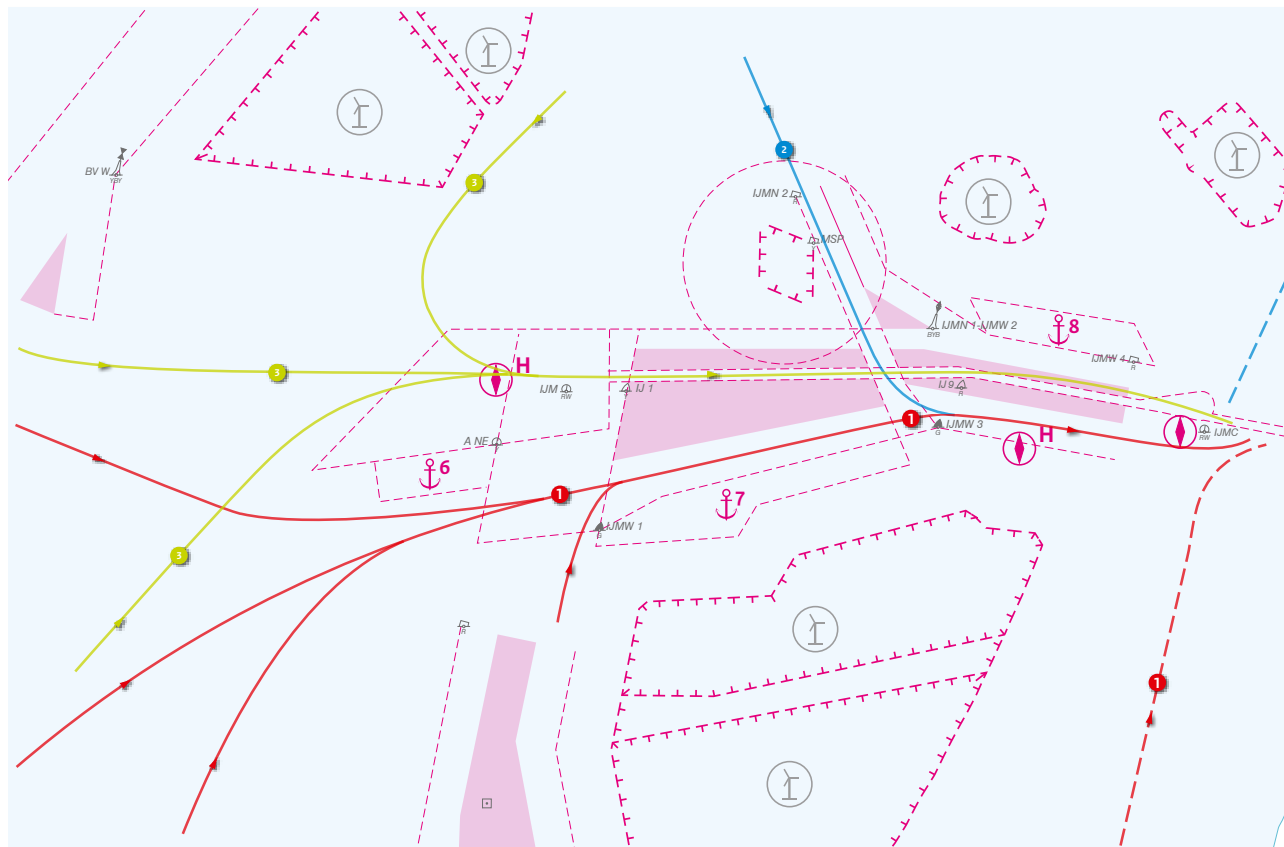
The drainage sluice and the pumping station at IJmuiden are by far the most important facilities for controlling the excess water in Noordzeekanaal. By their means the level of the water, receiving from a large part of the Netherlands can be regulated within certain narrow limits.

As a consequence of the sluicing/pumping a water flow (in a westerly direction) will arise in Noordzeekanaal, in the inner sluicing canal, the outer sluicing canal and in a part of Buitenhaven (IJmuiden).

When mooring at, or slipping from Buitenkade 2 (IJmuiden) vessels may request a temporary reduction in the rate of pumping or sluicing. This only applies to vessels constrained by their draught.

Sluicing signals are shown at several locations. See section [11.8.1 'Sluicing signals'](#).

11.5.2 IJmuiden approach



Inbound traffic with a draught less than 14.1m

1 - Incoming vessels from south- to westerly directions (draught < 14.1m)

IJmuiden can be reached from several south- to westerly directions. The pilot will board by launch between 3 and 8 nm west (depending of ship's draught) of the outer Breakwaters or can be transferred by helicopter in a circular area with a radius of 5 nm around position $52^{\circ}28.1'N$ $04^{\circ}14.0'E$.

Vessels coming from the North Hinder North TSS and the Precautionary area Maas Junction must clear the platforms of Rijn Field and the Mobil P12-SW production platform. Vessels with a draught $\geq 13.1\text{m} \leq 14.1\text{m}$ are not channel bound but may enter the IJ-geul with permission. No permission is given if this would create a risk for channel bound vessels.

2 - Incoming vessels from northerly directions (draught < 14.1m)

IJmuiden can be reached from northerly directions. The pilot will board by launch between 3 and 8 nm west (depending of ship's draught) of the outer breakwaters or can be transferred by helicopter in a circular area with a radius of 5 nm around position $52^{\circ}28.1'N$ $04^{\circ}14.0'E$. Vessels coming from Den Helder (Zeegat van Texel) should clear the areas of the offshore windfarms. Vessels with a draught $\geq 13.1\text{m} \leq 14.1\text{m}$ are not channel bound but may enter the IJ-geul with permission. No permission is given if this would create a risk for channel bound vessels.

Inbound traffic with a draught more than 14.1m

3 - DW-route to IJmuiden

Vessels with a draught of more than 14.1m are considered to be channel bound and therefore obliged to make use of IJ-Geul Approach Area and IJ-Geul. The pilot will board by helicopter in the Approach Area at the rendez-vous position $52^{\circ}30.0'N$ $03^{\circ}50.0'E$.

There is an emergency turning area North of IJ-Geul. The turning area is meant for channel bound vessels having to interrupt their voyage when the harbour entrance is obstructed. Because the small width of IJ-Geul (450m) it is prohibited for vessels to overtake or meet each other in the channel.

Admission policy for vessels constrained by their draught

Some important factors when determining the admission policy for vessels constrained by their draught are their under keel clearance and hydro-meteorological data.

Vessels constrained by the tide

Besides vessels constrained by their draught there are still a few other categories for which the time of entry depends on the tide. Ships with a length of about 200m and/or a draught greater than about 12m should enter the harbour at slack water. Passage between the breakwaters will take place, depending on the pilot's judgement and the meteorological conditions, between 1.5h to 3h before HW or about 3h after HW. ETA at the pilot boarding position should be at about 1.5h before passage of the breakwaters.

Notes

- During winds > 7 Bft from W-ly to NW-ly directions heavy seas and ground seas can arise even N of the northern outer breakwater of IJmuiden harbour. Under these circumstances small vessels are not recommended to navigate in this area.
- During spring tide there will be a greater chance for ground seas. The influence of the tidal stream is of minor importance.
- During stormy winds from NW-ly directions it is dangerous to enter the harbour of IJmuiden, unless the navigators have a good local knowledge. During these circumstances heavy breakers will occur until far inside the outer breakwaters.
- Stormy winds running against opposite stream are causing steep and breaking seas. Entering the harbour can best be done by using the axis of the deep water channel which is leading to the harbour entrance. This must be communicated with Traffic Centre IJmuiden.

Anchorage

Anchorage 6

This anchorage is normally used by channel bound vessels waiting to enter IJmuiden. Anchoring is only allowed with permission of IJmuiden Port Control.

Anchorage 7 and 8

Both anchorages are for general use. Anchoring is only allowed with permission of IJmuiden Port Control.

11.5.3 Noordzeekanaal - Amsterdam

General information

Noordzeekanaal gives access through locks to the harbour areas of Velsen-Noord, Beverwijk, Zaandam and Amsterdam. On its west end the canal is closed off by Noordzeesluizen (North Sea Locks) and on its east end by Oranjesluizen. The eastern part of Noordzeekanaal is called Het IJ. The canal is approximate 14 n miles long and has a navigable width of approximate 170m (for the greater part). The fairway is well buoyed and beacons according to the CEVNI-system (SIGNI). The Oranjesluizen gives access to Buiten IJ and from there to IJsselmeer. The access to the inland waterway Amsterdam-Rijnkanaal is given SE of Entrepothaven.

Sluicing

See section 11.5.1 'General information'.

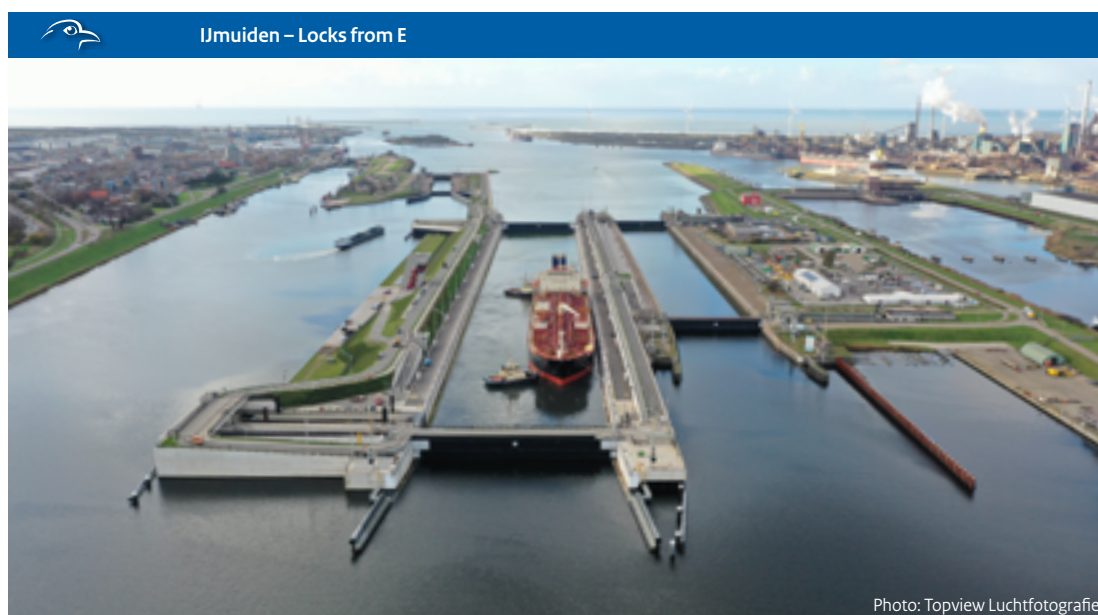
Ferries

Ferries maintain a connection between the N and S banks of Het IJ and are located appr. 150m and 500m west of IJ-tunnel and off oude Houthaven. A hydrofoil maintains a connection between IJmuiden and Amsterdam.

Restrictions

See section 11.5.1 'General information'.

11.5.4 Locks



IJmuiden

IJmuiden Locks - Zuidersluis	
Dimensions Locks	Length: 95m; Width: 21.5m; Navigable depth: no information
Maximum vessel dimensions	Length: 95m; Beam: 17.9m; Draught: 55dm
Visibility	The locking of seagoing vessels with dangerous cargo which have to display the appropriate IMO signal, is generally still allowed with a minimum visibility of twice the ship's length, measured from the bow, on condition that the radar and communication equipment is operating correctly.
Tugboat assistance	■ Available; ■ All tankers loaded with inflammable liquids or gasses included vessels when empty and not gas-free unless they are provided with an inert atmosphere are compulsory to make use of tugboats; ■ Vessels equipped with one or more properly working bow and stern thrusters may deviate from the laid down requirements, on and ad hoc basis, after consultation between the pilot, master and lock master; ■ Vessels with a controllable pitch propeller are exempt from the obligation to make use of the assistance of a tug.
Boatmen assistance	Available
Note	For communication with locks see section 11.3.6 'Communication with locks' . Kleine Sluis is normally used by pleasure crafts and inland barges.

IJmuiden Locks - Middensluis	
Dimensions Locks	Length: 202.4m; Width: 25m; Navigable depth: no information
Maximum vessel dimensions	Length: 100m; Beam: 15.0m; Draught: 80dm Length: 145m; Beam: 22.5m; Draught: 80dm (with bowthruster)
Visibility	The locking of seagoing vessels with dangerous cargo which have to display the appropriate IMO signal, is generally still allowed with a minimum visibility of twice the ship's length, measured from the bow, on condition that the radar and communication equipment is operating correctly.
Max. windforce	5 Bft crosswind
Tugboat assistance	■ Available; ■ All tankers loaded with inflammable liquids or gasses included vessels when empty and not gas-free unless they are provided with an inert atmosphere are compulsory to make use of tugboats; ■ Vessels equipped with one or more properly working bow and stern thrusters may deviate from the laid down requirements, on and ad-hoc basis, after consultation between the pilot, master and lock master; ■ Vessels with a controllable pitch propeller, azi- and fixed pods, diesel electric propulsion or with a gearbox are exempt from the obligation to make use of the assistance of a tug; ■ Summer DWT over 10 000 (one or more stern tugs with pulling power of at least 20 tons).
Boatmen assistance	Available
Note	For communication with locks see section 11.3.6 'Communication with locks' .

IJmuiden Locks - Noordersluis	
Dimensions Locks	Length: 400m; Width: 50m; Navigable depth: 14m
Maximum vessel dimensions	Length: 325m; Beam: 42m; Draught: 131dm; UKC: ≥1m Under certain conditions (= combination of draught, beam, E-going or W-going and weather) vessels may exceed the maximum dimensions allowed when permission is granted by the harbour master. Request for exemptions are to be forwarded, via www.portofamsterdam.com , 3 days in advance of the estimated time of passage through Noordersluis.
Visibility	At least twice the vessels length plus 200m
Max. windforce	5 Bft crosswind
Tugboat assistance	■ Available; ■ All tankers loaded with inflammable liquids or gasses included vessels when empty and not gas-free unless they are provided with an inert atmosphere are compulsory to make use of tugboats; ■ Vessels with a controllable pitch propeller, azi- and fixed pods, diesel electric propulsion or with a gearbox are exempt from the obligation to make use of the assistance of a tugboat.
Boatmen assistance	Available
Note	For communication with locks see section 11.3.6 'Communication with locks' .

IJmuiden Locks - Zeesluis IJmuiden	
Dimensions Locks	Length: 545m; Width: 70m; Navigable depth: 16.8m
Maximum vessel dimensions	Length: 398m; Beam: 57m; Draught: 137.5dm
Visibility	At least twice the vessels length plus 200m
Max. windforce	5 Bft crosswind
Tugboat assistance	■ All tankers loaded with inflammable liquids or gasses included vessels when empty and not gas-free unless they are provided with an inert atmosphere are compulsory to make use of tugboats; ■ Vessels >175m are compulsory to make use of a stern and front tugboat; ■ Vessels with a controllable pitch propeller, azi- and fixed pods, diesel electric propulsion or with a gearbox are exempt from the obligation to make use of the assistance of a tugboat.
Boatmen assistance	Available
Note	For communication with locks see section 11.3.6 'Communication with locks' .

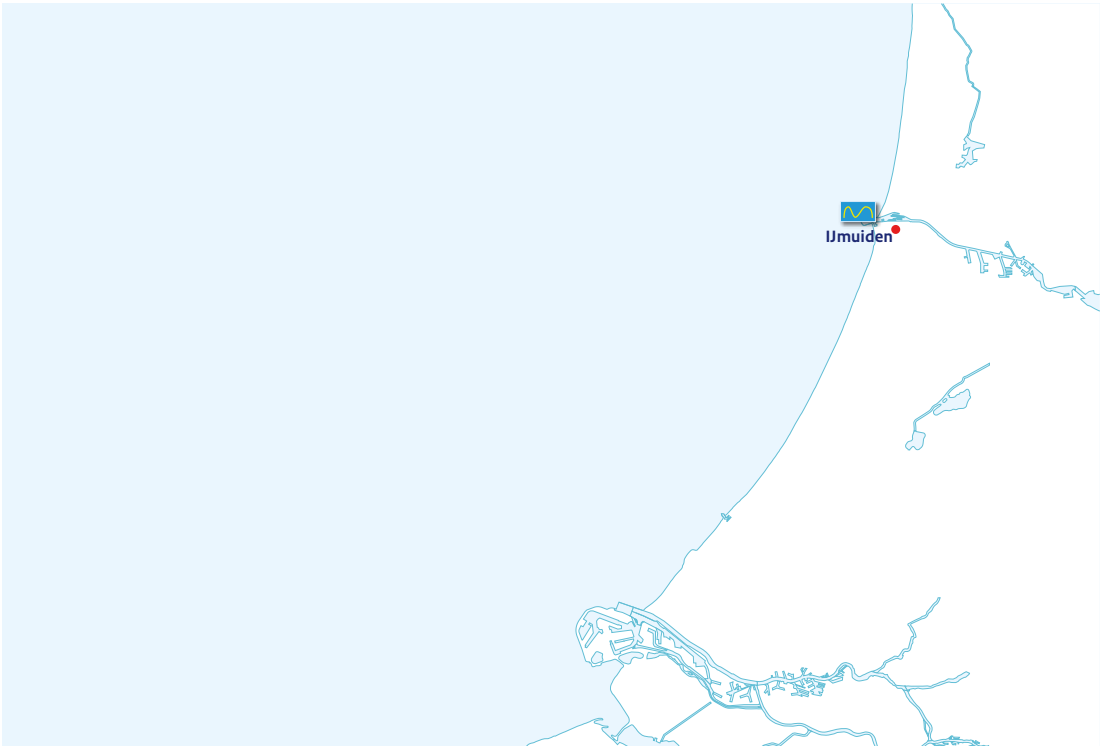
Amsterdam

Oranjesluizen (4 locks)	
Maximum Ship's dimensions	Up to the lock master
Remarks	■ Operational: 24h; ■ Contact: see caution 11.3.6 'Communication with locks'; ■ When the difference in water level of inner IJ and outer IJ is more than 1.45m the locks are not operational.

11.6

Tidal information

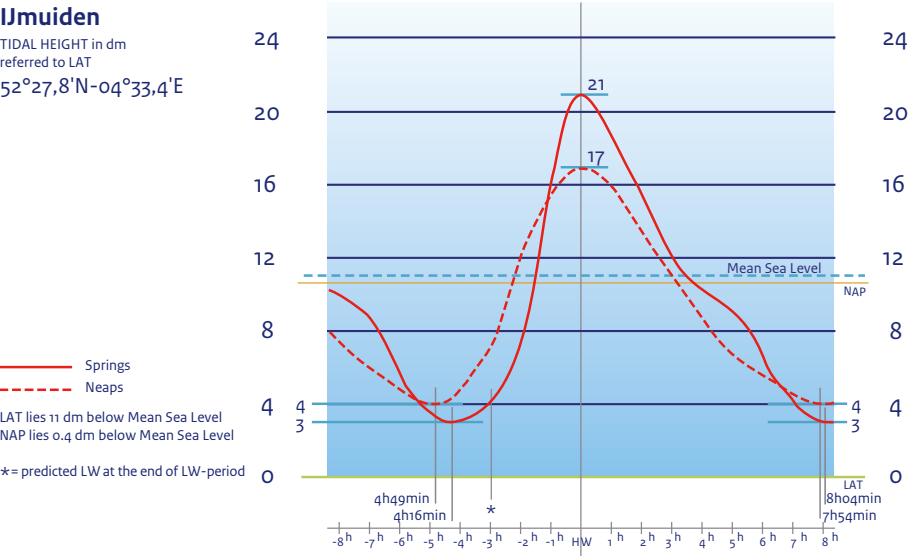
For general information see [Chapter 4 – ‘Oceanography’](#).



11.6.1

Tidal curve

IJmuiden
TIDAL HEIGHT in dm
referred to LAT
52°27,8'N-04°33,4'E



11.6.2 Tidal streams

The predictions in the tables refers to HW IJmuiden.

IJmuiden		52°27.8'N	04°31.7'E
Time	Direction	Spring Rate	Neap Rate
-06	203°	1.2 kn	1.0 kn
-05	201°	1.0 kn	0.8 kn
-04	197°	0.8 kn	0.6 kn
-03	186°	0.3 kn	0.1 kn
-02	038°	0.5 kn	0.9 kn
-01	015°	2.5 kn	2.0 kn
HW	013°	2.3 kn	1.7 kn
+01	011°	1.6 kn	1.3 kn
+02	008°	1.1 kn	0.8 kn
+03	349°	0.3 kn	0.2 kn
+04	219°	0.9 kn	0.7 kn
+05	208°	1.5 kn	1.2 kn
+06	204°	1.3 kn	1.2 kn

IJmuiden		52°28.2'N	04°32.3'E
Time	Direction	Spring Rate	Neap Rate
-06	224°	0.8 kn	0.6 kn
-05	225°	0.6 kn	0.5 kn
-04	227°	0.5 kn	0.3 kn
-03	256°	0.1 kn	0.1 kn
-02	033°	0.5 kn	0.7 kn
-01	049°	1.5 kn	1.1 kn
HW	044°	1.4 kn	0.9 kn
+01	042°	0.8 kn	0.6 kn
+02	039°	0.5 kn	0.3 kn
+03	210°	0.1 kn	0.2 kn
+04	213°	1.0 kn	0.8 kn
+05	222°	1.1 kn	0.9 kn
+06	224°	0.9 kn	0.8 kn

IJmuiden		52°28.2'N	04°31.8'E
Time	Direction	Spring Rate	Neap Rate
-06	202°	1.1 kn	1.0 kn
-05	202°	1.0 kn	0.8 kn
-04	201°	0.8 kn	0.6 kn
-03	201°	0.4 kn	0.2 kn
-02	031°	0.3 kn	0.7 kn
-01	025°	1.9 kn	1.6 kn
HW	020°	1.9 kn	1.4 kn
+01	018°	1.4 kn	1.1 kn
+02	016°	1.0 kn	0.7 kn
+03	002°	0.3 kn	0.2 kn
+04	206°	0.6 kn	0.5 kn
+05	201°	1.2 kn	1.0 kn
+06	202°	1.2 kn	1.0 kn

Cautions

- It is strongly emphasised that the stream atlases show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand wave, etc.) deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels; this depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks the tidal stream flows through the channels; the direction of the stream follows the bearings of the banks. After sufficient flooding the tidal stream will cross the banks.
- At IJmuiden, a seagoing current occurs in the Buitenspuikanaal and North of the Noordersluis, during sluicing or pumping. This may hinder ships with a draught less than 5 metre, because the speed of the water layer 0 - 5 metre below the surface amounts to 1 knot during sluicing. Below this layer, hardly any current occurs. During pumping, the rates are about 50% less.
- At IJmuiden, due to the salt water/fresh water exchange, a northerly or southerly current occurs in the buitentoeleidingskanalen to the Noordersluis, Zeesluis IJmuiden and the Middensluis. These transverse currents can possibly set ships away.

11.7

Rules | Regulations

See [Chapter 2 – Navigation | Traffic safety, section 2.13 ‘Shipping regulations’](#).

11.8

Signals

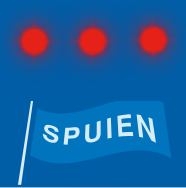
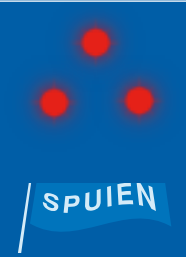
11.8.1

Sluicing signals

See also section 11.5.1 ‘General information’.

