EUROPEAN INLAND WATERWAYS SECTION
- A guide to using the Waterkaarten Nederlands app

By Machiel Lambooij (Updated February 2024)
Please email any corrections or updates to eiws@theca.org.uk.

Introduction

This product was originally produced by the ANWB (Dutch version of the AA) and called *ANWB Waterkaarten Nederland* and limited to Netherlands inland waterways. It has since been sold to another company. This updated guidance note has been produced because of a major update (February 2024), both of the app and of the Windows version. More general information can be found here: **waterkaarten.app/en/**. Note that the website is not completely up to date. Some features that are now actually in the app are still shown as under development or not mentioned.

Machiel Lambooij

These comments are based **on the app version** as available in February 2024 (Nautical Maps 10.1.5 (89)). Some additional key comments are made on the Windows 10 version separately below; note the Windows version has somewhat more limited functionality in the current version. The main development effort seems to go into the app version.

Extended coverage

Originally only including Netherlands inland waterways, its coverage has now been extended with Belgium, Germany and the UK. Also, some international data is appearing on bridges and locks (e.g. in France, but also further afield), but you cannot download offline maps yet outside the four current countries. It was announced that the coverage will be further extended in the coming season, including in the Donau (Danube) area and by adding berthing opportunities in Belgium and Germany.
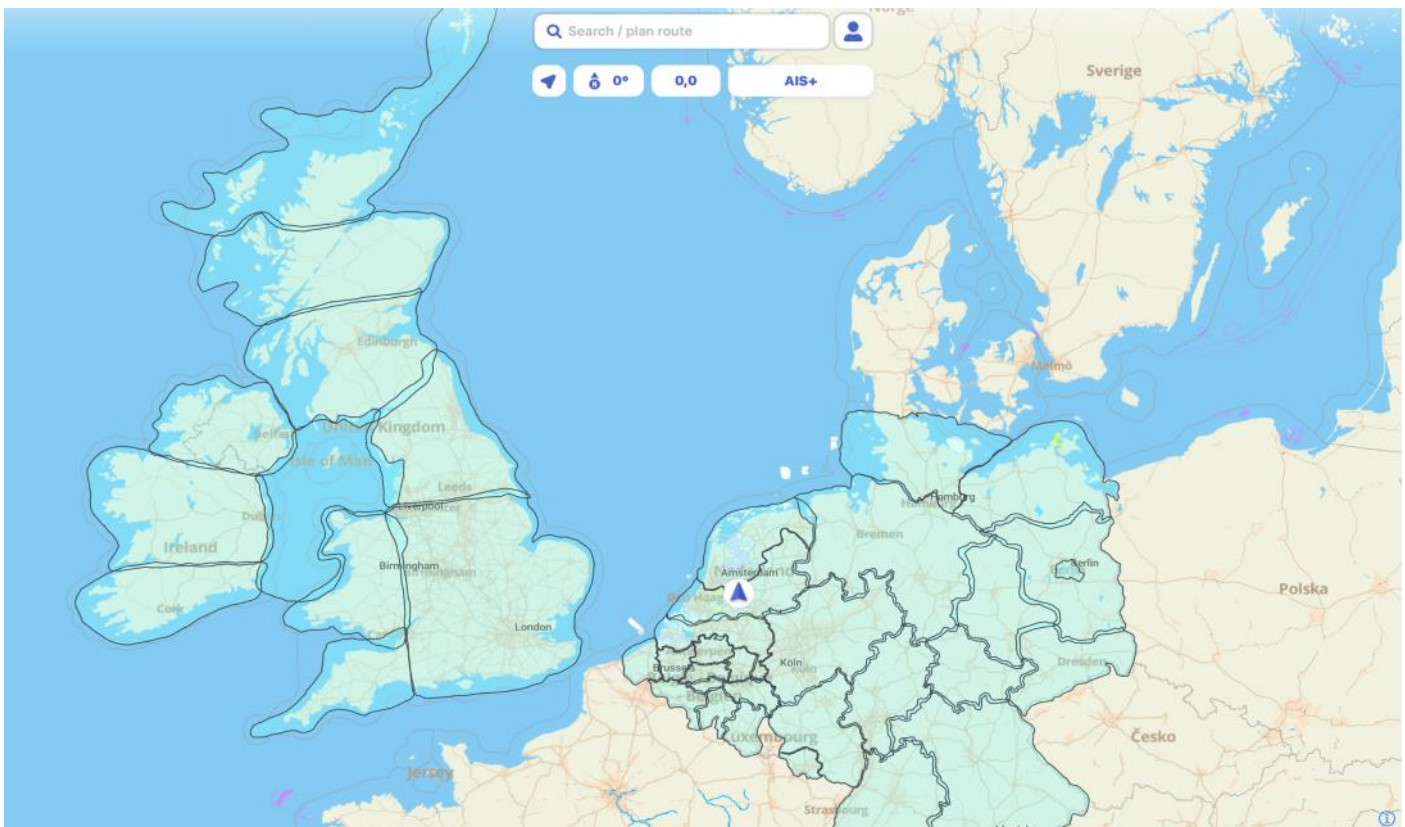
Coverage of downloadable maps – screenshot Waterkaarten.app