During sluicing signals are shown at the following positions:

- At Harbour Operation Centre
- On spit of land north entrance Buitenspuikanaal
- On top locking office
- East side Noordelijk Sluiseiland
- At the north bank near Zijkanaal A
- At the south bank near Zijkanaal C
- At the north bank near Zijkanaal G

Sluicing signal	Meaning
	Preparing for sluicing
	Sluicing in progress

11.9 Port information

11.9.1 IJmuiden

Facilities	Haringhaven Hoogovenhaven Visserhaven 1e Rijksbinnenhaven 2e Rijksbinnenhaven 3e Rijksbinnenhaven Staalhaven
Cargo	Ro-Ro, General Cargo, Bulk, Ore, Chemical products, Coal, Fish, Agriculture products, Steel works
Bunker	Fuel, Lubricating oil, Potable water
Repairing	- Small repairs has to be reported and approved by local authorities; - To patent slips, the larger with four 48m long cradle and capacity of 1200 tons.
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	- Speed: draught < 4m: 18km/h; draught: > 4m < 8m: 14km/h; draught > 8m: 12km/h; - Max. Ship's dimensions: in accordance with local authorities.

11.9.2 Velsen Noord

Facilities	Euro Base Octopus Base Grote Hout
Cargo	Offshore facilities
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Speed: draught < 4m: 18km/h; draught: > 4m < 8m: 14km/h; draught > 8m: 12km/h

11.9.3 Beverwijk

Facilities	Zijkanaal A
Cargo	Offshore facilities, Scrab, Reefer products, Forest products, Agriculture products
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Speed: draught < 4m: 18km/h; draught: > 4m < 8m: 14km/h; draught > 8m: 12km/h

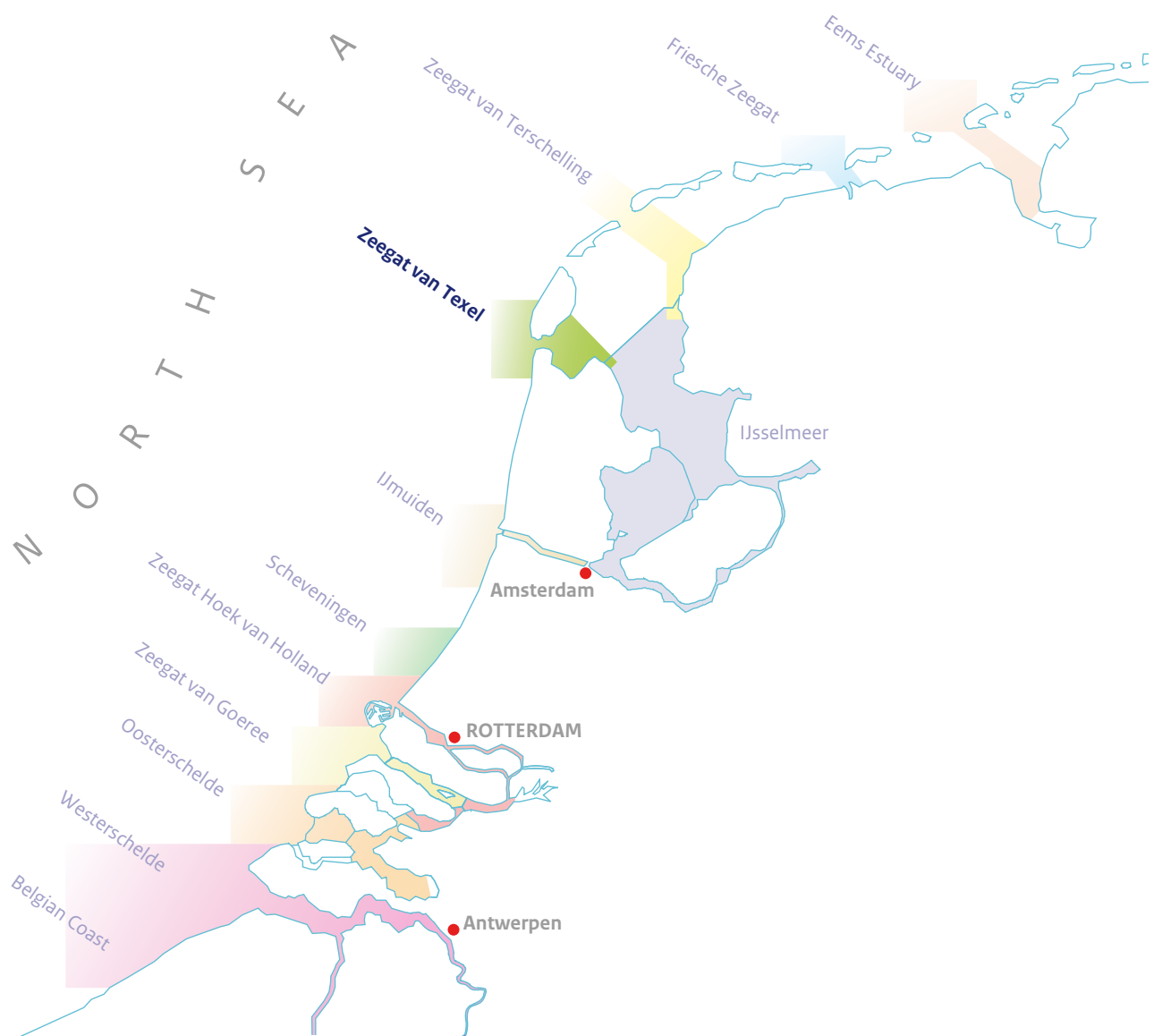
11.9.4 Zaandam

	Dirk Metselaarhaven Isaac Baarthaven Voorzaan Wim Thomassenhaven
Facilities	
Cargo	Edible oil, Sand, Agriculture products, Scrap, Aluminium, Forest products
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Speed: draught < 4m: 18km/h; draught: > 4m < 8m: 14km/h; draught > 8m: 12km/h

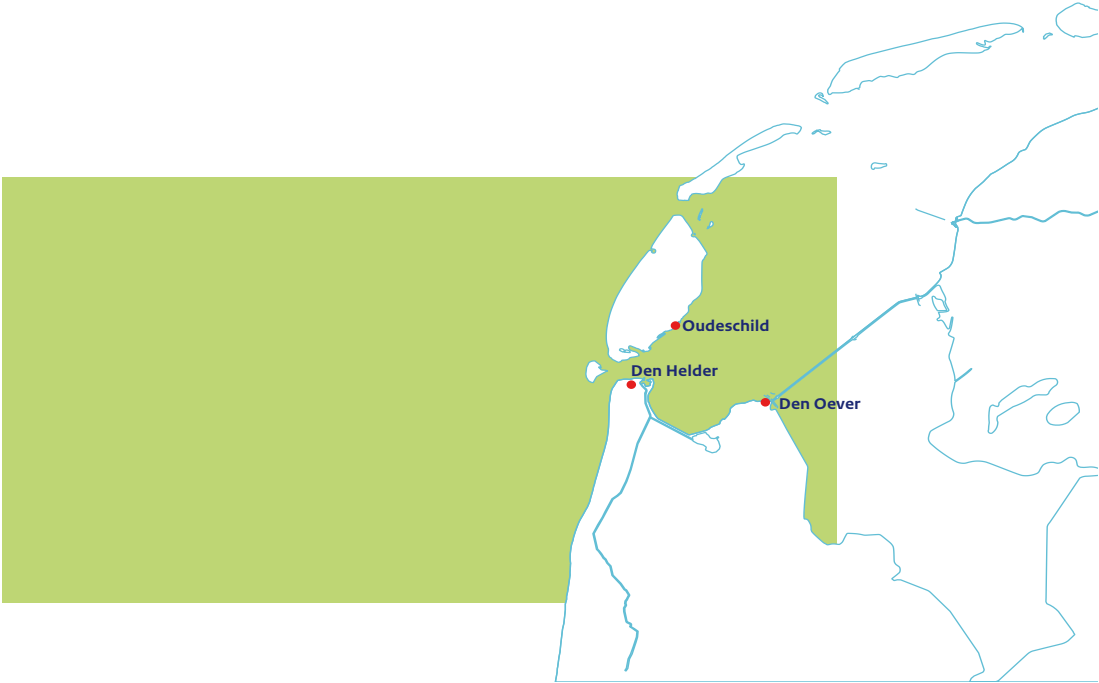
11.9.5 Amsterdam

	Afrikahaven Amerikahaven Australiëhaven Aziëhaven Beringhaven Bosporushaven Coenhaven Entrepotaven Hornhaven IJ Haven Jan v. Riebeeckhaven Mainhaven Mercuriushaven Minervahaven Neptunushaven Nieuwe Houthaven Petroleumhaven Sonthaven Suezhaven Usselincxhaven Vlothaven Westhaven
Facilities	
Cargo	Transshipment area, Coal, Granite, Gravel, Asphalt, Building material, Paper, RoRo, Chemical products, Scrap, Sand, Fertilizer, Phosphate, Minerals, Wine, Alcohol products, Inflammable products, Cacao, Passengers, Pesticide, General cargo, Timber, Grain, Soja, Forest products, Oil products, LPG, Building materials, Fruit
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Speed: draught < 4m: 18km/h; draught: > 4m < 8m: 14km/h; draught > 8m: 12km/h

	Cacaohaven Tasmaniehaven Carel Reynierszhaven Alaskahaven
Facilities	
Cargo	Coal, Granite, Gravel, Asphalt, General cargo, Containers, Building material, Oil, LPG, Cacao, Compost
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Speed: draught < 4m: 18km/h; draught: > 4m < 8m: 14km/h; draught > 8m: 12km/h



12.1 Destinations



12.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - ‘Catalogue of Nautical Charts and Nautical Publications’. This publication can be downloaded from: www.defensie.nl/hydro

12.3 Communication

12.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods

Who	All vessels carrying noxious and dangerous goods on the way to or leaving from the harbour, an inland anchorage or load/discharge terminal.
To	Harbour master via agent (Electronic Data Interchange - EDI)
What	A - B - G - H - I - L - O - P - U - W
When	■ If possible at least 24h before arrival at the harbour, anchorage or load/discharge terminal but at the latest before entering the Netherlands territorial waters; ■ Before leaving the harbour, anchorage or load/discharge terminal.
Note	See also section 12.3.3 ‘Explanation of codes’.

International Pollution Prevention Certificate

Who	All oil tankers with a gross tonnage of 150 tons or more.
To	Harbour master via agent (Electronic Data Interchange - EDI)
What	X7
When	ETA - 24h at the harbour
Note	See also section 12.3.3 'Explanation of codes'.

Notification of waste

Who	All vessels
To	Harbour master via agent (Electronic Data Interchange - EDI)
What	Name - call sign - IMO - flag - ETA - ETD - last and next port of call - last port and date where waste has been landed - do you land all/some/no garbage at the harbour reception facilities - Waste Report form.
When	ETA - 24h at the harbour or, if departure from a port was within this 24h, as soon as possible.
Remarks	None

Notification of ship's security

Who	All vessels
To	Harbour master via agent (Electronic Data Interchange - EDI)
What	X6
When	ETA - 24h at the harbour
Remarks	- Only vessels that are under way to a port or anchorage in the Netherlands as part of an international voyage; - The following vessels do not have to report: warships and troop transporting vessels - vessels without propulsion - wooden vessels with primitive construction - fishing vessels; - See also section 12.3.3 'Explanation of codes'.

ETA/ETD

Who	All seagoing vessels.
To	Traffic Station Den Helder Telephone: +31 (0)88 95 61 242 VHF Ch 62
What	A - B - C - G - H - I - J - O - P - Q - T - U - X
When	- At least 24h before arrival but at the latest before entering the Netherlands territorial waters; - At least 4h before leaving/shifting (confirmation 2h before).

Transit

Who	All vessels within the VTS area.
To	Traffic Station Den Helder VHF Ch 62
What	A - D
When	When crossing the VTS sector boundary.
Note	See also section 12.3.3 'Explanation of codes'.

12.3.2 Request for a pilot

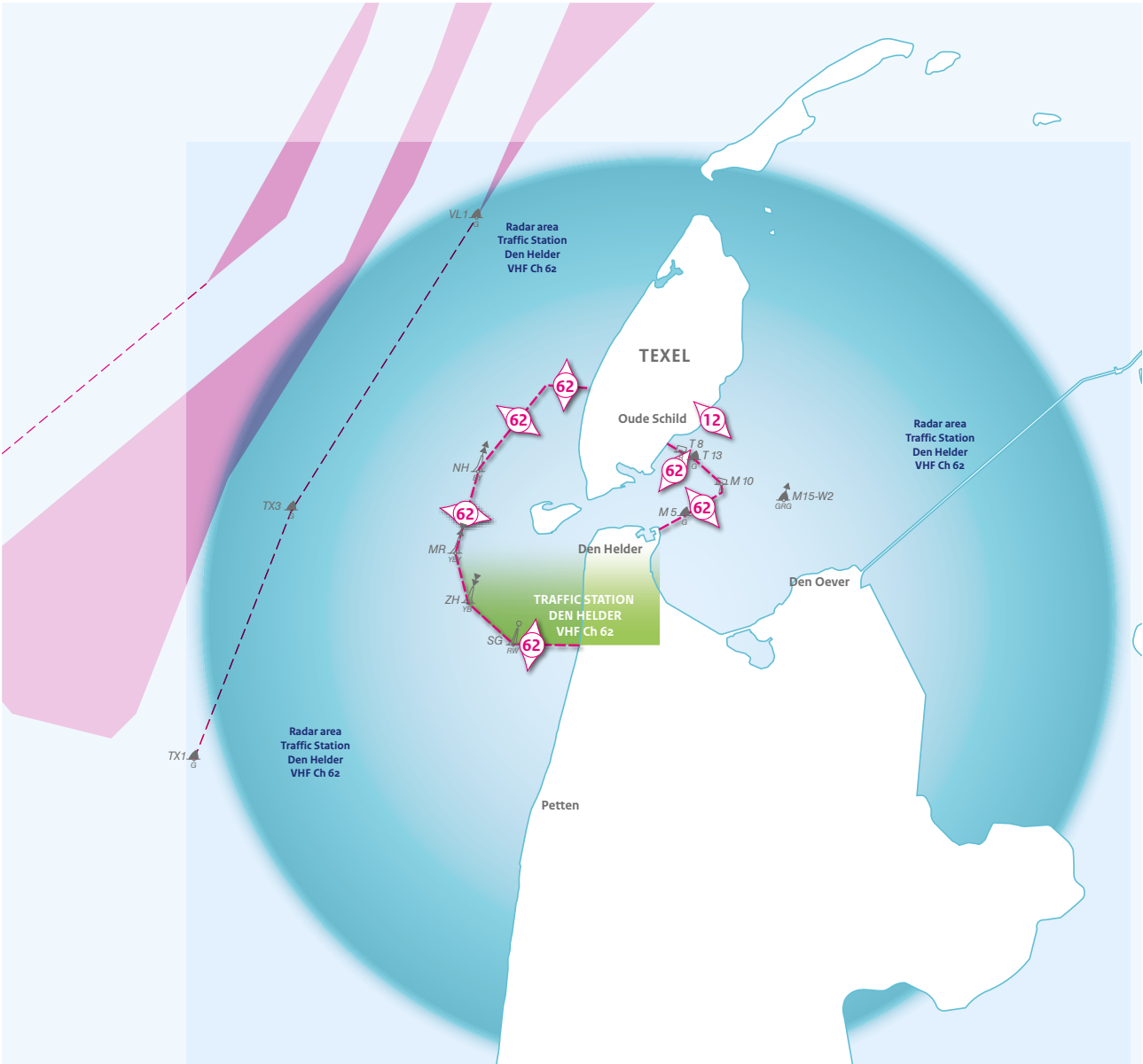
Who	All vessels compulsory to pilotage or if needed for vessels not compulsory to pilotage.
To	Pilot - VTS IJmuiden ETA's and ETD's must be sent to Amsterdam Pilots, direct, or via Den Helder Traffic Centre on VHF 62. Vessels should make contact on VHF 62 as early as possible for confirming their ETA and for berthing orders and/or other information. Telephone: +31 (0)255 56 4500 Fax: +31 (0)255 53 2535 E-mail: pilots.amsterdam@loodswezen.nl
What	■ Name vessel and call sign; ■ Port/Berth of destination; ■ ETA at the roads or at the Schulpengat fairway buoy; ■ Deepest draught; ■ Length Over All and GT; ■ IMO number.
When	Arrivals All vessels requiring the pilot at the roads must send ETA 6 hours before arrival. They should confirm their ETA 3 hours and 1 hour before arrival. Deviations of more than a half hour must be reported. Vessels requiring the pilot outside the roads should also contact the Chief Pilot at the IJmuiden Pilot station for instructions concerning position and time of embarkation. Departures ETD messages Den Helder must be sent at least 4 hours before departure. Deviations of more than a half hour must be reported. Vessels requiring the pilot to disembark outside the roads should also contact the Chief Pilot at the IJmuiden Pilot station for instructions concerning position and time of debarkation.

12.3.3 Explanation of codes

Code	Explanation
A	Vessel: Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event: A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position: True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, breadth, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

12.3.4 Vessel Traffic Services



VTS Reports			
VHF Ch	Location	Message	To
62	- All seagoing vessels on entering/leaving the VTS areas; - on anchoring/raising anchor and all other special manoeuvres inside the VTS area.	Name, Call sign or identification sign (MMSI number or IMO identification number), ship's flag.	Traffic Station Den Helder
12	All seagoing vessels before entering/leaving the harbour.	Name, Intentions	Harbour office Oudeschild

Vessel Traffic Services Zeegat van Texel

Station	VHF Ch	Traffic guidance	Traffic instructions	Navigational assistance	Shore based pilotage	General information
Traffic Station Den Helder	62	✓	✓	✓		
Radar area Traffic Station Den Helder	62	✓	✓	✓		

12.3.5 Communication with locks

Location	Locks	VHF Ch
Den Helder	Koopvaardersschutsluis	22
Den Oever	Stevensluizen	20

12.3.6 Communication with bridges

Location	Bridge	VHF Ch
Den Helder	Moormanbrug	18
	Van Kinsbergenbrug	14
	Burgemeester Visserbrug	22
Den Oever	Swing bridges (2)	22

12.3.7 Communication with pilot vessels

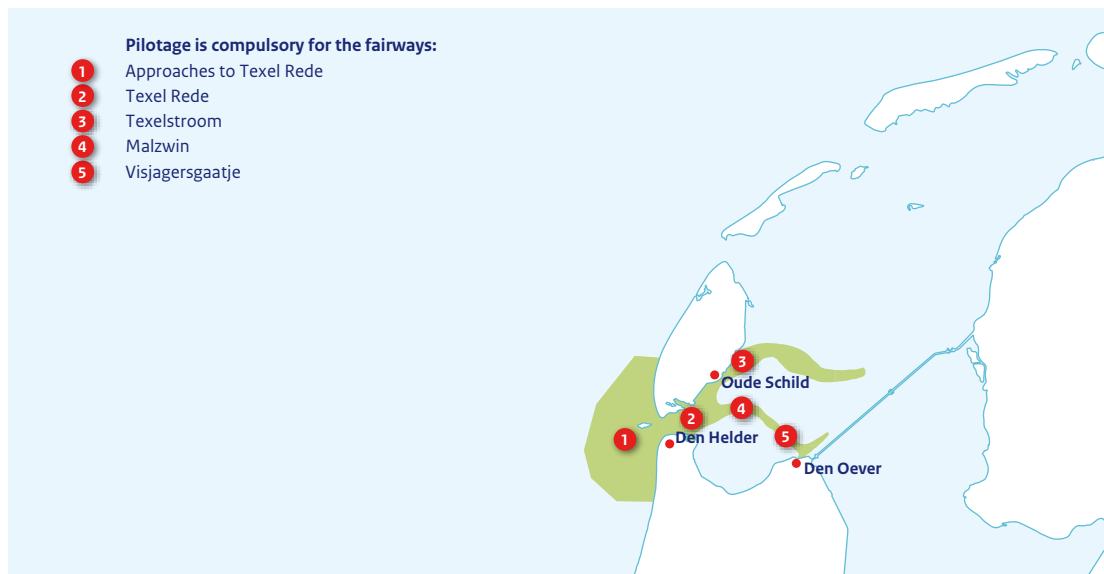
See section 12.3.2 'Request for a pilot'.

12.4 Pilotage

12.4.1 Local pilotage

Compulsory pilotage

Pilotage in this region is compulsory for the following fairways:



Exemptions compulsory pilotage

See [Chapter 2 – Navigation | Traffic safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Request for a pilot

See section [12.3.2 ‘Request for a pilot’](#).

Pilot vessel cruising stations

See section [12.3.2 ‘Request for a pilot’](#).

12.4.2 Deep sea pilotage

See [Chapter 2 – Navigation | Traffic safety, section 2.7 ‘Deep sea pilotage’](#).

12.4.3 Boarding arrangements

Boarding by pilot vessel

See [Chapter 2 – Navigation | Traffic safety, section 2.5.6 ‘Pilot boarding arrangements’](#).

12.5 Sailing directions

12.5.1 Zeegat van Texel



1 – Schulpengat to Den Helder

Haaksgronden provides shelter during strong NW winds. During strong SW winds little sea gets up with the NE-going tide. This changes however during the strong SW-going tide when the water is rough. Schulpengat is approached on the 026,5° Direction Lt (Den Hoorn). When the Sector Lt Huisduinen bears 070° true (start of the white sector) the Direction Lt 026,5° is left and vessels navigate in the white sector of Schilbolsnol Lt until entering the red sector of Huisduinen Lt (113° true). Thence proceed via Texelstroom (Marsdiep) in sight of buoys and lights to Den Helder. The Leading Lts 191° provides assistance entering or leaving the harbour. Allowance must be made for the direction and strength of the tidal stream in the roads and in front of the harbour entrance. The edge of the stream is often clearly visible. On passing within the breakwaters the influence of the stream on the direction of movement ceases rather suddenly. From Marsdiep to Den Helder Harbour radar guidance is given on request (Radar reference line).

2 – Molengat

Molengat is subject to continual change. Safe passage is not quaranteed.

3 – Marsdiep to Den Oever

Den Oever lies at the extreme SW end of Afsluitdijk (great enclosing dam). The harbour gives access to IJsselmeer through Stevinsluizen. From Den Helder roads the harbour can be reached through the buoyed and lit fairways of Gat van de Stier and/or Malzwin, Visjagersgaatje and Vaarwater naar Den Oever. The unlit and shallower fairway of Wierbalg runs parallel to Visjagersgaatje.

All these fairways mentioned are subject to continual change. The buoyage is, however, constantly to accomodate these changes. It is therefore strongly recommended that vessels remain within the fairways indicated by the buoyage.

The harbour is entered on the Leading Lts 131°. The Leading Lts provide guidance between Leidam and Dwarsdam. Halfway from Leidam the leading line is left and navigation to the harbour entrance at Buitenhaven is done by eye between the buoys. Guidance may be provided by the white light of the Sector Lt on the bifurcation dam between Buitenhaven and Noorderhaven.

Sluicing

The drainage sluices at Den Oever are important facilities for controlling the excess water in IJsselmeer. By their means the level of the water, receiving from a large part of the Netherlands can be regulated within certain narrow limits. When sluicing a water flow (in a northwesterly direction) will arise in front of the entrance to Buitenhaven.

4 – Marsdiep to Oudeschild

Oudeschild lies on the S-side of the island of Texel and is entered on the 291° Leading Lts. A strong cross stream may be encountered in front of the harbour entrance. When strong winds and streams are running against each other a difficult sea will arise before the harbour entrance. This is especially bad when strong E winds are blowing against the flood stream.

Note

Close W of Zeegat van Texel lies Haaksgronden. Over this area ground seas, heavy seas and or heavy breakers can arise during winds > 6-7 Bft from WNW-ly to N-ly directions. In Molengat, particularly on the outer bar, heavy seas can arise during winds > 6-7 Bft from WNW-ly to N-ly directions. When the wind runs against the falling tide (stream setting NW) ground seas can arise. In Schulpengat a rough sea arises when winds > 6-7 Bft from SW-ly direction runs against the falling tide (stream setting SW).

12.5.2**Military exercises**

In Zeegat van Texel several areas has been designated as military exercise areas. For more information see Chapter 2 – Navigation | Traffic safety, sections **2.8 ‘Military exercise and detonation areas’** and **2.9 ‘Exercises with mine countermeasure vessels’**.

12.5.3 Anchorages

Den Helder Roads

There are several anchorages indicated on the chart all marked with a letter. These are only anchorages allocated by the Harbour Coordination Centre. If another anchorage is requested, this will only be allowed if it is not:

- in a position dangerous to shipping;
- near submerged cables or pipelines;
- on the leading line 191° (Den Helder harbour);
- within 800m of the W breakwater;
- within 500m on either side of the radar line indicated on the nautical chart (exclusively for use by naval vessels);
- within 400m of a warship.

It is not permitted to anchor in a position other than that allocated by Traffic Station Den Helder.

12.5.4 Locks

Den Oever

Stevinsluizen	
Maximum ship's dimensions	LOA: 120m; Beam: 13m; Draught: 3,5m
Remarks	■ Operational: 24h; ■ Contact: see section 12.3.5 'Communication with locks'.

Den Helder

Koopvaardersschutsluis	
Maximum ship's dimensions	Up to the lock master
Remarks	■ Operational: 24h; ■ Contact: see section 12.3.5 'Communication with locks'.

12.5.5 Bridges

Den Helder

Moormanbrug (bascul bridge and fixed part)	
Maximum ship's dimensions	Up to the bridge keeper
Remarks	■ Operational: 24h
Van Kinsbergenbrug (bascul bridge)	
Maximum ship's dimensions	Up to the bridge keeper
Remarks	Operational: Mon - Thu between 0600-2300; Fri between 0600-2359; Sat between 0000-2200.
Burgemeester Visserbrug (bascul bridge)	
Maximum ship's dimensions	Up to the bridge keeper
Remarks	Operational: 24h.
Note	■ Contact: see section 12.3.6 'Communication with bridges'.

Den Oever

Swing bridges (2)	
Maximum ship's dimensions	Up to the lock master (Stevinsluizen)
Remarks	■ Operational: 24h
Note	Contact: see section 12.3.6 'Communication with bridges'.

12.6

Tidal information

For general information see [Chapter 4 – Oceanography](#).

12.6.1

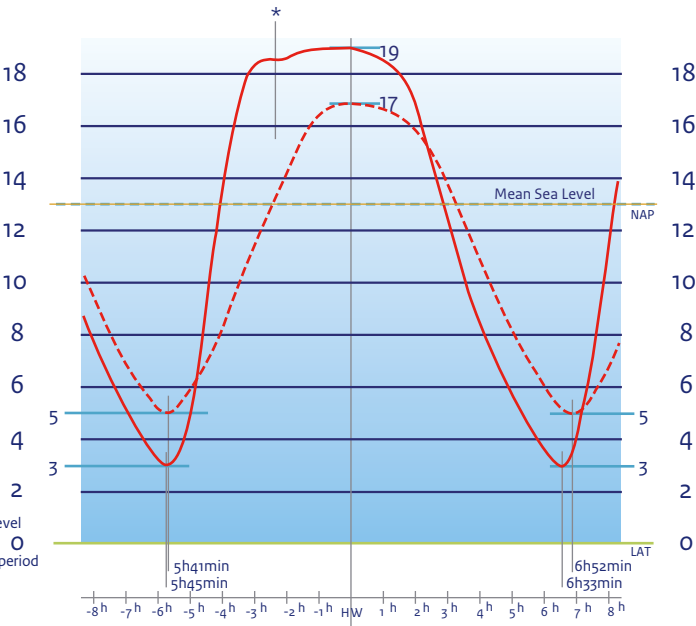
Tidal curve



Den Helder
TIDAL HEIGHT in dm
referred to LAT
52°57,9'N-04°44,8'E

— Springs
- - - Neaps

LAT lies 13 dm below Mean Sea Level
NAP lies on the same level as Mean Sea Level
*= predicted HW at the beginning of HW-period



12.6.2 Tidal streams

The predictions in the tables of Den Helder and Oudeschild refers to LW Den Helder.

The predictions in the table of Den Oever refers to HW Harlingen.

Den Helder		52°58.1'N	04°47.9'E
Time	Direction	Spring Rate	Neap Rate
-06	277°	0.0 kn	0.2 kn
-05	271°	0.7 kn	0.6 kn
-04	274°	1.2 kn	0.9 kn
-03	275°	1.4 kn	1.0 kn
-02	275°	1.3 kn	1.0 kn
-01	275°	1.0 kn	0.8 kn
LW	275°	0.7 kn	0.6 kn
+01	099°	0.2 kn	0.0 kn
+02	093°	1.9 kn	1.2 kn
+03	092°	1.5 kn	1.6 kn
+04	092°	1.0 kn	1.2 kn
+05	092°	0.7 kn	0.8 kn
+06	091°	0.4 kn	0.4 kn

Oude Schild		53°02.3'N	04°51.5'E
Time	Direction	Spring Rate	Neap Rate
-06	047°	0.5 kn	0.4 kn
-05	199°	0.1 kn	0.1 kn
-04	224°	0.9 kn	0.6 kn
-03	229°	1.2 kn	0.9 kn
-02	229°	1.2 kn	1.0 kn
-01	230°	1.0 kn	0.9 kn
LW	230°	0.9 kn	0.7 kn
+01	234°	0.4 kn	0.3 kn
+02	043°	1.3 kn	0.6 kn
+03	047°	1.7 kn	1.4 kn
+04	046°	1.3 kn	1.4 kn
+05	046°	1.0 kn	1.1 kn
+06	046°	0.8 kn	0.8 kn

Den Oever		52°57.8'N	04°59.9'E
Time	Direction	Spring Rate	Neap Rate
-06	109°	1.4 kn	0.0 kn
-05	110°	1.6 kn	1.2 kn
-04	108°	0.9 kn	1.2 kn
-03	107°	0.7 kn	0.7 kn
-02	106°	0.4 kn	0.4 kn
-01	131°	0.1 kn	0.0 kn
HW	284°	0.6 kn	0.4 kn
+01	290°	0.9 kn	0.6 kn
+02	293°	1.0 kn	0.8 kn
+03	293°	1.0 kn	0.9 kn
+04	292°	1.0 kn	0.9 kn
+05	291°	0.9 kn	0.7 kn
+06	101°	0.1 kn	0.2 kn

Cautions

- It is strongly emphasised that the stream atlases show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand waves, etc.) deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels. This depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks the tidal stream flows through the channels; the direction of the stream follows the bearings of the banks. After sufficient flooding the tidal stream will cross the banks.

12.7 Rules | regulations

See [Chapter 2 – Navigation | Traffic safety, section 2.13 ‘Shipping regulations’](#).

12.8 Port information

12.8.1 Den Helder

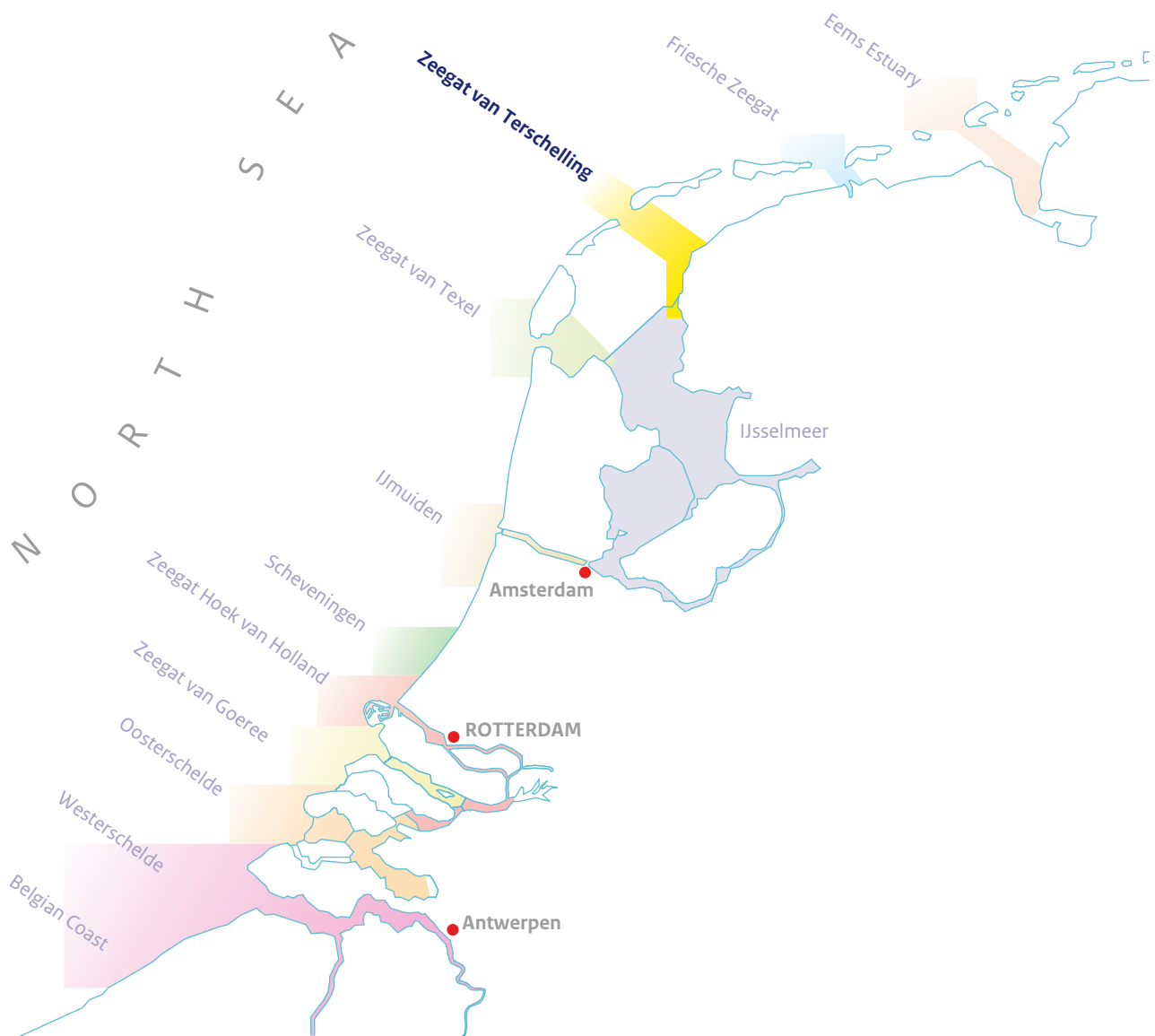
	
Facilities	
Cargo	Off shore activities, Fish, Navalbase
Bunker	Fuel, Lubricating oil, Potable water
Repairing	■ Small repairs has to be reported and approved by local authorities ■ Ship yards
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats and boatmen available
Restrictions	Speed: 5kn

12.8.2 Oudeschild

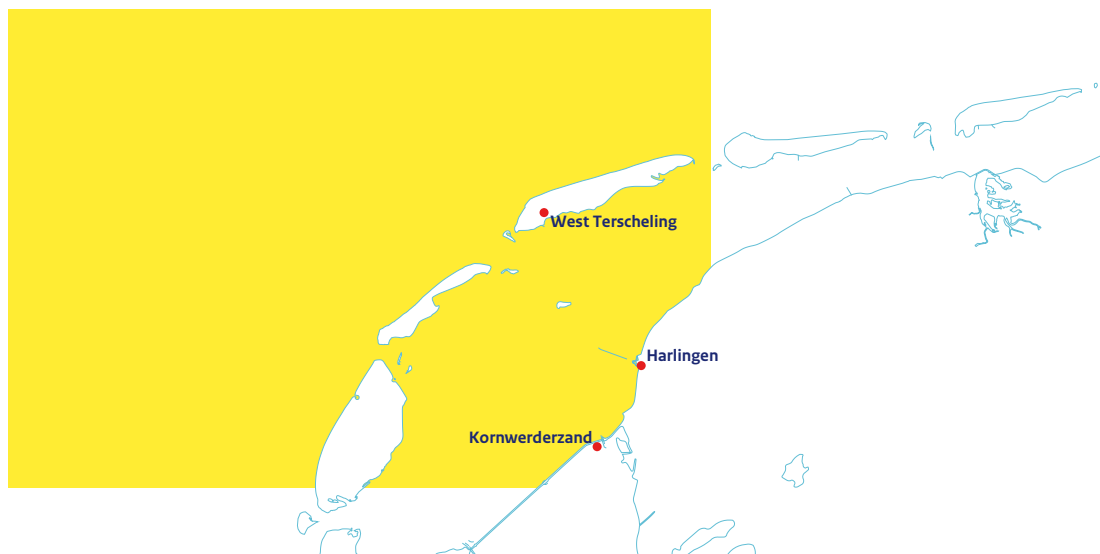
	
Facilities	
Cargo	Fish
Bunker	Fuel, Lubricating oil, Potable water
Repairing	■ Small repairs has to be reported and approved by local authorities ■ Floating dock (up to 1500 tons)
Port reception	Oil waste, Garbage
Mooring	Tugboats and boatmen available
Restrictions	Speed: 5kn

12.8.3 Den Oever

	
Facilities	
Cargo	Fish
Bunker	Fuel, Lubricating oil, Potable water
Repairing	■ Small repairs has to be reported and approved by local authorities ■ Floating dock
Port reception	Oil waste, Garbage
Mooring	Tugboats and boatmen available
Restrictions	Speed: 5kn



13.1 Destinations



13.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - 'Catalogue of Nautical Charts and Nautical Publications'. This publication can be downloaded from: www.defensie.nl/hydro

13.3 Communication

13.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods

Who	All vessels carrying noxious and dangerous goods on the way to or leaving from the harbour, an inland anchorage or load/discharge terminal
To	Harbour master via agent (Electronic Data Interchange - EDI)
What	A - B - G - H - I - L - O - P - U - W
When	■ If possible at least 24h before arrival at the harbour, anchorage or load/discharge terminal but at the latest before entering the Netherlands territorial waters ■ Before leaving the harbour, anchorage or load/discharge terminal
Note	See also section 13.3.3 'Explanation of codes'

International Pollution Prevention Certificate

Who	All oil tankers with a gross tonnage of 150 tons more
To	Harbour master via agent (Electronic Data Interchange - EDI)
What	X7
When	ETA - 24h at the harbour
Note	See also section 13.3.3 'Explanation of codes'

Notification of waste

Who	All vessels
To	Harbour master via agent (Electronic Data Interchange - EDI)
What	Name - call sign - IMO - flag - ETA - ETD - last and next port of call - last port and date where waste has been landed - do you land all/some/no garbage at the harbour reception facilities - Waste Report form
When	ETA - 24h at the harbour or, if departure from a port was within this 24h, as soon as possible

Notification of ship's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passenger vessels
To	Harbour master via agent (Electronic Data Interchange - EDI)
What	X6
When	ETA - 24h at the harbour
Remarks	- Only vessels that are under way to a port or anchorage in the Netherlands as part of an international voyage - The following vessels do not have to report: warships and troop transporting vessels - vessels without propulsion - wooden vessels with primitive construction - fishing vessels - See also section 13.3.3 'Explanation of codes'

ETA

Who	All seagoing vessels
To	Harbour Coordination Centre Harlingen Telephone: +31 (0)517 41 25 12 E-mail: haven@portofharlingen.nl
What	A - B - C - G - H - I - J - O - P - Q - T - U - X
When	At least ETA - 24h but at the latest before entering the Netherlands territorial waters
Who	All seagoing vessels
To	Traffic Station Brandaris Telephone: +31 (0)88 79 74 640 VHF Ch 02
What	A - B - D - O - Q - U
When	At least ETA - 6h
Note	See also section 13.3.3 'Explanation of codes'

Transit

Who	All vessels within the VTS area
To	Traffic Station Brandaris VHF Ch 02
What	A - D
When	When crossing the VTS sector boundary
Note	See also section 13.3.3 'Explanation of codes'

13.3.2 Request for a pilot

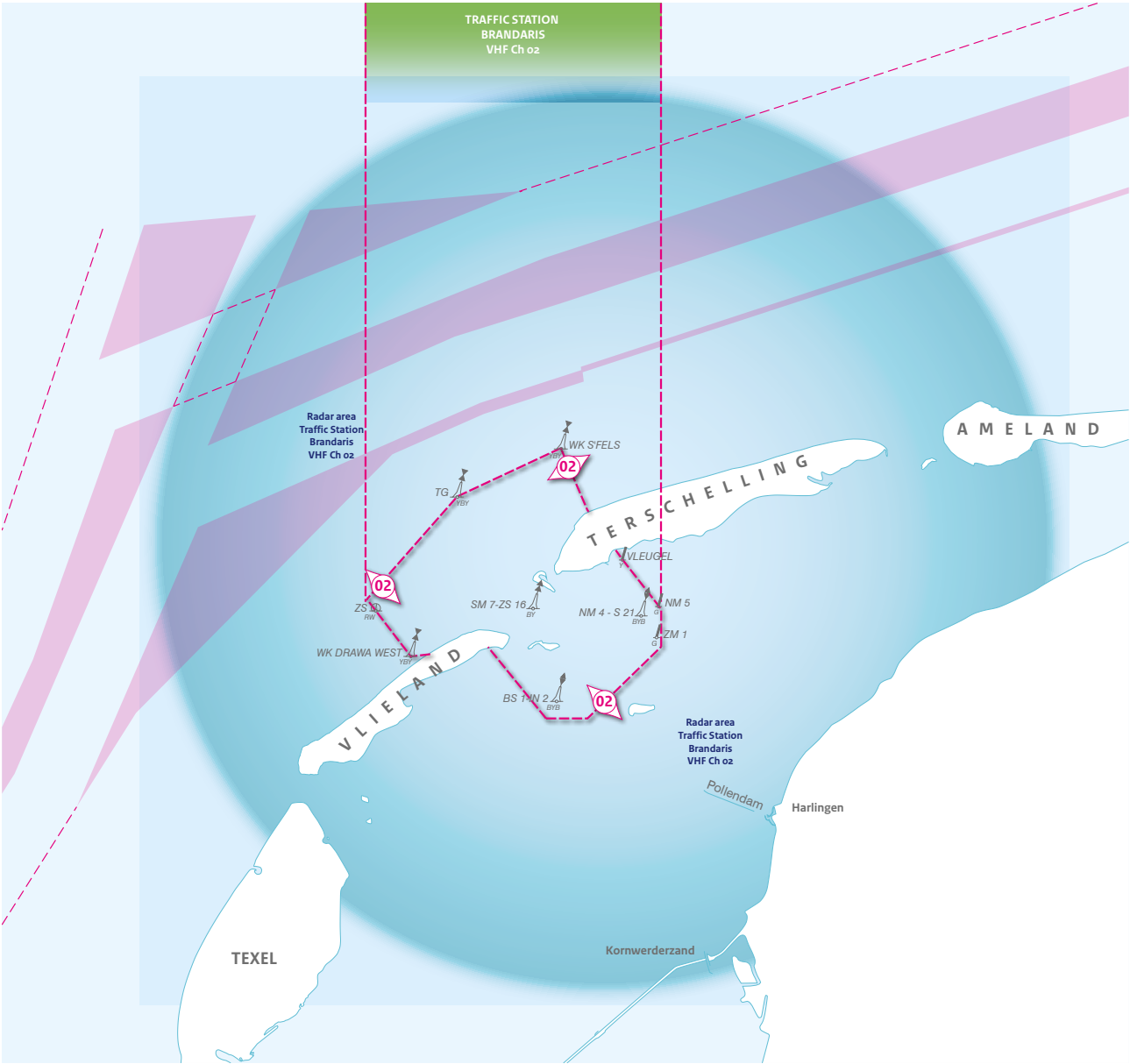
Who	All vessels compulsory to pilotage.
To	Loodsdienstcoördinatie Noord Telephone: +31 (0)596 61 36 72 E-mail: lodicon@loodswezen.nl Harlingen Pilot: VHF Ch 19
What	J
When	■ ETA - 6h (pilot station near ZS fairway buoy or pilot station Vlierede) ■ Deviations of more than 1h should be reported ■ ETD - 4h before leaving Harlingen ■ ETD - 6h before leaving Terschelling / Kornwerderzand
Note	See also section 13.3.3 'Explanation of codes'

13.3.3 Explanation of codes

Code	Explanation
A	Vessel: Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event: A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position: True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, breadth, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

13.3.4 Vessel Traffic Services



VTS Reports			
VHF Ch	Location	Message	To
02	■ All seagoing vessels on entering/leaving the VTS area; ■ On anchoring/raising anchor and all other special manoeuvres inside the VTS area ■ On entering/leaving harbours directly adjoining	Name, Call sign or identification sign (MMSI number or IMO identification number), ship's flag, Length and draught, Position, Destination, Dangerous cargo according to IMO/ADNR classification	Traffic Station Brandaris

Vessel Traffic Services Zeegat van Terschelling

Station	VHF Ch	Traffic guidance	Traffic instructions	Navigational assistance	Shore based pilotage	General information		
Traffic Station Brandaris	02	✓	✓	✓		✓		
Radar area Traffic Station Brandaris	02	✓	✓	✓		✓		
Harlingen Port Authority	11		✓			✓		

Communication with locks

Location	Locks	VHF Ch
Kornwerderzand	Lorentzsluizen	18

Communication with bridges

Location	Locks	VHF Ch
Kornwerderzand		18

Communication with pilot vessel

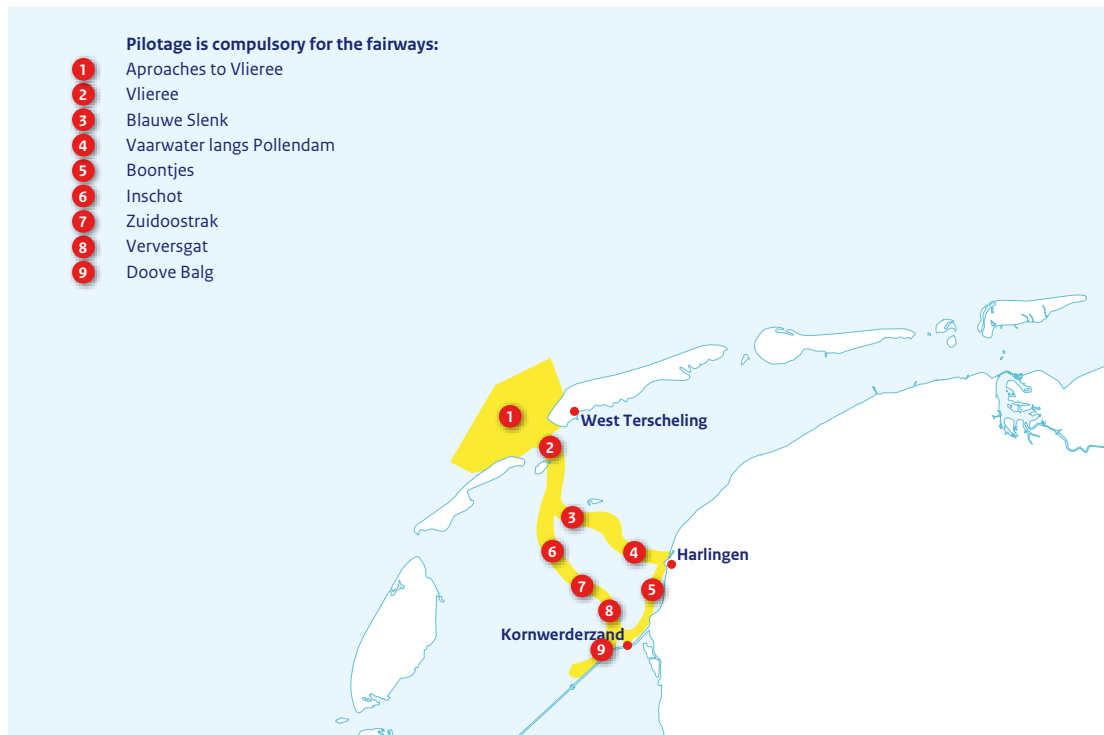
See section 13.3.2 'Request for a pilot'.