Support information

There is now much more language support in English in the app and on the website and a long FAQ-list can be found here: ***waterkaarten.app/en/faq/*** This guidance note therefore only discusses the basics and gives some practical comments on the usability of certain features. There are now also various instruction videos in English. You can find them ***here***.

How to obtain the product

Be aware there are similar products with almost the same name in the various app stores. You need the **Waterkaarten app**. You can also find the download link to the correct app here ***https://waterkaarten.app/en/download-waterkaarten/***. Although the company has announced that the name will be **Waterkaarten** from 2024, the product is sometimes still referred to as 'Nautical Maps' and it may add 'Boat navigation' to its logo. The correct icon is shown on the right.

The app is available for Google Play users, for Windows 10 users on a PC and for Apple users (as an app also on newer Apple laptops that can run iOS apps; there is no native MacOS version available). You can use the app (or Windows version) on three different devices using one user account. Routes created on one device should be automatically synchronized with the other devices on the same user account if synchronisation is set to 'on'. You can download the software free of charge, with a trial period of 7 days that is automatically granted if you create a new account. Thereafter you must take out a subscription for one month, three months or one year.

Current detailed contents

The product includes charts of the Inland Waterways of the Netherlands, Belgium, Germany and England and most of the contents of the printed ANWB Wateralmanak 2 information (detailed information on bridges, locks, waterways, marinas, harbours and local quays) for the Netherlands and Belgium. It does not include maximum speed information on individual waterways. That information can only be found in the printed ANWB Wateralmanak 2 (in Dutch only).

The nautical and other information for Belgium, Germany and England is still somewhat limited. The company's plans are to further improve that information to the same standard as for the Netherlands. Currently, all bridges and locks on the inland waterways of the Continent are being inputted. Also berthing information on Belgium and Germany will be appearing shortly.

The new version will also include actual Fairway Information (taken from the European wide **EuRIS** system) for all four countries, provided you have an active internet connection. It already includes local and international fairway information obtained from the Dutch Fairway Information system. (***https://vaarweginformatie.nl/frp/main/#/nts/map***; set language to English (upper left corner).

Limited nautical data

The charts do not include much nautical data on coastal waters, but some basic information on the Waddenzee is included. Please note that the chart data is updated infrequently (no update policy is shown). For open water details (depth, buoys), please be aware that the charts may therefore not be up to date. If this is critical to you (this is specifically the case with the Waddenzee), consult a secondary source (e.g. **NV** and **Navionics** (electronic) charts or the official charts by the Dutch Hydrographic Service). It is not advisable to navigate the Waddenzee on basis of this product (due to tidal influences and constantly changing position of buoys). Also,
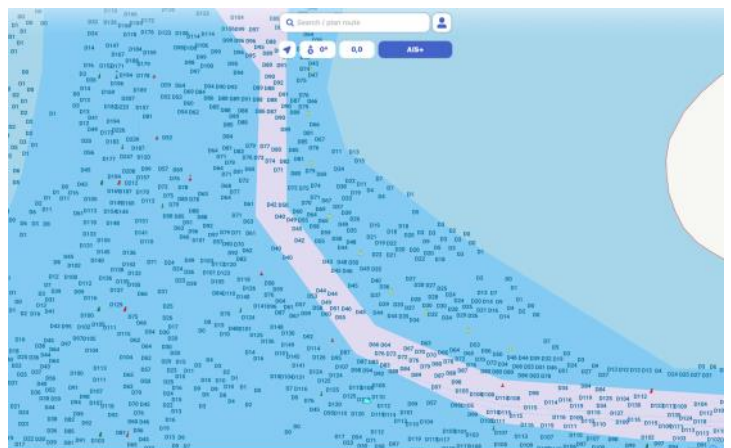
Waddenzee, nautical information – screenshot from the app

there is no tidal information used in bridge heights (although some limited tidal information is now appearing on rivers with tidal influence). So be careful with air draught around bridges in tidal waters (e.g. bridges in the Rotterdam and Dordrecht area). Depth information is displayed on the charts but is not used by the app in its routing function (you can set your draft in the app but the route planning does not take depth information into account). You will therefore have to check your route yourself for sufficient depth, given your boat's draft.