13.4 Pilotage

13.4.1 Local pilotage

Compulsory pilotage

Pilotage in this region is compulsory for the following fairways:



Exemptions compulsory pilotage

See [Chapter 2 – Navigation | Traffic safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Request for a pilot

See section [13.3.2 ‘Request for a pilot’](#).

Pilot vessel cruising stations

See section [13.3.2 ‘Request for a pilot’](#).

13.4.2 Deep sea pilotage

See [Chapter 2 – Navigation | Traffic safety, section 2.7 ‘Deep sea pilotage’](#).

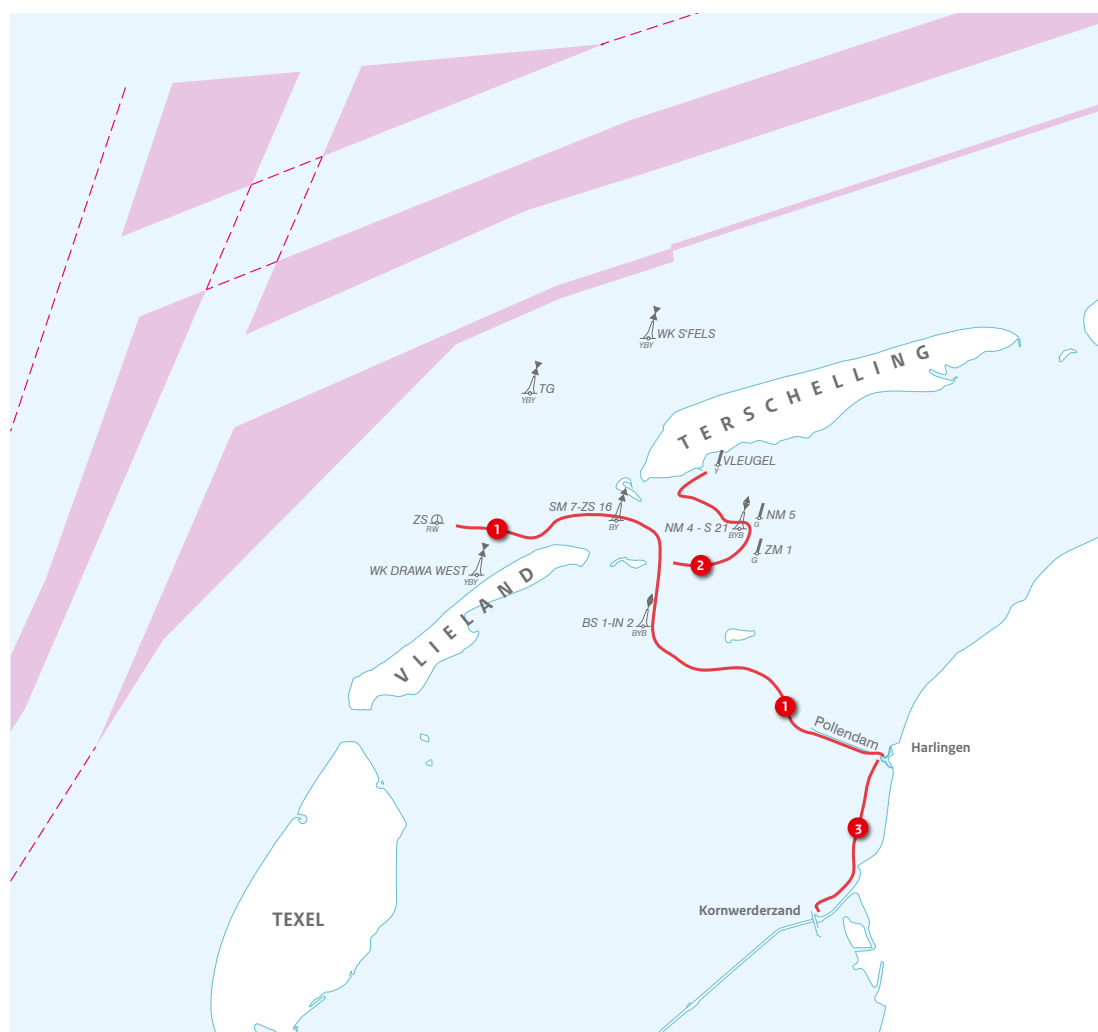
13.4.3 Boarding arrangements

Boarding by pilot vessel

See [Chapter 2 – Navigation | Traffic safety, section 2.5.6 ‘Pilot boarding arrangements’](#).

13.5 Sailing directions

13.5.1 Zeegat van Terschelling



1 – Zuider Stortemelk to Harlingen**Zuider Stortemelk**

Zuider Stortemelk is the only fairway through Zeegat van Terschelling. When rounding Terschellinger Gronden it is advisable to remain W of the line joining the Lt buoys ZS and TG. During the rising tide there is a little sea on the outer bar of this fairway, even during strong NW winds. When the fierce ebb stream runs against a NW gale heavy seas may rise on the outer bar making passage very risky.

When the embarkation of the pilot near the Lt buoy ZS is suspended, it can take place in Vlieree.

Vlieree / Vliestroom

If a deep draught vessel has to wait for the tide, this can best be done in Vliestroom.

Off Lt buoy BS 8 the tide can cause a set either to the N or S. When it is necessary to anchor, this can be done between the LT buoys BS8 and BS10, between the Lt buoys BS12 and BS14 and between the Lt buoys BS21 and BS23.

Vaargeul langs Pollendam

The Leading Lts 111° leading line provide guidance through the fairway south of Pollendam. The axis of the fairway lies 58m from the dam. Once abreast Pollendam stopping or anchoring is not possible. In the event of engine failure or other emergency manoeuvre course should be set away from Pollendam, the ship grounded and an anchor dropped. If Pollendam is awash, the rising tide sets to the north (towards the dam) and the falling tide to the south. In this situation considerable corrections to the course may be necessary. Oncoming ships may be confused by the heading. Clarity of intention is therefore required. Sound signals should be made in good time or communication can take place with Harlingen Port Authority (see [13.3.4 section 'Vessel Traffic Services Zeegat van Terschelling'](#)).

Harlingen Approach

- During falling tide (stream setting south): After passing Pollendam the lights of Tjerk Hiddessluizen should be kept dead ahead until the harbour entrance is well open. The harbour can then be entered with the sector Lt (FG) between the harbour breakwater lights.
- During the rising tide (stream setting north): After passing Pollendam the Lt tower should be kept dead ahead. As a rule the ship will be set so much to the north by the stream, that she will be well clear of the southern pier. As the bow passes out of the stream, the N-going stream will set the stern across and the ship will turn to starboard and be on course to proceed into the harbour entrance. When the southern pier is given too wide a berth there is a danger of being set onto the bank north of the harbour by the N-going stream. When approaching the harbour, course corrections of 10° to 20° may be needed to counter the strength of the stream. This can cause confusion if an oncoming ship is met, which has to carry out a similar course correction on account of the stream. When in doubt about the intentions of the other ship the Port Authority can be contacted. Furthermore recreational craft and ferries maintaining a service to the islands of Vlieland and Terschelling may be encountered in the roads. The Port Authority can provide information about the times of departure and arrival of the ferries.

When sluicing is done through Tjerk Hiddessluizen, a strong current will run through Nieuwe Voorhaven and Voorhaven in the direction of the harbour entrance, which may cause difficulty.

2 – West Meep to West-Terschelling harbour

West Terschelling harbour is approached through West Meep, Noord Meep and Slenk fairways. Vessels sailing Slenk fairway should have whenever possible their engines on standby or actually running. Additionally, they may not cross over an approaching ferry and must keep a listening watch on VHF Ch 02 (Traffic Station 'Brandaris'). The fairways are subject to frequent changes.

3 – Boontjes to Kornwerderzand

The harbour (Lorentzsluizen) is approached through Boontjes fairway. When entering, care is necessary due to the tidal stream. During the flood stream (NE-going) vessels should keep well clear of N-cardinal Lt buoy BO7-KZ2. The stream will ensure that the vessel arrives directly at the harbour entrance. Course should then be set to keep the harbour axis light (Iso G 6s) in the middle between the harbour lights. Vessels should not come E of the harbour entrance by the stream. During the ebb stream (SW-going) vessels should head for the N cardinal Lt buoy BO7-KZ2, passing close just E of the harbour axis. Care must be taken not to come W of this line as there is a real possibility of being set on the W breakwater. During sluicing a strong stream running across the fairway off Spuihaven Noord should be expected. There is a connection with IJsselmeer through Lorentzsluizen.

Note

Over Terschellinger Gronden, Zuider Stortemelk and Vlieree northern entrance ground seas and/or heavy seas can arise during winds > 6 Bft from W-ly to N-ly directions especially when the wind runs against the falling tide (stream setting NW).

13.5.2**Military exercise**

For more information see [Chapter 2 – Navigation | Traffic safety, sections 2.8 ‘Military exercises and detonation areas’](#).

13.5.3**Anchorage****Zeegat van Terschelling**

- Coastal anchorages can be found 1 nm SW Lt buoy of ZS and 1.5 nm SW of Lt buoy TG.
- Within the entrance, anchorage can be obtained during W winds and waiting for the tide in Vliestroom.
- For vessels carrying hazardous cargoes anchorages are established in West meep and Inschot.
- When necessary a vessel can anchor in fairway Blauwe Slenk between the Lt buoys BS8 and BS10 or BS12 and BS14 or BS21 and BS23.
- North of the harbour entrance of Harlingen just south of buoys K1 and K2 (short period).

Traffic Station Brandaris should always be consulted in selection of an anchorage.

13.5.4**Locks****Kornwerderzand****Lorentzsluizen****Maximum ship's dimensions**

LOA: 120m **Beam:** 13m **Draught:** 3.5m

Remarks

- Operational: 24h
- Contact: see [section ‘Communication with locks’](#)



13.5.5 Bridges

Kornwerderzand	
Kornwerderzand bridge (swing bridge)	
Maximum ship's dimensions	In consultation with lock keeper
Remarks	Operational: 24h Contact: see section 'Communication with bridges'

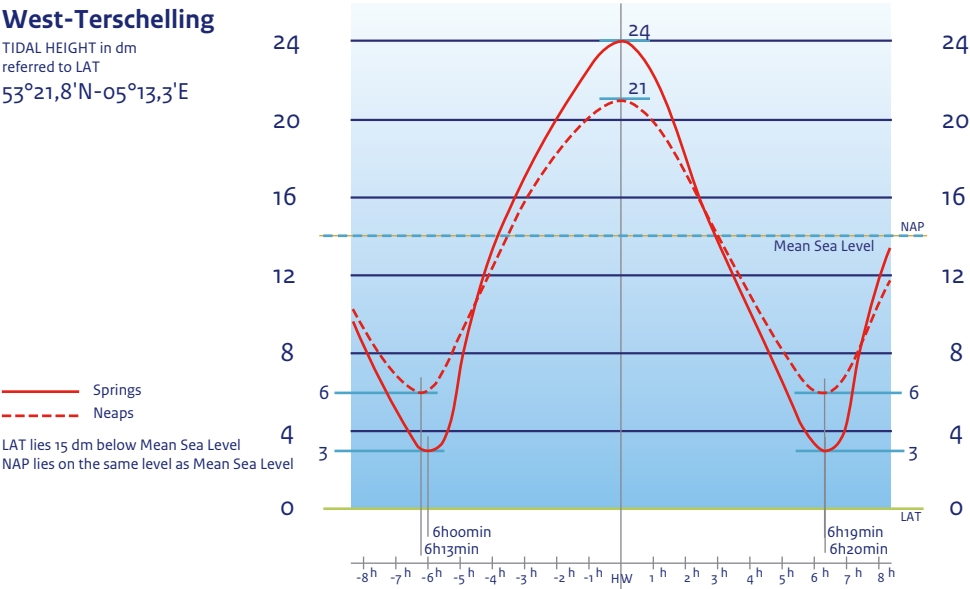
13.6 Tidal information

For general information see [Chapter 4 – 'Oceanography'](#).

13.6.1 Tidal curves



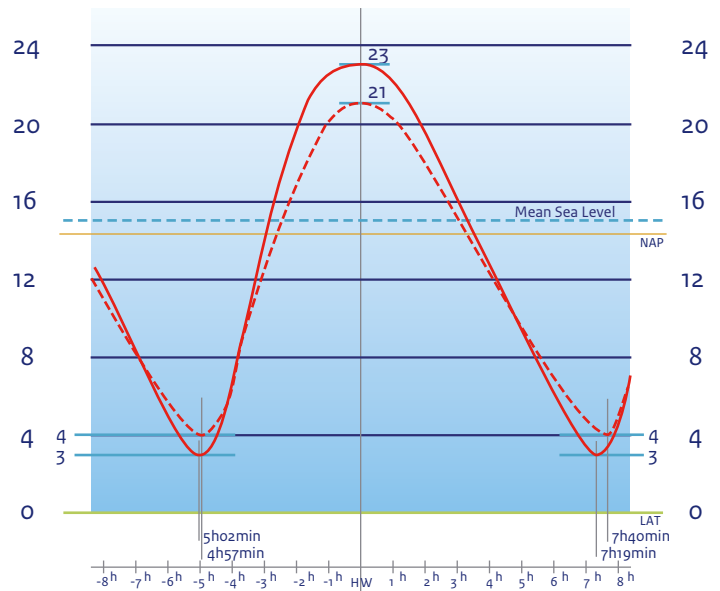
West-Terschelling
TIDAL HEIGHT in dm
referred to LAT
53°21,8'N-05°13,3'E



Harlingen

TIDAL HEIGHT in dm
referred to LAT
53°10,6'N-05°24,6'E

— Springs
- - - Neaps
LAT lies 15 dm below Mean Sea Level
NAP lies 0.7 dm below Mean Sea Level

**13.6.2****Tidal streams**

The predictions in the tables refers to HW Harlingen

± 4 nm NW Vuurduin Lt.		53°19.0'N	04°59.0'E
Time	Direction	Spring Rate	Neap Rate
-06	059°	0.8 kn	0.7 kn
-05	075°	2.0 kn	0.9 kn
-04	078°	1.7 kn	1.5 kn
-03	083°	1.4 kn	1.4 kn
-02	087°	1.2 kn	1.1 kn
-01	096°	0.6 kn	0.7 kn
HW	242°	0.5 kn	0.3 kn
+01	266°	1.5 kn	0.5 kn
+02	273°	1.9 kn	1.2 kn
+03	275°	1.9 kn	1.5 kn
+04	277°	1.9 kn	1.5 kn
+05	280°	1.6 kn	1.3 kn
+06	307°	0.6 kn	0.9 kn

West-Terschelling		53°21.2'N	05°13.1'E
Time	Direction	Spring Rate	Neap Rate
-06	051°	0.1 kn	0.6 kn
-05	055°	1.5 kn	0.4 kn
-04	055°	1.5 kn	1.2 kn
-03	055°	1.3 kn	1.1 kn
-02	055°	1.3 kn	0.9 kn
-01	055°	0.9 kn	0.8 kn
HW	234°	0.2 kn	0.5 kn
+01	236°	1.4 kn	0.2 kn
+02	236°	1.4 kn	1.1 kn
+03	236°	1.3 kn	1.2 kn
+04	236°	1.2 kn	1.0 kn
+05	236°	1.1 kn	0.9 kn
+06	235°	0.6 kn	0.6 kn

Harlingen		53°10.1'N	05°23.6'E
Time	Direction	Spring Rate	Neap Rate
-06	241°	0.3 kn	0.3 kn
-05	227°	0.1 kn	0.2 kn
-04	058°	0.6 kn	0.2 kn
-03	043°	0.7 kn	0.6 kn
-02	037°	0.6 kn	0.6 kn
-01	037°	0.4 kn	0.5 kn
HW	065°	0.1 kn	0.2 kn
+01	206°	0.3 kn	0.2 kn
+02	214°	0.4 kn	0.4 kn
+03	217°	0.5 kn	0.4 kn
+04	220°	0.5 kn	0.4 kn
+05	226°	0.4 kn	0.4 kn
+06	235°	0.4 kn	0.3 kn

Kornwerderzand		53°05.3'N	05°20.9'E
Time	Direction	Spring Rate	Neap Rate
-06	242°	0.8 kn	0.8 kn
-05	067°	1.0 kn	0.3 kn
-04	065°	2.0 kn	1.3 kn
-03	065°	1.5 kn	1.6 kn
-02	065°	0.9 kn	1.1 kn
-01	067°	0.5 kn	0.6 kn
HW	198°	0.0 kn	0.1 kn
+01	240°	0.6 kn	0.4 kn
+02	239°	0.9 kn	0.8 kn
+03	240°	1.0 kn	1.0 kn
+04	240°	1.0 kn	1.0 kn
+05	242°	1.0 kn	1.0 kn
+06	242°	0.9 kn	0.9 kn

Cautions

- It is strongly emphasised that the stream atlases show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand waves, etc.) deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels. This depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks the tidal stream pulls through the channels. The direction of the stream follows the bearings of the banks. After sufficient flooding the tidal stream will cross the banks.
- In the Waddenzee the tidal stream pattern is complicated in tidal flat areas flood streams from separate tidal inlets meet each other continuously, resulting in local lower stream rates. This causes a comparatively high sedimentation rate in these tidal flat areas; tidal flats usually stretch meandering between coast and island.
- In the Waddenzee lengthy periods with easterly winds may cause considerable water level reductions and shifts in tidal stream patterns.
- Deviations from the Waddenzee tidal stream atlases may occur after a number of years after publication. This is the result of ever changing channels in this area.

13.7 Rules | regulations

See Chapter 2 – Navigation | Traffic safety, section 2.13 ‘Shipping regulations’.

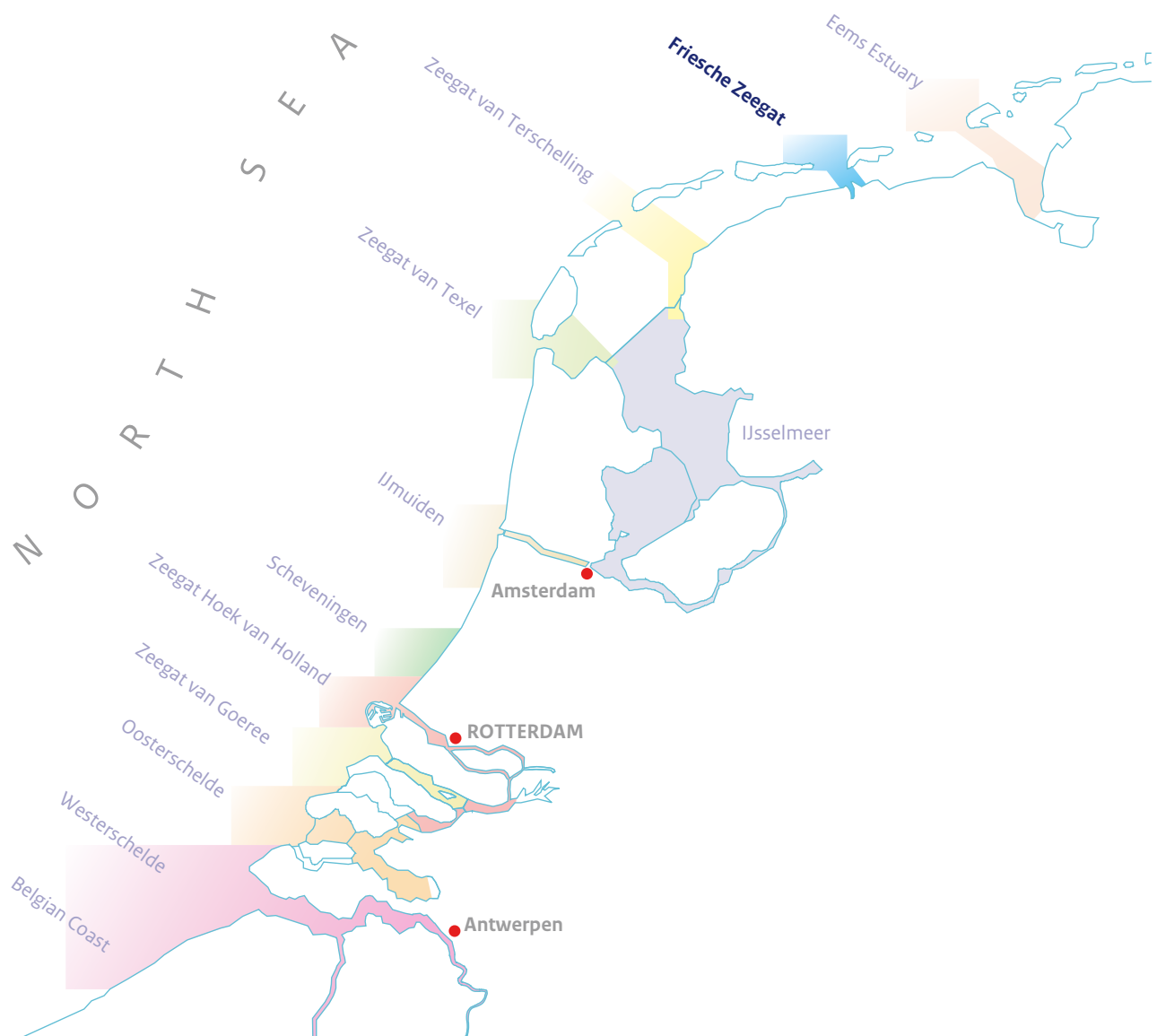
13.8 Port information

13.8.1 West-Terschelling

	
Facilities	
Cargo	Fish, Containers, Oil, Gas, Ro-Ro, Passengers, Chemical products, Floral products, Agriculture products, Cattle, Reefer products
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities
Port reception	Oil waste, Garbage and Chemicals
Mooring	Tugboats assistance available
Restrictions	Speed: 3 kn

13.8.2 Harlingen

	Industriehaven	Nieuwe Voorhaven	Nieuwe Willemshaven	Oude Buitenhaven	Nieuwe Vissershaven	Vluchthaven												
Facilities																		
Cargo	General cargo, Containers, Offshore activities, Passengers, Bulk, Chemical products, Fish products																	
Bunker	Fuel, Lubricating oil, Potable water																	
Repairing	Small repairs has to be reported and approved by local authorities Drydock: max ship's dimensions: Length 145m; beam 30m Floating dock: Lifting capacity: 2500 tons; max ship's dimensions: Length 115m; beam 21.5m																	
Port reception	Oil waste, Garbage and Chemicals																	
Mooring	Tugboats assistance and boatmen available																	
Restrictions	Safe speed: in accordance with local circumstances																	



14.1 Destinations



14.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - 'Catalogue of Nautical Charts and Nautical Publications'. This publication can be downloaded from:

www.defensie.nl/hydro

14.3 Communication

14.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods

Who	All vessels carrying noxious and dangerous goods on the way to or leaving from the harbour, an inland anchorage or load/discharge terminal.
To	Harbour master via agent (Electronic Data Interchange - EDI).
What	A - B - G - H - I - L - O - P - U - W
When	■ If possible at least 24h before arrival at the harbour, anchorage or load/discharge terminal but at the latest before entering the Netherlands territorial waters ■ Before leaving the harbour, anchorage or load/discharge terminal
Note	See also section 14.3.3 'Explanation of codes'.

International Pollution Prevention Certificate

Who	All oil tankers with a gross tonnage of 150 tons more.
To	Harbour master via agent (Electronic Data Interchange - EDI).
What	X7
When	ETA - 24h at the harbour.
Note	See also section 14.3.3 'Explanation of codes'.

Notification of waste

Who	All vessels
To	Harbour master via agent (Electronic Data Interchange - EDI).
What	Name - call sign - IMO - flag - ETA - ETD - last and next port of call - last port and date where waste has been landed - do you land all/some/no garbage at the harbour reception facilities - Waste Report form.
When	ETA - 24h at the harbour or, if departure from a port was within this 24h, as soon as possible.

Notification of ship's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passenger vessels
To	Harbour master via agent (Electronic Data Interchange - EDI).
What	X6
When	ETA - 24h at the harbour.
Remarks	■ Only vessels that are under way to a port or anchorage in the Netherlands as part of an international voyage; ■ The following vessels do not have to report: warships and troop transporting vessels - vessels without propulsion - wooden vessels with primitive construction - fishing vessels; ■ See also section 14.3.3 'Explanation of codes'.

ETA

Who	■ All vessels carrying dangerous cargo ■ Special transports ■ Vessels restricted in their manoeuvrability
To	Centrale Meldpost Waddenzee Telephone: +31 (0)88 79 74 599 VHF Ch 04
What	Name vessel - call sign - nationality- type of vessel and GT - loa - beam - draught - Lloyds number - harbour of destination - ETA - sailing plan - cargo specifications - confirmation 'Bill of loading' on board - number of crew/passengers on board.
When	■ ETA - 24h entering Waddenzee ■ Unexpected circumstances within VHF - range

14.3.2 Request for a pilot

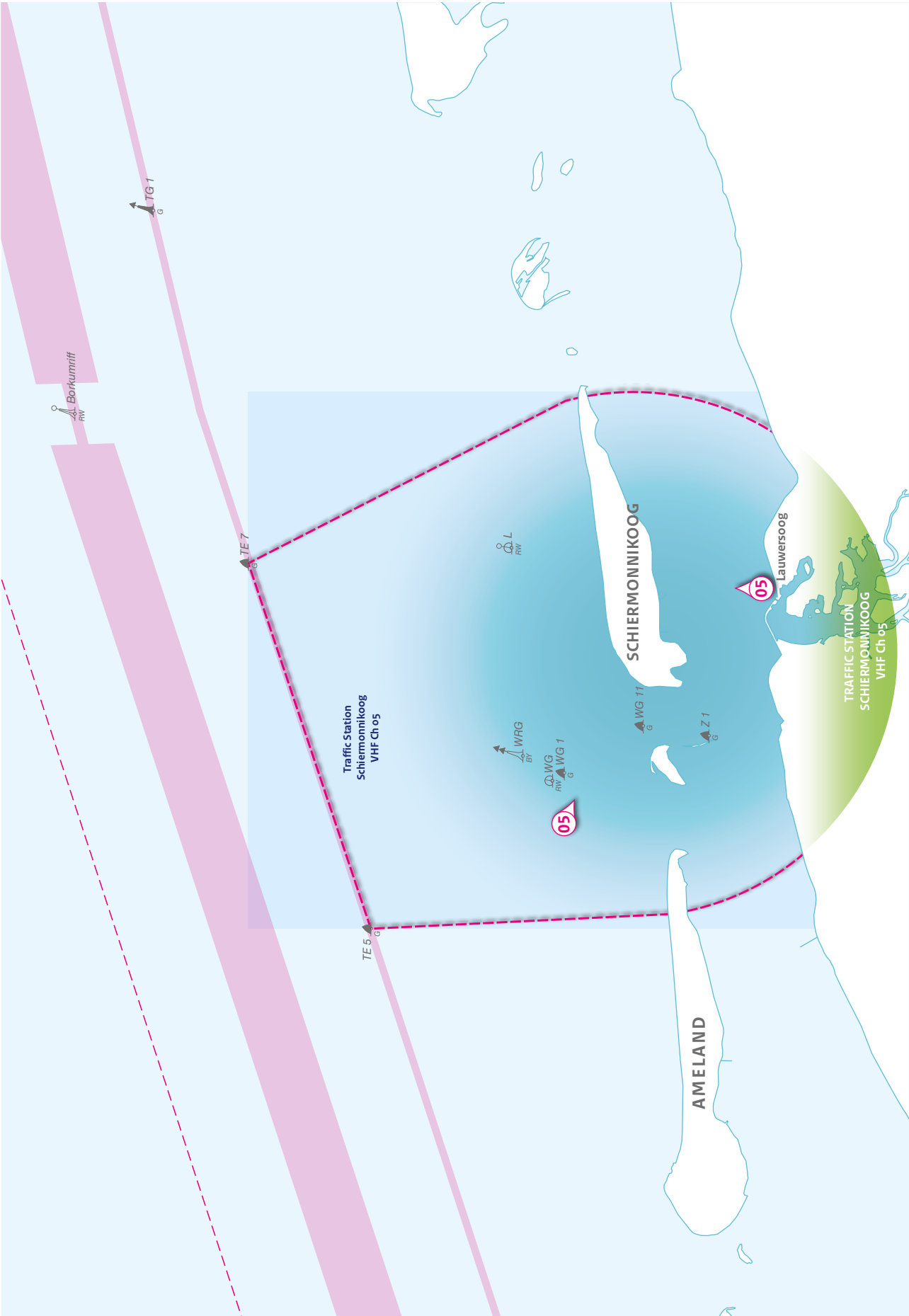
Who	All vessels compulsory to pilotage.
To	Pilot Coördination Centre Noord Telephone: +31 (0)596 61 36 72 E-mail: lodicon@loodswezen.nl
What	A - B - I - J - O - T - U - X
When	■ ETA - 12h (pilot station near fairway buoy Westereems) ■ Deviations of more than 1h should be reported ■ ETA - 4h before arrival contact Pilot Office Delfzijl/Eemshaven on VHF Ch 19
Note	See also section 14.3.3 'Explanation of codes' .

14.3.3 Explanation of codes

Code	Explanation
A	Vessel: Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event: A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position: True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, breadth, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

14.3.4 Vessel Traffic Services



VTS-reports - All vessels except vessels < 20m (not carrying dangerous cargo)

VHF Ch	Location	Message	To
05	- On time before entering Waddenzee - When leaving/entering a harbour or secondary fairway - When turning in or crossing the fairway - When dropping or heaving anchor	- Name vessel and call sign - Position - Destination - Draught - Cargo - Number of crew/passengers	Traffic Station Schiermonnikoog

Other communication

VHF Ch	Location	Service	Call sign
05	Lighthouse Schiermonnikoog	Traffic Station Schiermonnikoog provides radar information on request. This means that the vessel's position relative to buoys or other recognisable points is passed. No information is provided about shipping in the vicinity. Navigational information regarding the eastern part of the Waddenzee is transmitted at the following fixed times (Lt): 0030, 0230, 0430, 0630, 0830, 1030, 1230, 1430, 1630, 1830, 2030 and 2230.	Traffic Station Schiermonnikoog
04		The Central Reporting Station Waddenzee is responsible for co-ordinating the relevant maritime authorities with regard to all incidents within the Waddenzee area.	Central Reporting Station Waddenzee
11	Lauwersoog Harbour	The station is occupied: Mon. 0000 - 1700; Tue. and Wed. from 0800 - 0700; Thu. and Sat. from 0700 - 1500 (Lt)	Port Authority Lauwersoog

14.3.5 Communication with lock

Location	Lock	VHF Ch
Lauwersoog	Robbengatsluis	64

14.3.6 Communication with pilot vesselSee section [14.3.2 'Request for a pilot'](#).

14.4

Pilotage

14.4.1

Local pilotage

Compulsory pilotage

Pilotage in this region is ad-hoc compulsory for the following fairways:



Exemptions compulsory pilotage

See [Chapter 2 – Navigation | Traffic safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Request for a pilot

See section [14.3.2 ‘Request for a pilot’](#).

14.4.2

Boarding arrangements

Boarding by pilot vessel

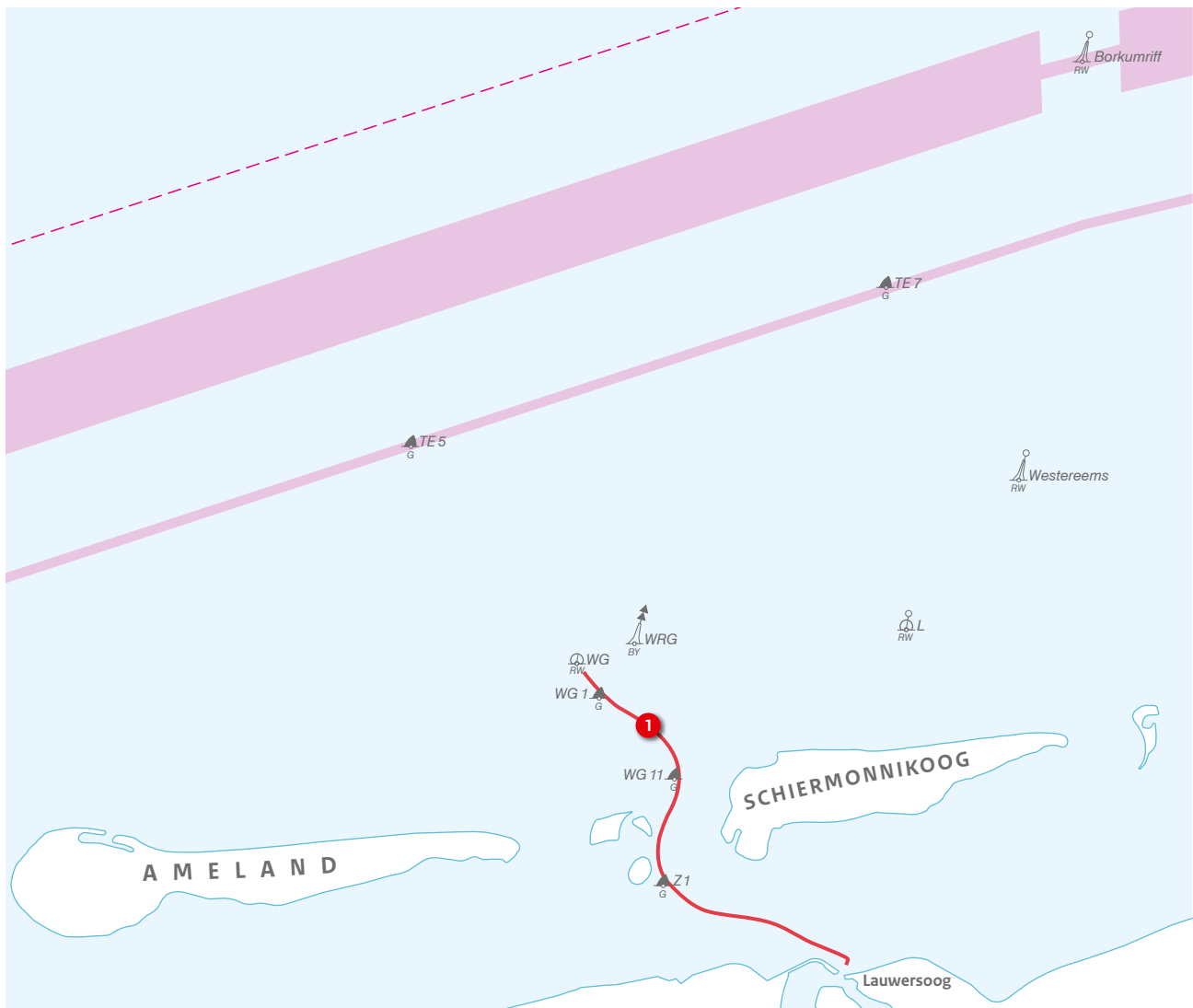
See [Chapter 2 – Navigation | Traffic safety, section 2.5.6 ‘Pilot boarding arrangements’](#).

14.5

Sailing directions

14.5.1

Friesche Zeegat

**1 – Westgat to Lauwersoog****Friesche zeegat**

This sea area is not of importance to seagoing trade. Coastal trade bound for Groningen is advised to proceed via Delfzijl.

The outer banks of the channel are subject to considerable change. On the Gronden van Plaatgat en Rif heavy swell and rough seas occur during strong W to NE winds. The channel can only be entered or left during reasonably fine weather. The road of Lauwersoog is entered through the lit fairways of Westgat and Zoutkamperlaag.

The set of the stream N of Het Rif and Kuipersplaat is at right angles to the fairway of Westgat. During the ebb tide with a strong W wind a difficult sea arises in Zoutkamperlaag and especially in front of the harbour entrance at Lauwersoog.

Westgat

On the outer ground the stream sets initially in a E/W direction. Further inside the ebb and flood streams follow the channels of the buoyed fairway and hardly any noticeable sideways drift will be experienced before reaching fairway Zoutkamperlaag.

Zoutkamperlaag

In the W part of Zoutkamperlaag the ingoing flood stream sets somewhat to the green buoy side of the fairway. Off Z2, Z4 and Z6A buoys the outgoing stream sets strongly towards the red buoy side of the fairway, as most of the outgoing ebb stream passes E of Kuipersplaat through Plaatgat. Outward bound ships, leaving on the ebb, are strongly advised, as far as shipping permits, to keep their course as long as possible on Z1 Lt buoy and then make a very wide turn in Westgat.

At half tide, most of the flow of the flood and ebb streams passes in front of the harbour entrance at Lauwersoog; a rate of well over 2 knots should be expected. As a result of the relatively shallow waters off the harbour entrance, local heavy seas are frequent, which go down considerably further in.

There are sluicing locks just W of the harbour entrance. During sluicing a strong current should be anticipated. A counter current exist just in front of and in the harbour entrance.

Note

Over Gronden van het Plaatgat, Wierumer Gronden and the buoyed channel Westgat ground seas and/or heavy seas can arise during winds > 7 Bft from WNW-ly to NEly directions especially when the wind runs against the falling tide (stream setting NW-N). Small vessels are advised not to navigate the channel during above mentioned circumstances. Sailing Westgat can best be done via Lt buoy ‘WG’ from 2h before HW Lauwersoog to HW Lauwersoog (HW at the Fairway Buoys = approximately HW Lauwersoog - ooh2om). The Traffic Station at Schiermonnikoog will inform shipping about wind and sea state on request. See section 14.3.4 ‘Vessel traffic services’.

14.5.2 **Military exercises**

For more information see Chapter 2 – Navigation | Traffic safety, sections 2.8 ‘Military exercise and detonation areas’.

14.5.3 **Locks**

Lauwersoog

Robbengatsluis	
Maximum ship’s dimensions	In consultation with lock keeper.
Remarks	■ Opening times (May 1st - October 1st): Mon. to Fri.: from 0700 - 1200 and 1300 - 2000; Sat.: 0700 - 1900 (closed only in May from 1200 - 1300); Sun. and public holidays: closed; ■ Contact: see section 14.3.5 ‘Communication with lock’.



14.6

Tidal information

For general information see [Chapter 4 – Oceanography](#).

14.6.1

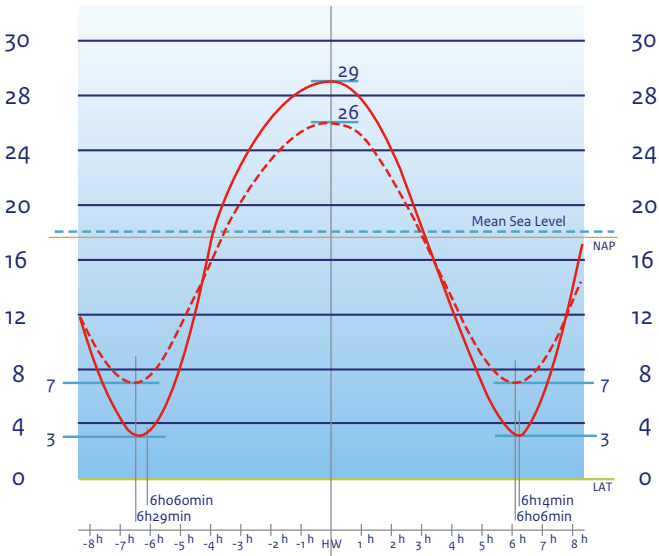
Tidal curves



Lauwersoog

TIDAL HEIGHT in dm
referred to LAT
53°24,6'N-06°11,9'E

— Springs
- - - Neaps
LAT lies 18 dm below Mean Sea Level
NAP lies 0.4 dm below Mean Sea Level



14.6.2 Tidal streams

The predictions in the tables refers to HW Delfzijl.

Westgat		53°27.7'N	06°04.7'E	Zoutkamperlaag		53°25.6'N	06°09.0'E
Time	Direction	Spring Rate	Neap Rate	Time	Direction	Spring Rate	Neap Rate
-06	195°	2.5 kn	2.2 kn	-06	112°	2.0 kn	1.8 kn
-05	192°	2.4 kn	2.0 kn	-05	109°	2.1 kn	1.8 kn
-04	191°	1.9 kn	1.5 kn	-04	107°	1.9 kn	1.5 kn
-03	190°	1.3 kn	1.1 kn	-03	106°	1.4 kn	1.1 kn
-02	202°	0.4 kn	0.5 kn	-02	104°	0.6 kn	0.6 kn
-01	000°	1.1 kn	0.6 kn	-01	291°	0.8 kn	0.4 kn
HW	006°	1.9 kn	1.5 kn	HW	294°	1.6 kn	1.3 kn
+01	005°	2.1 kn	1.9 kn	+01	295°	1.8 kn	1.7 kn
+02	006°	2.1 kn	1.8 kn	+02	296°	1.9 kn	1.6 kn
+03	007°	1.7 kn	1.4 kn	+03	298°	1.6 kn	1.3 kn
+04	004°	0.8 kn	0.8 kn	+04	300°	0.7 kn	0.7 kn
+05	196°	0.5 kn	0.3 kn	+05	108°	0.4 kn	0.2 kn
+06	194°	1.9 kn	1.4 kn	+06	112°	1.4 kn	1.0 kn

Cautions

- It is strongly emphasised that the stream atlases show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand waves, etc.) deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep-draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels. This depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks the tidal stream pulls through the channels; the direction of the stream follows the bearings of the banks. After sufficient flooding the tidal stream will cross the banks.
- In the Waddenzee the tidal stream pattern is complicated in tidal flat areas, flood streams from separate tidal inlets meet each other continuously, resulting in local lower stream rates. This causes a comparatively high sedimentation rate in these tidal flat areas; tidal flats usually stretch meandering between coast and island.
- In the Waddenzee lengthy periods with easterly winds may cause considerable water level reductions and shifts in tidal stream patterns.
- Deviations from the Waddenzee tidal stream atlases may occur after a number of years after publication. This is the result of ever changing channels in this area.

14.7

Rules | regulations

See [Chapter 2 – Navigation](#) | [Traffic safety, section 2.13 ‘Shipping regulations’](#).

14.8

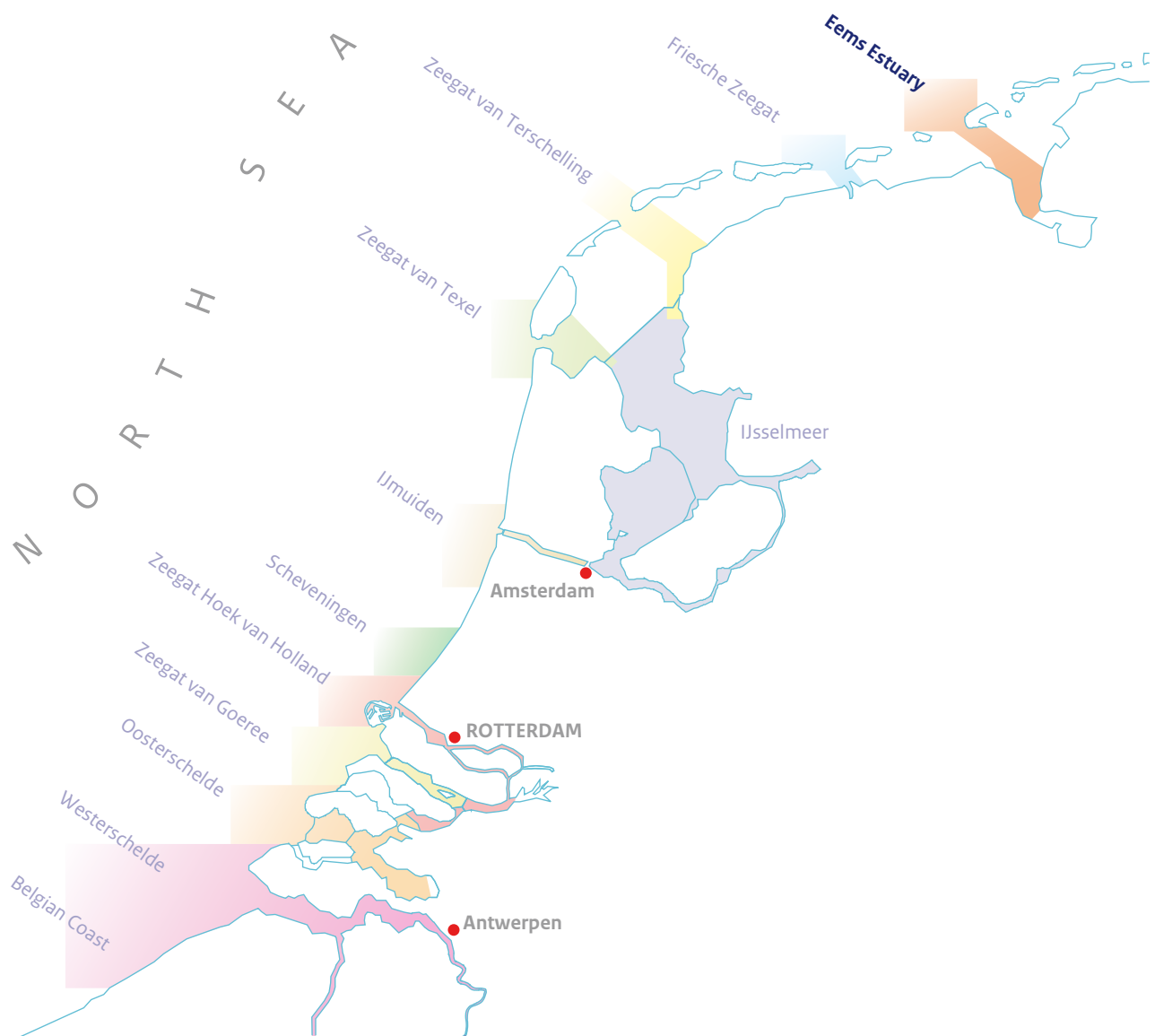
Port information

14.8.1

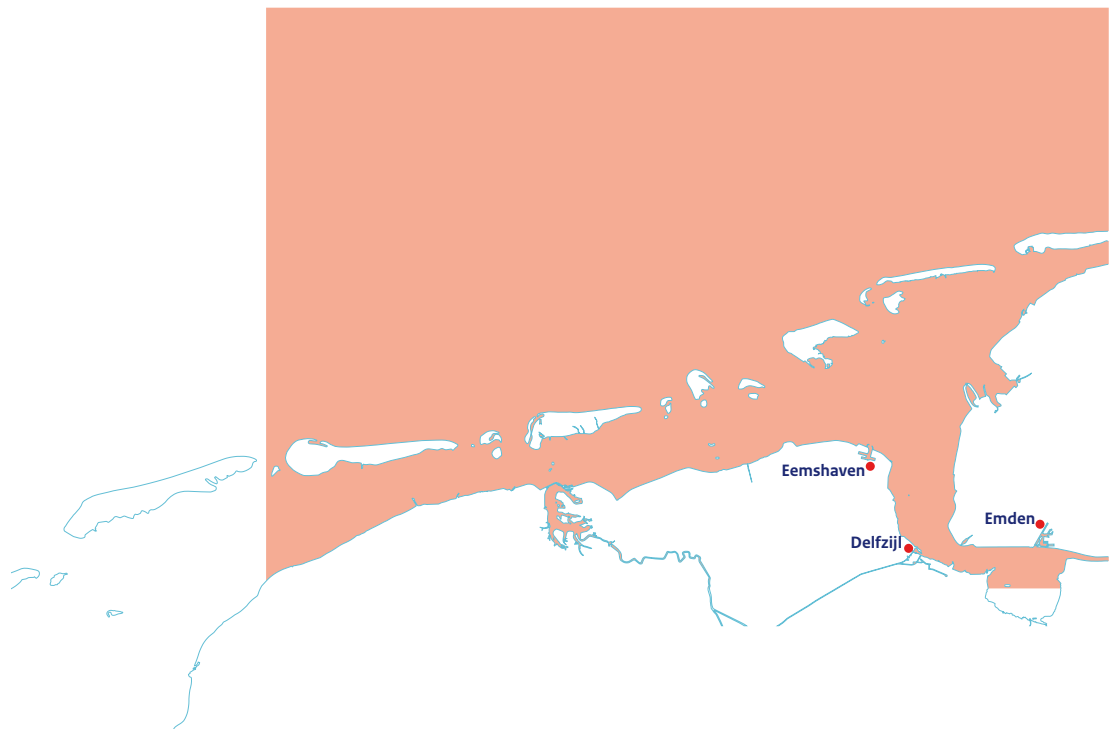
Lauwersoog



Facilities	
Cargo	Passengers, Fish products
Bunker	Fuel, Lubricating oil, Potable water
Repairing	Small repairs has to be reported and approved by local authorities;
Port reception	Oil waste, Garbage
Mooring	Tugboats assistance and boatmen available
Restrictions	Speed: in accordance with local circumstances Veerhaven: only in use by ferry



15.1 Destinations



15.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - 'Catalogue of Nautical Charts and Nautical Publications'. This publication can be downloaded from: www.defensie.nl/hydro

15.3 Communication

15.3.1 Pre-entry / Pre-departure reports

Notification of dangerous goods

Who	All vessels carrying noxious and dangerous goods on the way to or leaving from the harbour, an inland anchorage or load/discharge terminal.
To	Harbour master Groningen Seaports via agent (Electronic Data Interchange - EDI).
What	A - B1 - G - H - I1 - I2 - L - O - P - U - W
When	■ If possible at least 24h before arrival at the harbour, anchorage or load/discharge terminal but at the latest before entering the Netherlands territorial waters ■ Before leaving the harbour, anchorage or load/discharge terminal
Note	See also section 15.3.3 'Explanation of codes'.