Menu access via your profile

Menu access is through clicking on the little 'puppet' box to the right of the search box – this brings you to your profile and settings). If this is not entirely visible, scroll the screen down until it is. It usually disappears if the app detects movement or after some time.
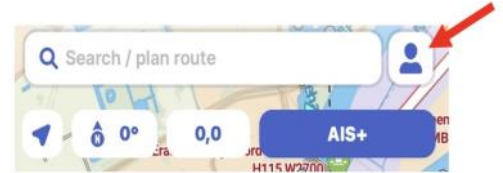
Language and unit settings

The app version should normally default to your device standard language, if recognized. If not then it will appear in Dutch, but you can set the language to English (or German) manually by going to your profile and go to *Mijn Taal* and switch to English. Note that for some features (such as the FAQ) you are rerouted to their website so you need an active internet connection, but you may also need to set the language again to English through the website menu. You can switch from km/h to knots by clicking on the km/h button.

Boat dimensions and route planning

When you have installed the app, fill out your boat's dimensions, under 'your profile', 'my boat' with the width (beam), length (LOA), height (air draught) and draft of the boat. This is a very useful feature as it is used for showing (through colour coding) whether bridges must be opened for you and you fit in locks. The route planning feature takes your air draught into account and should not suggest routes with fixed bridges that you cannot pass. It does not, however, take account of the bridge status (blockage) or opening hours. Although you can input your draft, the route planning does (currently) **not** seem to take this into account. Perhaps this will come in a next release. Check the route for correct depths!

If you tick 'share location', your boat will appear as AIS+ target to other users of the Waterkaarten app (even if you have no AIS transceiver), but more importantly, it may be used by bridge and lock keepers on certain 'Blue Wave' routes. These are routes on which boats are allowed to pass bridges and locks in a kind of convoy. Participating bridge and lock keepers may await your approach before starting the opening process of the bridge or lock, therefore it is useful to enable this. (Please note that the 'Blue Wave' system is currently used in North Holland and around Middelburg). For this to work, your device must have a constantly active internet connection.

Subscription

You need (after expiry of a free trial period of 7 days or the use of a voucher) a subscription that you can purchase through the app itself or online for the Windows version. Current prices (February 2024) for the app version are for 1 month: €13.99 p/m, for 3 months: €31.99 and for 12 months: €49.99. You can pay through the relevant Android of Apple app store. You can use the subscription, through an account, on three different devices. If you install the product from scratch, you are prompted to create an account with an e-mail address, after which you automatically receive a 7 day free trial.

Online and offline charts

The product works in principle with **online** charts. You should therefore have an active internet connection. However, you can also download the charts for offline usage. Go to 'your profile', 'download maps', and select the maps you want to use offline. It is highly recommended to do this on a free wifi connection before you leave on your trip, as the data volume is high and therefore potentially expensive to download via a mobile phone connection or to navigate online. Also, for reliability reasons it is better to have the maps available offline in case the internet connection drops out or is very slow.

Legend

The legend of the app charts can be found by clicking on your profile, Legend. Bridge (brug) and lock (sluis) numbers refer to the printed ANWB Wateralmanak 2.

Fairway information

(blockages, works in progress, other alerts)
Notices to mariners are included in the charts and indicated with this symbol.

Click on it and you will get the underlying information. Note that the underlying information may be a mix of Dutch and the relevant local language (Dutch, French, German or English). You should be able to select the text in a foreign language on your device (check your device's manual for how to do that) and copy it. Then use Google Translate online or the Google Translate app.

Be aware that the fairway information only updates when your device is connected to the internet. If it is not, it will show out-of-date information and not clearly alert you to this.

Selection of downloaded (offline maps) and update option – screenshot from app

GPS

For optimal use Waterkaarten requires GPS. You can also use it without GPS, but then you will have to manually establish your current position. The app on your device should be able to connect to a phone with GPS switched on if your device has no GPS built in (e.g. wifi only Apple iPad's). You need to set GPS permission to 'always' for it to operate properly. There may be a setting for shared GPS in 'profile' or 'GPS share', depending on your device. An Apple iPad with 4/5G connectivity and most modern mobile phones have GPS built in.