International Pollution Prevention Certificate

Who	All oil tankers with a gross tonnage of 150 tons or more.
To	Harbour master via agent (Electronic Data Interchange - EDI).
What	X7
When	ETA -24h arrival at fairway buoys Westerems or GW/TG.
Note	See also section 15.3.3 'Explanation of codes'.

Notification of waste

Who	All vessels.
To	Harbour master Groningen Seaport via agent (Electronic Data Interchange - EDI).
What	Name - call sign - IMO - flag - ETA - ETD - last and next port of call - last port and date where waste has been landed - do you land all/some/no garbage at the harbour reception facilities - Waste Report form.
When	ETA -24h arrival at fairway buoys Westerems or GW/TG or, if departure from a port was within this 24h, as soon as possible.

Notification of ship's security

Who	All commercial vessels with a gross tonnage of 500 tons or more and passenger vessels.
To	Harbour master Groningen Seaport via agent (Electronic Data Interchange - EDI).
What	X6
When	ETA -24h arrival at fairway buoys Westerems or GW/TG.
Remarks	■ Only vessels that are under way to a port or anchorage in the Netherlands as part of an international voyage ■ The following vessels do not have to report: warships and troop transporting vessels - vessels without propulsion - wooden vessels with primitive construction - fishing vessels ■ See also section 15.3.3 'Explanation of codes'

Transit

Who	All vessels within the VTS area.
To	Traffic Centres
What	A - D
When	When crossing a VTS sector boundary.
Note	See also section 15.3.3 'Explanation of codes' .

15.3.2 Request for a pilot

Netherlands harbours

Who	All vessels compulsory to pilotage.
To	Delfzijl pilot or Eemshaven pilot Telephone: +31 (0)596 61 36 72 E-mail: lodicon@loodswezen.nl Pilot office Eemshaven VHF Ch 19
What	Entering: A - B - I - J - O - T - U - X Leaving: A - B - I - O - T - U - X
When	■ ETA - 12h (pilot station near fairway buoy Westerems) ■ ETA - 4h (pilot station near fairway buoy Westerems - VHF Ch 19) ■ ETA - 2h (pilot station near fairway buoy Westerems - VHF Ch 19) ■ Deviations of more than 1h should be reported ■ ETD - 4h (at least) before departure/shifting
Note	See also section 15.3.3 'Explanation of codes'.

German harbour

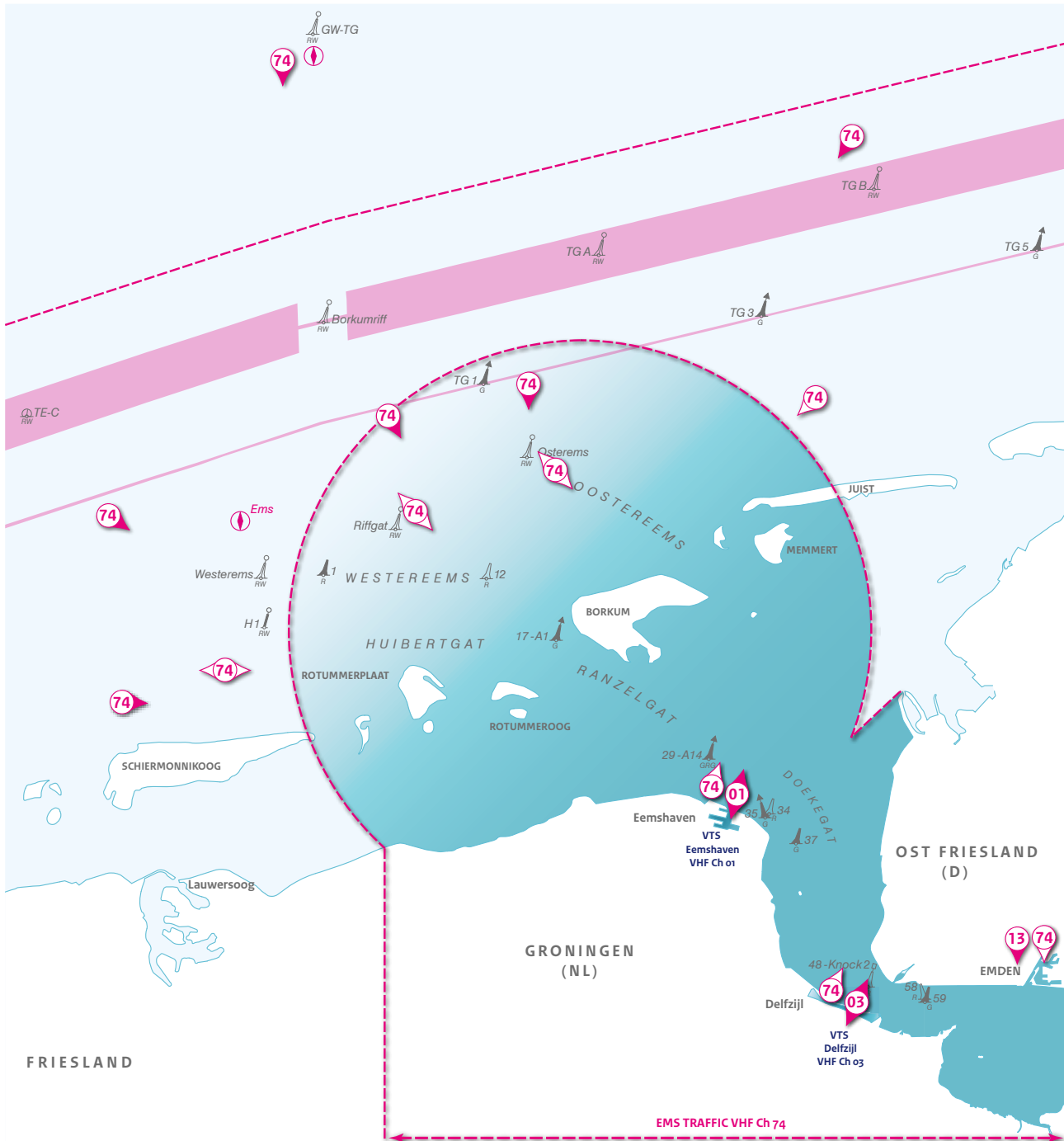
Who	All vessels compulsory to pilotage: ■ tankers carrying gas - chemicals - petroleum products in bulk or unloaded ■ tankers, if not cleaned, degassed or completely inerted after having carried petroleum/petroleum products with a flash point below 35 degrees Celsius ■ vessels over 90m length or 13m beam or 6m draught ■ other vessels which are not compulsory to pilotage but making use of the service of a pilot
To	Emden pilot Telephone: +49 (0)49 22 92 35 89 36 Fax: +49 (0)49 22 92 35 89 37 E-mail: borkumstation@emspilots.de
What	Entering: ■ A - D - G - I - O - P - Q - T - U ■ Vessels requiring a pilot at the GW-TG boarding position should state whether helicopter or pilot vessel boarding is required
When	■ ETA - 24h at arrival pilot boarding position (Lt buoy GW-TG) ■ ETA - 12h at arrival pilot boarding station (Westerems Lt buoy) or immediately on departure from last port ■ As soon as the vessel is within VHF Range (VHF Ch 09 pilot vessel), ordering the pilot should be confirmed ■ ETD - 4h from ports or terminals in the Ems. For all departures between 2100 - 0700 the request for pilots should be sent before 1800 LT
Note	■ See also section 15.3.3 'Explanation of codes'; ■ When the pilot is transferred by helicopter the vessel must keep a listening watch on VHF 16 from 30 minutes before arrival at the pilot boarding position so that the helicopter can contact the vessel. After radio contact has been established, the vessel must transmit to the helicopter the following information (on VHF Ch 09 or 72): vessel's position - heading - speed together with the current direction and speed of the wind over the deck.

15.3.3 Explanation of codes

Code	Explanation
A	Vessel: Name – call sign or ship's identity (IMO or MMSI number) – flag.
B	Date and time of event: A 6 digit group giving day of month (first two digits), hours and minutes (last four digits) in UTC.
C	Position: A 4 digit group giving latitude in degrees and minutes suffixed with N (north) or S (south) and a 5 digit group giving longitude in degrees and minutes suffixed with E (east) or W (west).
D	Position: True bearing (first 3 digits) and distance (state distance) in n miles from a clearly identified landmark (state landmark).
G	Port of departure: Name of last port of call.
I	Destination and ETA: Name of port and date time group expressed as in (B) (ETA at pilot station).
J	Pilot: State whether a deep sea or local pilot is on board or one is requested.
K	Date, time and exit point from system: ETD expressed as in (B).
L	Route information: Intended track.
O	Maximum present static draught in m: A 4 digit group giving metres and centimetres
P	Cargo on board: Nature of cargo and, if cargo consists of harmful and dangerous substances: ■ The correct technical name; ■ The UN identification numbers; ■ The IMO danger classification in accordance with IMDG, IBC and IGC codes if applicable; ■ The vessel's class in accordance with the INF code; ■ The quantity of dangerous goods and their location on board and their identification numbers if they are located in transport units suitable for cargo transport, except tanks; ■ Confirmation that a list or manifest or an appropriate loading plan is on board, containing detailed information regarding the dangerous and noxious goods carried and their location on board; ■ Confirmation that a list or manifest or cargo plan is on board, accurately specifying the harmful or dangerous goods the vessel is carrying and their location on the vessel. If the hold of a vessel has been fumigated with a gaseous fumigant, also report the nature of the cargo, the chemical or technical name of the fumigant, the disinfected spaces or the place of stowage of the disinfected cargo, the date of treatment with disinfecting agents, spaces that have been ventilated with air after treatment with disinfecting agents, the presence of appropriate gas detectors on board for measuring concentrations of disinfecting gases and whether spaces have been checked before arrival for the presence of disinfecting gases, mentioning the spaces and measured value in parts per million.

Code	Explanation
Q	Defects, damage, deficiencies, limitations: Brief details of defects, damage, deficiencies, or other limitations.
T1	Ship's representative: Name, address and phone number of ship's agent, master, or operator.
T2	Ship's representative: Name of customer.
U	Ship's size and type: Details of length, breadth, tonnage (GT) and type.
W	Total number of persons on board: Total number of crew on board and the total number of persons on board.
X1	Miscellaneous: Presence of bow/stern truster including capacity in kW, radar, gyro compass, VHF with VTS channels of VTS area you will passing, manoeuvring speed in knots.
X2	Miscellaneous: Report any changes in previous report.
X3	Miscellaneous: Required tugboats or linesmen.
X4	Miscellaneous: What is the purpose of your visit (e.g. loading, discharging, or repair).
X5	Miscellaneous: Any other information that might be important.
X6	Miscellaneous: Does the vessel possess a valid International Ship Security Certificate: Yes or No; current security level; name of ship security officer; authority that issued the ISPS certificate of the last 10 ports of call; mention per port name of port, date of arrival and date of departure; ship security level; special or additional security measures taken by the vessel; appropriate ship security procedures maintained during ship-to-ship activities during the last 10 ports calls: Yes or No; mentioning if you require any security at the port facility; other practical or security-related information (including ship-to-ship operations); is the vessel capable of executing the Ship Security Plan: Yes or No Remark: Only vessels that are underway to a port or anchorage in the Netherlands as part of an international voyage. This part does not have to be reported by warships and troop transporting vessels, vessels without propulsion, wooden vessels or primitive constructions and fishing vessels.
X7	Miscellaneous: Place on the attached list a copy of the International Oil Pollution Prevention Certificate (IOPP Certificate)

15.3.4 Vessel Traffic Services



VTS Reports – Sailing Plan

A Sailing Plan must be sent by the following vessels:

- vessels with a length of 40m or more (including pushed or towed composite units)
- vessels carrying dangerous goods in bulk (gas, chemicals, petroleum or petroleum products)
- nuclear powered vessels

VHF Ch	Location	Message	To
74	- Before entering the Ems VTS area on the seaward side - When leaving an anchorage or berth within the VTS area	- Name vessel and call sign - Position - Length, draught - Port of departure, destination	Ems Traffic
01	- Before entering Eemshaven - On departure Eemshaven	Indication of liquefied gases or petroleum (products) are/where carried in bulk, and in case; type, quantity, UN number and if tanks are not cleaned or if they are completely inerted	VTS Eemshaven
03	- Before entering Delfzijl harbour - On departure Delfzijl harbour	Indication of deficiencies, restrictions of manoeuvrability	VTS Delfzijl
13	Before leaving Emden harbour	Name of vessel's owner or the latter's agents	Emden Radar



VTS – Position Reports

A position Report must be sent by the following vessels:

- vessels with a length of 40m or more (including pushed or towed composite units)
- vessels carrying dangerous goods in bulk (gas, chemicals, petroleum or petroleum products)
- nuclear powered vessels

VHF Ch	Location	Message	To
74	- Near fairway buoys Westerems, Riffgat and Osterems (incoming/outgoing) - Eemshaven (outgoing) - When passing buoy 35 (SE-bound) - Delfzijl (outgoing) - Emden (incoming/outgoing) - When leaving an anchorage, berth or lock within the VTS area	- Name vessel and call sign - Position - Time of report (LT in 4 digits) - Speed	Ems Traffic

Vessel Traffic Services – Ems Estuary

VHF Ch	Station	Service
74	Ems Traffic	Listening watch All seagoing vessels entering the VTS Area must maintain a continuous listening watch on the local VHF Channel of Ems Traffic. Information broadcasts Ems Traffic broadcasts every H+50. The broadcast includes the following: ■ Information relevant to the safe passage through the VTS Area ■ General fairway and traffic situation (e.g. local storm warnings, weather messages, visibility and ice reports when appropriate, casualties, dredging operations and pilot information)

15.3.5**Vessel Traffic Services – Delfzijl / Eemshaven**

VHF Ch	Station	Service
01 03	VTs Eemshaven VTs Delfzijl	Radar assistance When visibility is below 2000m within the jurisdiction of the VTS area. Under special circumstances assistance can also be given when visibility is good, for example if navigational aids are not working correctly. Duty to report ■ On entering or leaving the VTS area ■ When intending to carry out a special manoeuvre or any other action, deviating from the normal traffic pattern ■ On completion of mooring ■ On departure to a destination in- or outside the VTS area Reports (as stated under a. and b. are to be accompanied by the following statements: ■ name of vessels ■ position ■ draught ■ home port of destination ■ remarks (if any) Information broadcasts Weather and tidal information on request on VHF Ch 66 (Delfzijl/Eemshaven Port Control). Vessel Traffic Services Delfzijl/Eemshaven The roads of and approaches to Delfzijl/Eemshaven, as well as the main fairways in the ports and adjacent harbour bassins are covered by the VTS (excluding the entrance to the sea locks Delfzijl). This system is mandatory for all seagoing vessels, except recreational craft. The VTS consists of a Vessel Traffic System and an Information System. Both facilities are located in the Harbour Coordination Centre (HCC) 'Eemsmoeding' and serves ports of both Delfzijl and Eemshaven. The HCC is responsible for the planning and coordination of vessels traffic movements and has a direct line of communication with the VTS through Knock Radar. Delfzijl/Eemshaven Port Control - VHF Ch 66

15.3.6 Communication with locks

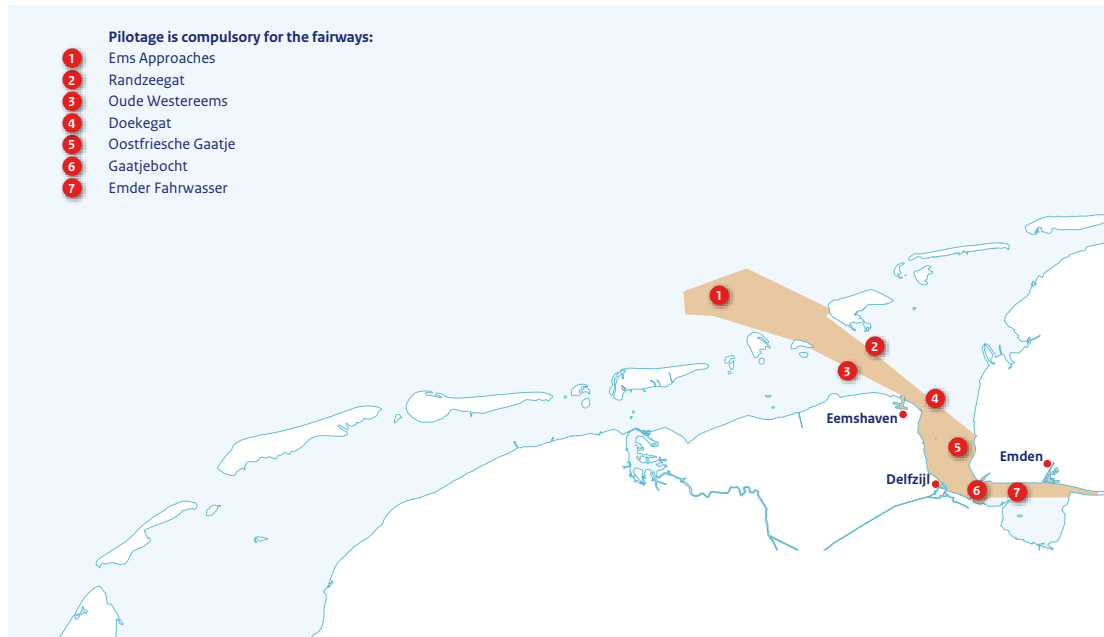
Location	Locks	VHF Ch
Delfzijl	Zeesluis Farmsum	60
Emden	Nesserland Seeschleuse	13

15.4 Pilotage

15.4.1 Local pilotage

Compulsory pilotage

Pilotage in this region is compulsory for the following fairways:



Exemptions compulsory pilotage

See [Chapter 2 – Navigation | Traffic safety, section 2.5 ‘Pilotage \(The Netherlands\)’](#).

Request for a pilot

See section [15.3.2 ‘Request for a pilot’](#).

Pilot vessel cruising stations

See also section [15.3.2 ‘Request for a pilot’](#).

Pilot cruising station close NW Westereems fairway buoy

The Netherlands pilot service (Netherlands harbours) will be carried out by means of small tenders operating from Eemshaven. The pilot tenders have a yellow hull with a white superstructure. The transit time to Westereems fairway buoy is approximate 2h. In bad weather, particularly during or after strong N or W winds, the pilot vessel may take station within the entrance but never above Borkum. If a pilot is unable to embark because of bad weather, he may lead the vessel in by proceeding ahead in the pilot vessel. This rule does not apply to oil, gas or chemical tankers exceeding a certain length. For these vessels an alternative boarding position must be agreed between the pilot vessel and the tanker.

The German pilot service will be carried out by a pilot vessel which is painted black with on both sides of her hull the letters ‘LOTSE’ in white. She has a yellow funnel with a black rim and displays the german pilot flag (national flag with white border) in her fore mast.

Pilot cruising station close S of GW/TG fairway buoy

This German pilot station is used for the following category of vessels:

- Tankers exceeding 150m in length or 23m in beam, when en-route to or from the river Ems

15.4.2

Deep sea pilotage

See [Chapter 2 – Navigation | Traffic safety, section 2.7 ‘Deep sea pilotage’](#).

15.4.3

Boarding arrangements

Boarding by pilot vessel

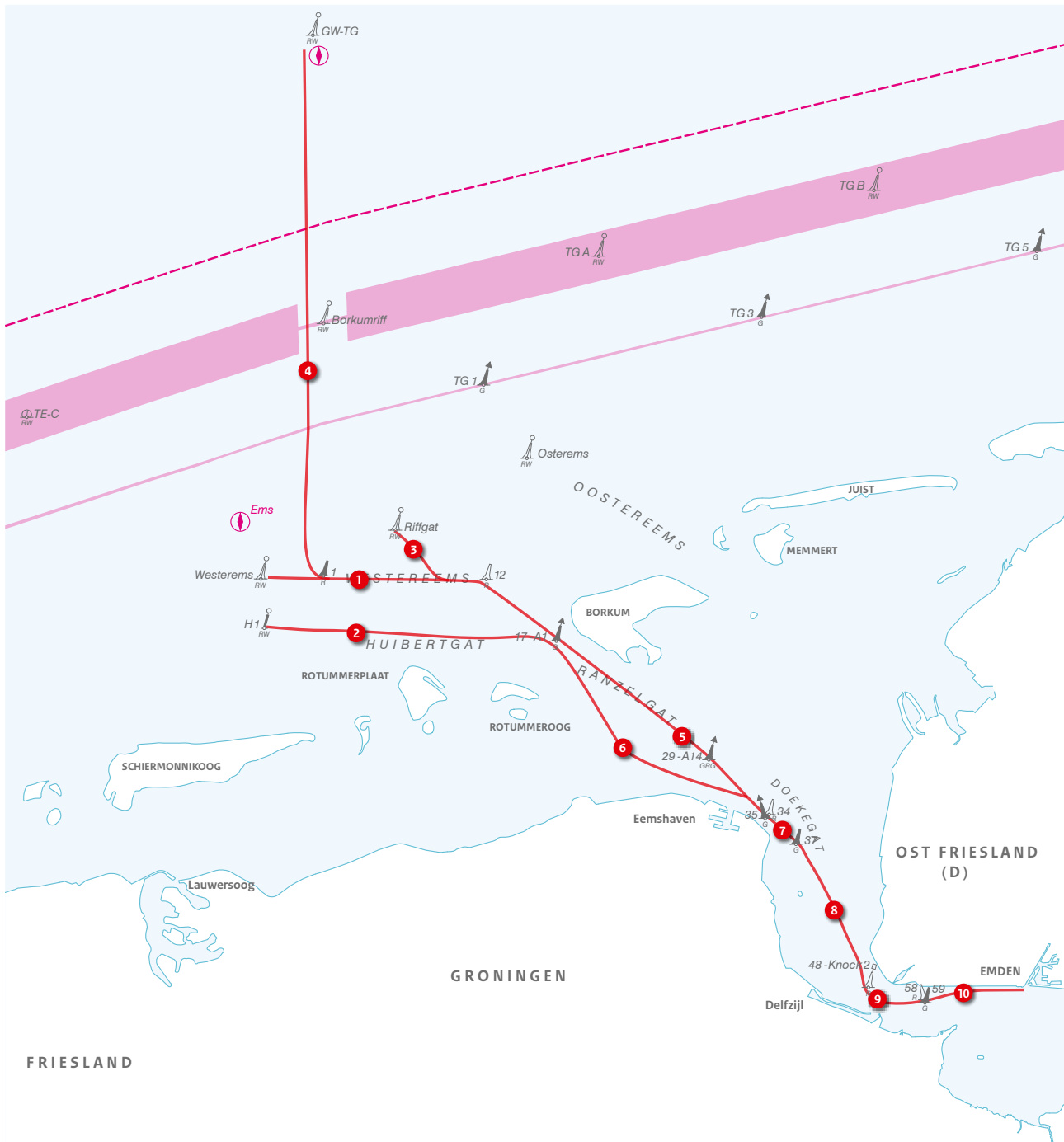
See [Chapter 2 – Navigation | Traffic safety, section 2.5.6 ‘Pilot boarding arrangements’](#).

15.5

Sailing directions

15.5.1

Ems Estuary



1 – Westereems

This fairway is the main entrance to the Ems and consists of a deep water channel with on both sides passing lanes. Vessels with a draught between 11.01m up to 14m are considered to be channelbound and therefore obliged to make use of the deep water channel. Vessels with a draught up to 11m can use the passing lanes. It is prohibited for channelbound vessels to meet or overtake each other. In a small area at the height of Lt buoys 11 and 12 there are no passing lanes.

When there is a strong or gale force wind blowing from NW, seas break across Geldsackp-laar and run on into the fairway. Heavy seas may occur in the fairway. Small vessels may set across the waves, particularly in the W part of the fairway, due to the seas running in from astern. During a NW storm the sea breaks on Geldsackp-laar and dangerous heavy seas arise locally. Should it be necessary to enter the fairway, this can best be done by day, at local HW. The least difficulty from the heavy seas will be found on the S side of the fairway. Borkum Radar can render assistance from Lt buoy Westereems. The radar reference line indicated on the nautical chart is used in this case. At the place where Riffgat joins Westereems, special care must be taken to avoid vessels wishing to cross the fairway which have entered through Riffgat. During flood and N winds or during ebb and S winds strong cross sets off Lt buoys 9 and 10 - Riffgat 6 should be anticipated. After altering course near pair of Lt buoys 11 and 12 the Dir. Lt Campen provides guidance through Randzelgat fairway up to Lt buoy 27.

2 – Huibertgat

The banks on the N side give some shelter during gale force NW winds. But even in this fairway, particularly the W part, storms from W to N cause a high and boiling sea. From H1 buoy Borkum Radar can render assistance. In the vicinity of Huibertp-laar and Horsbornp-laar the depths in the channel are subject to frequent changes. Caution is required where the fairway converge into Oude Westereems fairway due to crossing traffic.

3 – Riffgat

Navigating Riffgat is only possible during fair weather, and not at all for large vessels. Navigating this channel in winds of Beaufort 5 and above from N and W is not recommended. During strong W to NW winds heavy seas will arise very quickly. Caution is required where this fairway joins Westereems. The tide always runs straight across the fairway. The depths on the outer bar are subject to changes.

4 – From GW/TG Lt buoy to Westereems

This route is normally followed by vessels which must embark/disembark the pilot near the GW/TG Lt buoy. Vessels using this route other than the vessels mentioned below may embark/disembark the pilot near Westereems Lt buoy. Vessels which are obliged to make use this route are:

- **Tankers of 10 000 GT and upwards**, carrying oil as defined under Annex I to MARPOL
- **Chemical tankers of 5 000 GT and upwards**, carrying noxious liquid substances in bulk as assessed or provisionally assessed as Categories X or Y of Annex II to MARPOL
- **Chemical tankers and NLS tankers of 10 000 GT and upwards**, carrying noxious liquid substances in bulk assessed or provisionally assessed as Category X or Y of Annex II to MARPOL
- **Vessels of 10 000 GT and upwards**, carrying liquefied gases in bulk

5 – Randzelgat

This fairway consists of a deep water channel with on both sides passing lanes. Vessels with a draught between 11.01m up to 14m are considered to be channelbound and therefore obliged to make use of the deep water channel. Vessels with a draught up to 11m can use the passing lanes. It is prohibited for channelbound vessels to meet or overtake each other. Between Lt buoys 27 and 29 – A14 there are no passing lanes. Vessels can fasten their tugs in this area.

Dir. Lt Campen provides guidance in the fairway up to Lt buoy 27. Anchoring in the fairway is prohibited. The fairway is narrowest between Lt buoy 26 and buoy 28 and cross-setting by the tide may occur. Off Eemshaven is a bar, which is kept at depth by regular dredging. S of the isle of Borkum are the anchorages Borkum-Reede and an Emergency anchorage for channelbound vessels.

6 – Oude Westereems

This channel is little used as a navigational route but mainly as an anchorage. Because of the variable depths in the NW end of Oude Westereems, these anchorages are normally approached from the S via Randzelgat.

7 – Doekegat

The S shore of Doekegat is very steep. Near Lt buoy 37 the fairway is very narrow and cross tides must be anticipated. Particularly during the ebb stream when proceeding up stream the ship's course will need to be altered off Lt buoy 35 to allow for this. On the E side of the fairway the unlit track Osterems commences.

In the N part, along the coast, an ingoing tide of about 3 knots may run, at about 4h before HW Delfzijl.

The ebb stream from Bocht van Watum causes a cross set to NE. Up to Lt buoy 34 the flood stream sets to the E and afterwards to the S, as the flood runs into Bocht van Watum.

Approach Eemshaven

The harbour is accessible to vessels with draughts up to 11m in normal conditions, at HW, making use of the tide. An under keel clearance of 10% must be allowed.

Eemshaven is approached on the 175° leading line. For this reason the leading line should be followed for the greatest possible distance from the breakwaters. Care is required at the moment of passing the breakwaters. Large ships are advised to enter at slack water, and ask for the assistance of a tug well outside the harbour entrance. Having passed the breakwaters the leading line, 195° is followed. This line leads through Doekegatkanaal. Not keeping to the line of the lights may lead to considerable risks as the channel is narrow and the banks rise steeply.

Special signals

A seagoing vessel with a length of 200m or more and/or a draught of 10m or more is obliged to display the signals prescribed by Rule 28 of the International Regulations for Preventing collisions at Sea (1972). This also applies to sea going ships, which because of the depth of water, are limited in their ability to manoeuvre.

Prohibition to overtake

It is prohibited to overtake and pass another vessel in Doekegatkanaal. This does not apply to small vessels.

Prohibition to use an anchor

The use of anchors is prohibited without express permission of the Harbour Master. This prohibition does not apply when the action is on the pilot's advice.

8 – Ostfriesisches Gatje (Oostfriesche Gaatje)

Attention should be paid to crossing dredgers, which have a jetty for discharging on the German side of the border off Lt buoy 46. As soon as Paap sandbank covers the flood stream sets to the W. The ebb stream always sets to the E.

9 – Gaatjebocht

For large and/or deep draught vessels Gaatjebocht is a difficult fairway. It is winding and narrow. The changing cross-setting by the tide should also be reckoned with. Vessels with a length of more than 260m and/or a breadth of more than 40m and/or a draught of more than 10.67m proceeding upstream and with a draught of more than 10.36m proceeding downstream, are not allowed to meet or overtake each other between pair of buoys 48 (Knock 2) - 49 and 52 - 53/PS2/Oterdum Reede. Early consultation with Knock Radar is required.

N of the fairway runs an adjacent fairway ('Knock route'). This fairway may be used taking the vessel's draught into consideration, by small vessels if a large or deep draught vessels are approaching. Near Lt buoy 51/PS1 the crossing via Paapsand Süd to the harbour entrance of Delfzijl begins. N of the harbour entrance of Delfzijl lies the anchor area Oterdum Reede. If a seagoing vessel is bound for Delfzijl and goes at anchor in this area, the Port Authority Delfzijl/Eemshaven should be informed.

Approach to Delfzijl harbour

Under normal conditions, the harbour is accessible to vessels with draughts up to 9m, making use of the tide. A under keel clearance of 10% must be allowed. The harbour is approached through Paapsand Süd fairway using the 203° leading line and Knock sector light (at night).

The above-mentioned fairway is deepest on the W side. On the E side an bank extends into the fairway. During the ebb stream deep draught vessels may therefore have insufficient water to enter the harbour safely. The tidal stream runs across the harbour entrance. For vessels with a length of 150m or more and/or a draught of 8m or more the best time to enter is therefore the time of slack water. When entering during the ebb care must be taken the moment the breakwaters are passed.

Vessel traffic management Oterdum Reede

A traffic arrangement for the harbour entrance of Oterdum has been published in the Traffic Regulations Eemsmond.

The following priority rules apply in this area:

- Incoming traffic has priority above outgoing traffic
- Traffic in Gaatjebocht has priority over traffic coming from above-mentioned area
- Traffic coming from the above-described area has priority over traffic coming from Bocht van Watum and Dollard
- Sound signals near harbour entrance
 - A vessel entering the harbour entrance should make this known by giving 3 long blasts, followed by 1 or 2 short blasts, depending on whether she wants to turn to SB or P
 - A vessel planning to leave the harbour, should give one long blast. If she wants to proceed her track immediately to SB, this is allowed, provided she gives one short blast after a short pause. It is prohibited to turn to P, unless the fairway is clear

The signals need not to be given, when the harbour and fairway can be overlooked and no shipping is proceeding in that area.

A vessel having priority according to these traffic regulations is allowed to make this known by displaying:

- by day: pennant 1 from the International Codebook of Signals
- at night and during poor visibility: an allround visible green light, placed above the side lights. This light should be visible at a distance of at least 2 nm

Vessel traffic arrangement in Zeehavenkanaal (Delfzijl harbour)

The following regulations apply for seagoing vessels in Zeehavenkanaal:

- A vessel with a length of 150m or more and/or a draught of 8m or more is obliged to display a cylinder by day. At night she displays 3 red lights in a vertical line as described in Rule 28 of the International Regulations for Preventing collisions at Sea (1972)
- It is prohibited to overtake or pass another vessel. This does not apply to small vessels
- Seagoing vessels passing each other on opposite courses, between light beacons 5 and 21, should, when passage takes place within 100m ahead or astern of a ship lying moored, observe the following rule: The vessel having the jetty on her SB-side, should leave the way clear for the other vessel

Prohibition to use an anchor

The use of anchors is prohibited without the express permission of the Harbour Master. This prohibition does not apply when the action is on the pilot's advice.

The tidal stream does not follow the channel everywhere

In the N part of the channel the flood stream sets towards the red buoy line and the ebb stream towards the green buoy line. The reverse happens in the S part, there the flood stream sets to the W and the ebb stream to the E. Both when proceeding up and down river the stream sets first to one side and, after rounding 48 / Knock 2 Lt buoy, to the other side. While making the crossing to the harbour entrance at Delfzijl (called Paapsand Süd) the stream sets directly across the track.

10 – Emden Fahrwasser

This fairway gives access to the river Ems. The depth is maintained by dredging. On the S side of the fairway lies the drying-up silt Geise. Long moles with transversal groynes, which become awash during HW, have been constructed here.

S of the fairway, off Neuer Binnenhafen of Emden, lies the anchorage Emden Reede.

Seagoing vessels with a length of more than 50m wishing to approach Emskade or to enter Emden harbour, are allowed to keep to the N side of the fairway from 68 and 69 Lt buoys. Once chosen, the N side of the fairway should be adhered to. Wybelsum Radar should be informed in good time of the intention to do this.

Vessels having to cross the fairway during flood or slack water in order to approach Emskade or to enter Emden harbour, have priority over vessels on opposite course.

Vessels with a length of more than 260m and/or a beam of more than 40m and/or a draught of more than 10.67m proceeding upstream and a beam of 10.36m when proceeding downstream, are not allowed to meet or overtake each other between pair of Lt buoys 68 - 69 and the harbour entrance of Emden. Early consultation with Wybelsum Radar is required.

15.5.2**Notes****Permission to navigate the Ems**

All extraordinarily large vessels, air cushions vehicles, oil, gas and chemical carriers and unusual tug and tow units must obtain authorisation from the competent authority to navigate the Ems, by applying, in writing, before arrival at the respective pilot boarding stations. Vessels with destinations Eemshaven or Delfzijl should apply through their agency at least 24 hours before arrival. Vessels with destination Emden should apply to WSA Emden at least 24 hours before arrival.

Extraordinarily large vessels are defined as those exceeding the following dimensions:

Sea to Eemshaven

- Length 260m
- Beam 40m
- Draught 11m

Eemshaven to Emden

- Length 260m
- Beam 40m
- Draught 10.5m

Vessels sailing inward bound from open sea to Eemshaven

- Draught between 10m and 14m:
At least 24 hours prior on arrival Westerems fairway buoy these vessels need to request a tidal window from the competent authority. At least 6h before arrival these vessels receive a final plan of entry. This plan indicates the times at which the vessel should be at the Westerems fairway buoy.
- Draught up to 9.99m:
These vessels do not receive a plan of entry and can enter at any time.

Radar assistance

Radar reference lines are established along the centre of each reach of the maintained fairway from Westerems Lt buoy to Emden Fahrwasser. Radar assistance is given by Ems VTS when visibility is less than 2000m; information is passed in English or German.

Carriage of dangerous substances

Regulations are applicable concerning the carriage of dangerous substances by seagoing vessels on the waters located between the sea and Eemshaven and Delfzijl harbour, including the transport in those harbours.

Dangerous substances are understood to be:

all substances mentioned in IMDG-Code, the IMO-Bulk Chemical Code and the Gas Carrier Code. Moreover, a number of additional rules have been laid down by the Port Authority of Delfzijl/Eemshaven, which have been embodied in the Port Bye-laws for Delfzijl and Eemshaven. These rules also deal with observing the safety measures.

Vessels carrying dangerous substances should comply with the following stipulations:

- Constant VHF contact should be maintained with the radar centre of the area being navigated
- On entering the Ems or leaving a berth, the visibility should be more than 1000m. When visibility is less than that vessels should anchor in the nearest anchorage
- Tank covers should be kept closed
- The helm should be operated by a reliable and experienced helmsman. When using the automatic steering gear the helmsman should remain near the helm
- the Ems may not be entered if the services of a Chartered pilot are not made use of. These vessels are also not allowed to leave or shift without a Chartered pilot.

Signals to be displayed:

- by day: signal flag 'B' of the International Code of Signals
- at night: 1 all around red light

Traffic measures LPG-tankers

In Ems fairway and her estuary all vessels approaching, passing or overtaking tankers carrying liquid gases (LPG-carriers) with a loading capacity of more than 30 000m³, should observe the following regulations:

Safety distance

Large vessels and vessels going the same way are not allowed to enter the safety zone 2 nm ahead and 2 nm astern of the tanker.

Passing distance

Overtaking or passing vessels should allow a distance of at least three times the LPG-carriers' beam between their respective sides. In no case should this distance be less than 90m. In cases of doubt the instructions should be obtained from Radar Centre Knock and be complied with.

Prohibition to approach in Gaatjebocht

Vessels with a deadweight of more than 3 000 tons and vessels carrying certain dangerous goods as mentioned in enclosure 2 of the Shipping Regulations 'Eemsmoeding', are not allowed to meet nor to overtake LPG-carriers with a loading capacity of more than 2 500m³, on the part of the fairway between pair of buoys 48 (Knock 2)/49 and 54/55 (Gaatjebocht); the same applies to LPG-carriers with a loading capacity of more than 2 500m³ in relation to the ships mentioned above.

Between pair of buoys 46/47 and 56 (Knock 8)/57 - Oterdum Reede (Gaatjebocht), meeting and overtaking an LPG-tanker with a loading capacity of more than 30 000m³, is prohibited. Tidal bound vessels from and to Delfzijl should be given the right of way.

Vessel Traffic System in Emdor Fahrwasser

Between pair of buoys 56 (Knock 8)/57 - Oterdum Reede and 68/69, it is prohibited for tidal bound vessels and vessels with a deadweight of more than 3 000 tons, to meet LPG-tankers with a loading capacity of more than 30 000m³.

The meeting and overtaking prohibition mentioned under items (3) and (4) also apply in reverse order for LPG-tankers with a loading capacity of more than 30 000m³ in relation to the vessels mentioned in said items.

Prohibition to approach the harbour entrance of Emden

Between pair of buoys 68/69 and the harbour entrance of Emden no single vessel is allowed to meet or overtake an LPG-tanker with a loading capacity of more than 30 000m³.

Escort vessels of the shipping police

Tankers, with the exception of empty non-gasfree tankers proceeding seaward, are only allowed to navigate Eems if escort from a patrol vessel is available, provided the following applies:

- for tankers with a loading capacity of 2 500m³ to 10 000m³ on the track from pair of buoys 44/45 to Emden and in reverse direction
- for tankers with a carrying capacity of 10 000m³ to 30 000m³ on the track from buoy 17 to Emden and in reverse direction
- for tankers with a loading capacity of more than 30 000m³ on the track from fairway buoy Westereems to Emden and in reverse direction

Navigating die Ems is only allowed if two VHF sets, suitable to communication with Radar Centre Emden and with other ships, capable of operation from the bridge, are available and operational. Approaching and leaving Eemsmond by tankers is only allowed to take place exclusively through Westereems.

Tankers with a loading capacity of more than 30 000m³

- Navigating the Ems is only allowed if two authorised pilots are on board. Radar Centre Emden should be manned by an authorised pilot; during transit use should be made of the navigation service from the Radar Centre.
- In the area between pair of buoys 56 (Knock 8)/57 - Oterdum Reede and the harbour entrance of Emden two tugs with a power of at least 736 kW (1 000 hp), should be available. It may be necessary to connect the two at any time.
- The speed in the area between pair of buoys 1 - 2 and buoy 30, should not be more than 14 kn and between buoy 30 and pair of buoys 56 (Knock 8)/57 - Oterdum Reede not more than 12 kn.
- It is prohibited to navigating the Ems during such wind force that safe manoeuvring is endangered.
- Navigating the Ems is only allowed when there are on board:
 - two radars
 - GPS
 - an electronic log (e.g. Doppler log) and
 - a turning speed indicator
 - All of them ready to operate and available.

During the first 3,5h of the flood phase, entering and leaving Emden harbour is not allowed. Furthermore, consultation with Radar Centre Emden is necessary for incoming and outgoing tidal vessels and ships of more than 3 000 tons deadweight up to about 4h after HW.

Tankers carrying more than 30 000m³ cargo

A tanker coming from sea should have passed pair of buoys 56 (Knock 8)/57 - Oterdum Reede at least one hour before HW Emden.

The deepest draught should not be more than 10.22m.

Tugs required should already be available at Lt buoy 31.

Visibility restrictions

Oil, gas and chemical tankers and towed units, which are carrying hazardous goods in bulk or have done so but which are not certified gas-free are permitted to enter the Ems only if visibility is 1000m or more, and may navigate the river only if visibility is 500m or more. Such vessels must be equipped with a serviceable radar which is manned by trained operators.

Wind restrictions

During winds > 7 Bft, sailing on the fairway Westereems/Randzelgat – Eemshaven is prohibited for extraordinarily large vessels, oil, gas and chemical tankers.

15.5.3

Anchorage

Approaches and Borkum roads

Anchorage 9

This anchorage is normally used by channel bound vessels waiting to enter Eemshaven, but can also be used for general use.

Emergency anchorage

This anchorage is available only for channel bound vessels which already are sailing in the channel and are informed that the Eemshaven is closed

Borkum-Reede

This anchorage is available for general use.

On anchoring in or leaving this location all vessels should report this to the appropriate VTS station.

Oude Westereems

Alte-Ems-Reede

General use, available for smaller vessels seeking shelter or temporary anchorage.

Reede

Available for vessels carrying explosives.

Tanker-Reede

For tankers. Also available for vessels other than tankers on request to the appropriate VTS station.

Doekegat-Reede

Transshipment anchorage and is used for lightening deep draught dry bulk carriers by offloading into barges and lighters.

On anchoring in or leaving these locations all vessels should report this to the appropriate VTS station.

Gastanker-Reede

The anchorage is intended for gas tankers, laden or unladen, of less than 230m length and less than 7m draught; vessels other than gas tankers may use the anchorage with permission from Ems VTS. On anchoring in or leaving this location all vessels should report this to the appropriate VTS station.

Oterdum Reede

This anchorage is available for vessels up to 4000 tons DWT. On anchoring in or leaving this location all vessels should report this to the appropriate VTS station.

Emden Reede

This anchorage may only be used by vessels with a length of 100m or more. After dropping anchor Wybelsum Radar should be informed of the anchor position occupied.

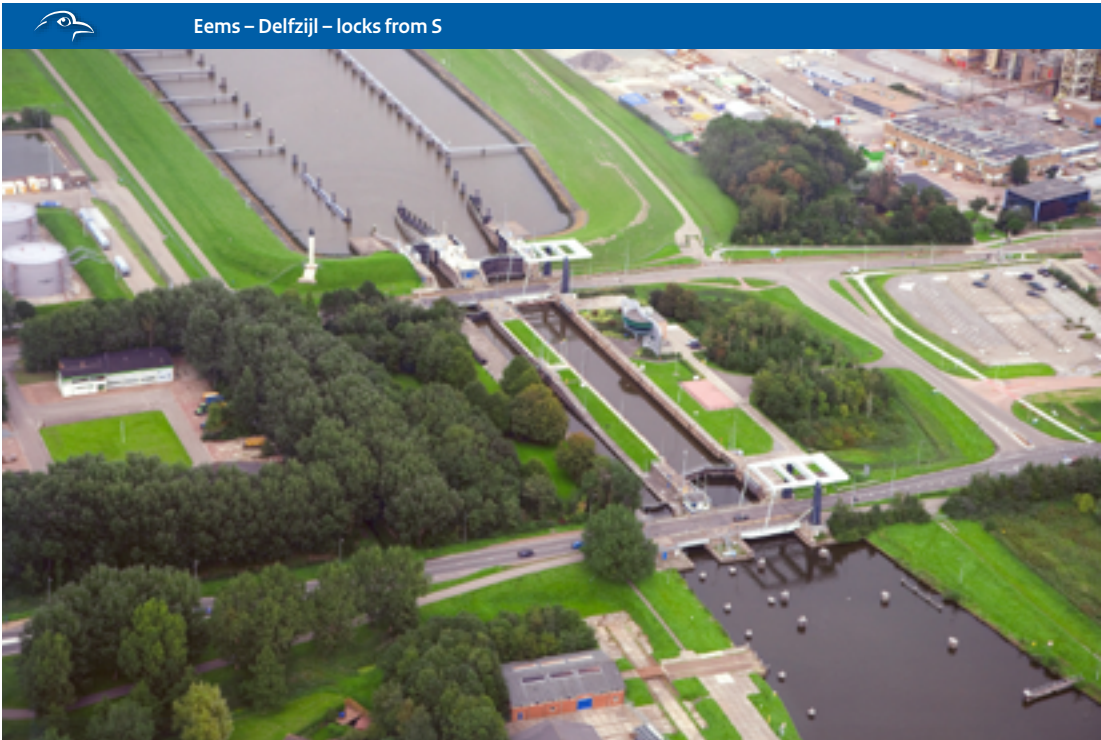
15.5.4

Military exercises

For more information see [Chapter 2 – Navigation | Traffic safety, sections 2.8 ‘Military exercises and detonation areas’.](#)

15.5.5

Locks



Delfzijl	
Zeesluizen (Eemkanaalsluizen)	
Maximum ship's dimensions	LOA: 120m Beam: 16m Draught: 5.2m An under keel clearance of 0.3m is required
Remarks	■ The locks (2) are spanned by two bascule bridges, one combined road and rail bridge, the other a road bridge ■ Contact: see section 15.3.4 ‘Vessel Traffic Services - Eems Estuary’
Emden	
Grosse Seeschleuse	
Maximum ship's dimensions	LOA: 220m Beam: 25m Draught: no information Vessels with LOA> 240m and beam> 33m require special permission from the harbour authorities
Remarks	■ Operational: 24h ■ Contact: see section 15.3.4 ‘Vessel Traffic Services - Eems Estuary’
Nesserland Seeschleuse	
Maximum ship's dimensions	Up to lock master.
Remarks	■ Operational: Mon. - Sat.: 0700-1900; Sun. And holidays: 0700-1500 ■ Contact: see section 15.3.4 ‘Vessel Traffic Services - Eems Estuary’

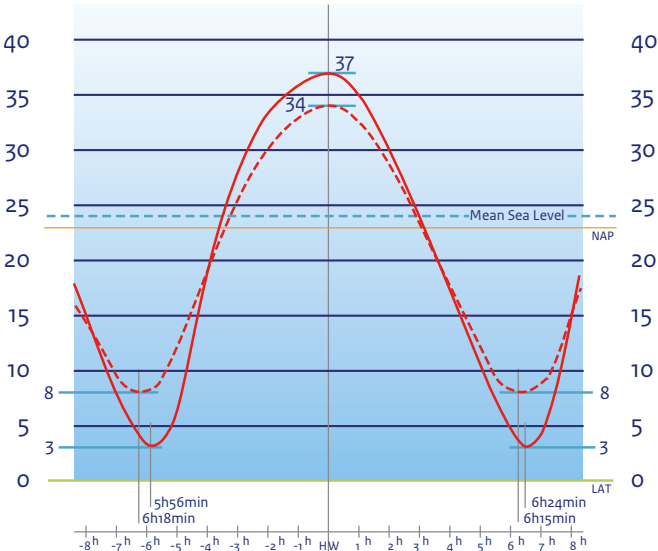
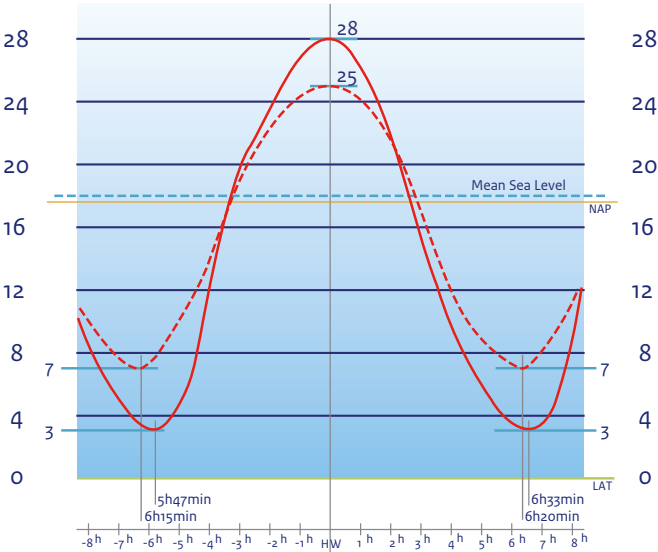
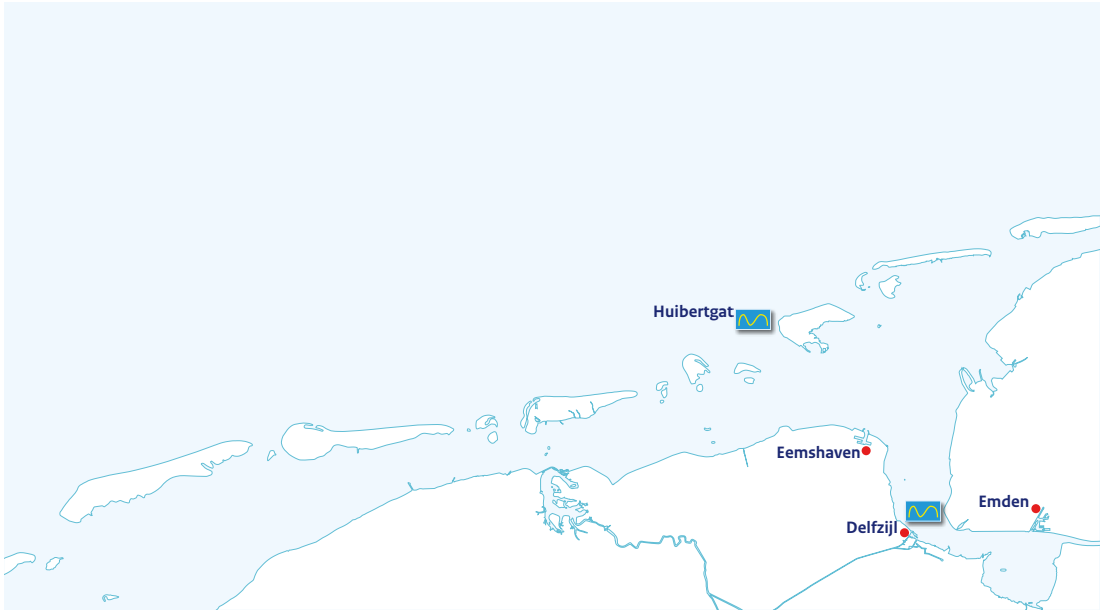
15.6

Tidal information

For general information see [Chapter 4 – Oceanography](#).

15.6.1

Tidal curves



15.6.2 Tidal streams

The predictions in the tables refers to HW Delfzijl

Eemshaven		53°27.3'N	06°52.1'E	Delfzijl		53°19.8'N	07°00.4'E
Time	Direction	Spring Rate	Neap Rate	Time	Direction	Spring Rate	Neap Rate
-06	126°	0.6 kn	0.9 kn	-06	305°	0.3 kn	0.0 kn
-05	118°	3.2 kn	2.8 kn	-05	134°	1.8 kn	1.6 kn
-04	118°	3.2 kn	2.8 kn	-04	135°	2.2 kn	1.9 kn
-03	119°	2.5 kn	2.1 kn	-03	135°	2.0 kn	1.8 kn
-02	119°	1.8 kn	1.5 kn	-02	135°	2.0 kn	1.6 kn
-01	119°	0.9 kn	0.9 kn	-01	136°	1.5 kn	1.2 kn
HW	305°	0.4 kn	0.2 kn	HW	144°	0.4 kn	0.4 kn
+01	303°	1.8 kn	1.5 kn	+01	310°	1.3 kn	0.9 kn
+02	301°	2.6 kn	2.3 kn	+02	311°	2.1 kn	1.9 kn
+03	300°	2.9 kn	2.5 kn	+03	312°	2.2 kn	2.0 kn
+04	300°	2.6 kn	2.2 kn	+04	312°	2.2 kn	1.9 kn
+05	299°	1.8 kn	1.6 kn	+05	312°	1.8 kn	1.5 kn
+06	291°	0.5 kn	0.4 kn	+06	311°	0.9 kn	0.8 kn

Emden		53°19.9'N	07°13.0'E
Time	Direction	Spring Rate	Neap Rate
-06	276°	2.0 kn	1.7 kn
-05	276°	1.1 kn	0.5 kn
-04	096°	1.8 kn	1.9 kn
-03	096°	2.4 kn	2.3 kn
-02	096°	2.4 kn	2.1 kn
-01	095°	2.0 kn	1.8 kn
HW	095°	1.1 kn	1.0 kn
+01	278°	0.4 kn	0.2 kn
+02	276°	1.7 kn	1.5 kn
+03	276°	2.0 kn	1.9 kn
+04	276°	2.1 kn	2.0 kn
+05	276°	2.2 kn	2.1 kn
+06	276°	2.1 kn	1.9 kn

Cautions

- It is strongly emphasised that the stream atlases show averages, in direction and rate, of the tidal streams. There is a lot of variety in the circumstances, which may cause severe deviations from averages. Therefore, tidal streams can never be predicted with absolute certainty.
- Depending on position and local bottom properties (e.g. channels, sand waves, etc.) deviations in both direction and rate of the tidal stream may occur, especially at greater depths. This may have a notable effect on deep draught vessels. Unlike general expectations, the mean neap rates may be higher than the mean spring rates in some channels. This depends on their cross-sections in areas that lie above the momentary water level.
- In areas with banks the tidal stream flows through the channels, the direction of the stream follows the bearings of the banks. After sufficient flooding the tidal stream will cross the banks.
- In the Waddenzee the tidal stream pattern is complicated in tidal flat areas, flood streams from separate tidal inlets meet each other continuously, resulting in local lower stream rates. This causes a comparatively high sedimentation rate in these tidal flat areas. Tidal flats usually stretch meandering between coast and island.
- In the Waddenzee lengthy periods with easterly winds may cause considerable water level reductions and shifts in tidal stream patterns.
- Deviations from the Waddenzee tidal stream atlases may occur after a number of years after publication. This is the result of ever changing channels in this area.

15.7 Rules | Regulations

See [Chapter 2 – Navigation | Traffic safety, section 2.13 ‘Shipping regulations’](#).

15.8 Port information

15.8.1 Eemshaven

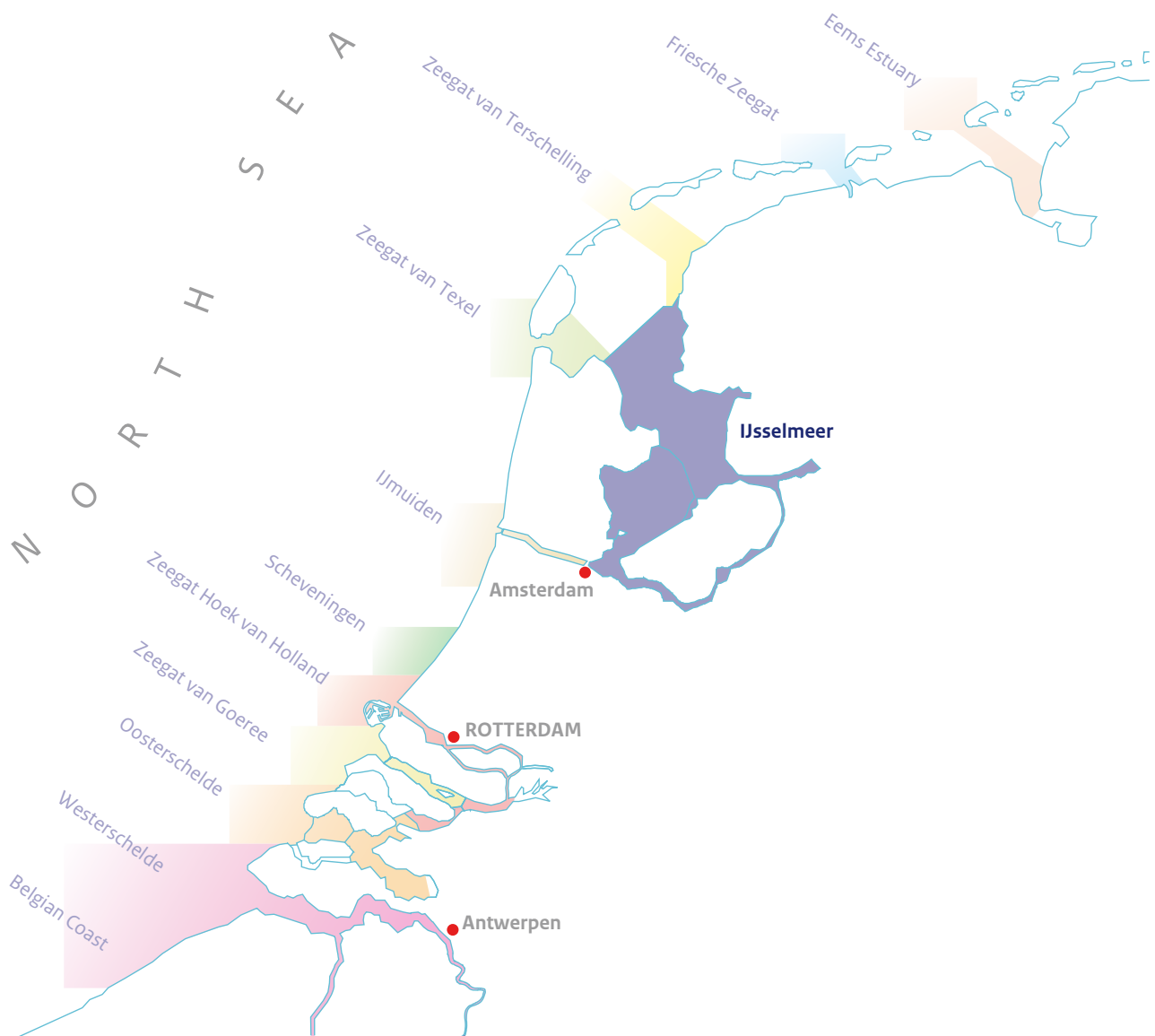
	Emmahaven Julianahaven Wilhelminahaven Beatrixhaven																			
Facilities																				
Cargo	Passengers, Ro-Ro, Ore, General cargo, Containers, Forest products, Petroleum, Chemical products, Feeder vessels, Transhipment																			
Bunker	Fuel, LNG, Lubricating oil, Potable water																			
Repairing	Small repairs has to be reported and approved by local authorities																			
Port reception	Oil waste, Garbage and Chemicals																			
Mooring	Tugboat assistance and boatmen available																			
Restrictions	Safe speed: in accordance with local circumstances																			

15.8.2 Delfzijl

	Handelshaven Oosterhornhaven Zeehavenkanaal																			
Facilities																				
Cargo	General cargo, Forest products, Bulk, Cokes, Ore, Chemical products, Salt, Condensat																			
Bunker	Fuel, Lubricating oil, Potable water																			
Repairing	Small repairs has to be reported and approved by local authorities																			
Port reception	Oil waste, Garbage and Chemicals																			
Mooring	Tugboat assistance and boatmen available																			
Restrictions	Safe speed: in accordance with local circumstances Zeehavenkanaal: Maximum ship's dimensions: LOA 200m; Draught 9.0m Oosterhornhaven: Maximum ship's dimensions: LOA 90m; Beam 13m; Draught 5m																			

15.8.3 Emden

	Vorhafen Aussenhafen I Hafenbecken II Hafenbecken III Hafenbecken Binnenhafen Stichkanaal Industrieafen Ölhafen Neuer Binnenhafen																			
Facilities																				
Cargo	General cargo, Ro-Ro, Bulk, Grain, Vehicles handling, Building material, Oil, Liquid chalk, Containers, Forest products, Dry bulk																			
Bunker	Fuel, Lubricating oil, Potable water																			
Repairing	■ Small repairs has to be reported and approved by local authorities; ■ Drydock: capacity up to 55000 DWT; LOA 218m, Beam 26m, Draught 6.9m; ■ Floating dock: capacity up to 9500 DWT; LOA 178m, Beam 26m, Draught 6.9m; ■ Slipway: capacity up to LOA 67m, Draught 1.9m.																			
Port reception	Oil waste, Garbage and Chemicals																			
Mooring	Tugboat assistance and boatmen not available																			
Restrictions	Maximum ship's dimensions up to harbour master																			



16.1 Destinations

- For destination Amsterdam (approach via Noordzeekanaal) see also [Chapter 11 – ‘IJmuiden’](#);
- For destination Den Oever (approach via Waddenzee) see also [Chapter 12 – ‘Zeegat van Texel’](#);
- For destination Kornwerderzand (approach via Waddenzee) see also [Chapter 13 – ‘Zeegat van Terschelling’](#).



16.2 Nautical charts and publications

Detailed information about nautical charts and publications is given in HP7 - ‘Catalogue of Nautical Charts and Nautical Publications’. This publication can be downloaded from: www.defensie.nl/hydro

16.3 Communication

16.3.1 Central Reporting Station IJsselmeer

- Working channel: VHF Ch 01
- Reporting calamities
- Weather and shipping reports every H+15 LT

16.3.2 Request for a pilot

Pilotage is not compulsory for the inland waterway IJsselmeer, but if needed an inland pilot can be ordered:

- When coming from a northerly direction (Waddenzee – Den Oever) at Den Helder Pilot. See [Chapter 12 – ‘Zeegat van Texel’](#)
- When coming from a northerly direction (Waddenzee – Kornwerderzand) at Harlingen Pilot. See [Chapter 13 – ‘Zeegat van Terschelling’](#)
- When coming from Amsterdam at IJmuiden Pilot. See [Chapter 11 – ‘IJmuiden’](#)

16.3.3 Communication with locks

Location	Locks	VHF Ch
Den Oever	Stevinsluis	20
Kornwerderzand	Lorentzsluizen	18
Enkhuizen	Krabbengatsluis	22
	Naviduct Krabbengat	22
Lelystad	Houtribsluizen	20
Amsterdam	Oranjesluizen	18

16.4 Pilotage

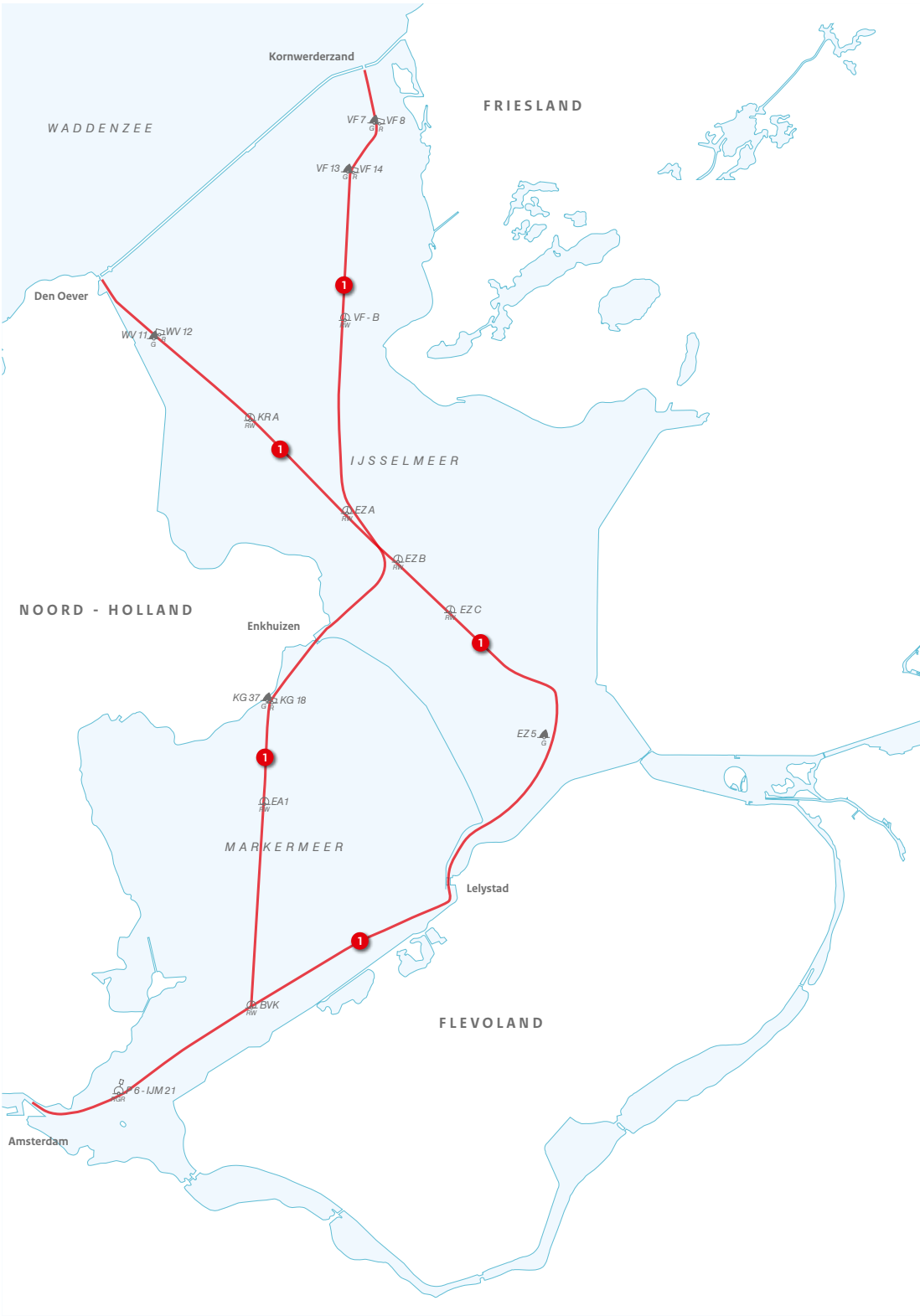
16.4.1 Local pilotage

Local pilotage

Pilotage is not compulsory for IJsselmeer but if needed see section [16.3.2 'Request for a pilot'](#).

16.5 Sailing directions

16.5.1 IJsselmeer



1 – IJsselmeer and Markermeer

IJsselmeer and Markermeer are of minor importance to seagoing vessels. Occasionally both lakes are used by small seagoing vessels which prefer not to navigate through that part of the North Sea which leads along the northwest to northern part of the Netherlands coast. To navigate IJsselmeer and Markermeer vessels must pass several locks. Because of the sizes of these locks and the waterdepth in IJsselmeer and Markermeer there are limited conditions for seagoing vessels.

On the north side IJsselmeer is separated from Waddenzee by the Afsluitdijk (great enclosing dyke). IJsselmeer and Waddenzee are connected to each other by sea locks at Den Oever (Stevensluizen) and Kornwerderzand (Lorentzsluizen).

The southern part of the former IJsselmeer is called Markermeer and is separated from IJsselmeer by the Houtribdijk. Markermeer and IJsselmeer are connected to each other by locks at Enkhuizen (Krabbersgatsluizen) and Lelystad (Houtribsluizen).

Projected depths in some buoyed and lit main fairways:

- Buiten IJ (east of Oranjesluizen at Amsterdam): 3.5m
- Pampus: 2.8m
- Vaarwater langs de Friese Kust (approach to Kornwerderzand): 4.4m
- Wieringer Vlaak (approach to Den Oever): 2.8m

16.5.2**Military exercises**

For more information see [Chapter 2 – Navigation | Traffic safety, sections 2.8 ‘Military exercise and detonation areas’](#).

16.5.3**Locks****Den Oever**

Stevensluis	
Maximum vessel dimensions	LOA: 120m Beam: 13m Draught: 3.5m
Remarks	■ Operational: 24h ■ Contact: see section 16.3.3 ‘Communication with locks’

Kornwerderzand

Lorentzsluizen (2 locks)	
Maximum vessel dimensions	LOA: 120m Beam: 13m Draught: 3.5m
Remarks	■ Operational: 24h ■ Contact: see section 16.3.3 ‘Communication with locks’

Enkhuizen

Krabbersgatsluis	
Maximum vessel dimensions	LOA: 110m Beam: 11.6m Draught: 3.2m
Remarks	■ Operational: 24h ■ Contact: see section 16.3.3 ‘Communication with locks’

Naviduct Krabbersgat	
Maximum vessel dimensions	LOA: 125m Beam: 12.5m Draught: 4.5m
Remarks	■ Operational: Mon – Fri between 0600 – 2400; Sat – Sun between 0600 – 2200. Except from November 1st to March 31st, then Mon – Fri between 0600 – 2400; Sat – Sun between 0830 – 1730 ■ Contact: see section 16.3.3 ‘Communication with locks’

Lelystad

Houtribsluizen (2 locks)	
Maximum vessel dimensions	LOA: 190m Beam: 17.5m Draught: 3.5m
Remarks	■ Operational: 24h ■ Bridges not operational from winds >6 Bft ■ Contact: see section 16.3.3 ‘Communication with locks’

Amsterdam	
Oranjesluizen (4 locks)	
Maximum vessel dimensions	In consultation with lock master.
Remarks	■ Operational: 24h ■ Contact: see section 16.3.3 ‘Communication with locks’ ■ When the difference in water level of inner IJ and outer IJ is more than 1.45m the locks are not operational

16.6

Rules | Regulations

See Chapter 2 – Navigation | Traffic safety, section 2.13 ‘Shipping regulations’.

16.7

Port information

16.7.1

Den Oever

See Chapter 12 – ‘Zeegat van Texel’.

16.7.2

Amsterdam

See Chapter 11 – ‘IJmuiden’.

HP1 | EDITION 2026

The Netherlands Coast Pilot

Eastern part of North Sea from
Oostende (Belgium) to Emden (Germany)

Hydrographic Service

Den Haag. Published in 2026
by the Hydrographer of the Royal Netherlands Navy.

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