AIS+ and (real) AIS

AIS+ (AIS-signals obtained over the internet – currently only in the app version)

The product now offers a feature called AIS+. It shows AIS targets (ships with AIS constantly sending out their ship details, position and speed) superimposed on the charts. Be aware that not all boats have AIS transceivers. Commercial barges are required to have an AIS transceiver, but sometimes it does not work properly. Police services and fishermen may switch it off under certain circumstances. Many pleasure craft do not have it, especially smaller yachts. You can therefore not rely on it to navigate (e.g. in bad visibility). It may provide useful **additional** information on e.g. locks being used by commercial shipping, or commercial ships approaching you/nearing you from behind.

The term AIS+ is somewhat misleading as it less reliable than (real) AIS. It uses volunteer shore stations that receive AIS signals and transmit those over the internet to the server of the Waterkaarten app. For it to function reliably, there needs to be a shore station (there is no full coverage of all waterways, especially outside busy areas used by commercial barges!), the shore stations need to work and your Waterkaarten app device needs to have an 'always on' internet connection. You also need to be sufficiently zoomed in (the AIS+ targets are not visible if you are zoomed out too far: it warns you in Dutch with a message *AIS+ niet zichtbaar, zoom in* – AIS+ not visible, zoom in). You also need to switch AIS+ on (the button then goes from white to blue). The AIS+ function is currently only offered in the Netherlands (February 2024). It may come to other areas later this season. Click on an AIS+ target (an arrow) to get details of the ship.

Right: example of AIS+ information – screenshot Waterkaarten.app
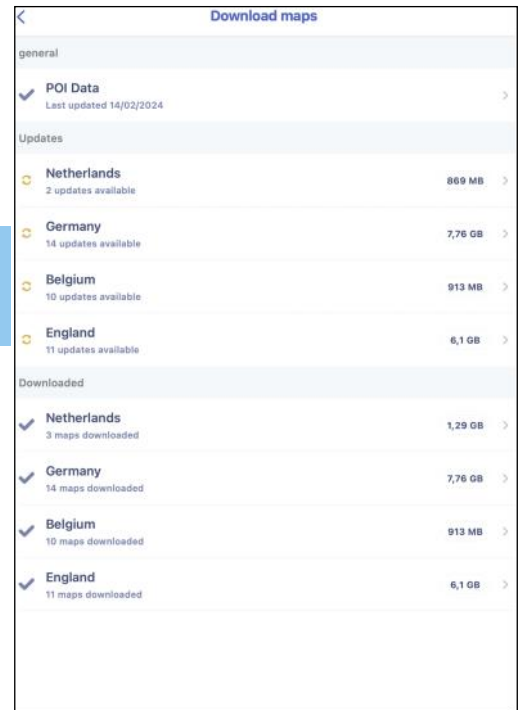
It also shows other Waterkaarten users that have ticked the box 'share location' under Profile, My boat. (This relies on both users to have an active internet connection).

'Real' AIS

If you have an AIS receiver (or an AIS transceiver) you can superimpose the AIS targets received by your device on the chart in Waterkaarten. Using your own boat's AIS for overlay on the chart is much more reliable than the AIS+ feature as you have your own dedicated receiver on board that should pick up all ships with AIS in the immediate vicinity. This does not rely on the internet. Obviously, it still doesn't show boats without (functioning) AIS. For this to work, you must create a connection between your onboard AIS device and the device on which you run the Waterkaarten app. This may require some detailed technical information and skills.

Alternatively, some AIS-devices have their own wifi hotspot; you should connect your Waterkaarten device to that wifi network (and this may mean you will lose internet connectivity to your device – offline charts required!). In some boats, the AIS-device is included in the local boat network and that network may have its own dedicated wifi network; you then need to connect to that network.

You need to know the network protocol (often TCP), the IP address of the AIS-device on that network, and the port number over which it is reachable. Consult the technical manual of the AIS-device or ask the person that installed the AIS-device on your boat. You can, alternatively, try to connect your Waterkaarten device to the relevant AIS or boat network and install an app that shows IP addresses and, in that way, figure out the correct IP address. Please note that on some boat networks, the IP addresses renews every time you start up the network. You may then have to also change the settings in the Waterkaarten app every time. The app shows the status of the AIS-connection under your profile, AIS Devices (with a red, orange, or green dot).

If you have this information, go to your profile, and choose 'AIS Devices'. Click on 'Add device', select protocol (usually TCP), give the device a name that you like and fill in the IP address and the port number. Then switch it on with the switch on the right-hand side. This feature is very much still in Beta, and you need to have some knowledge of the IT aspects of your AIS or boat network. Connecting this successfully is therefore still very much a question of trial and error. If you have a plotter on board with AIS overlay, it is easier to use that to view AIS-targets.

Bridge and lock clearance

The app allows you to set the dimensions of your boat and (air) draught, the margin between boat and bridge clearance and the minimum height of the boat. In the map, the colour of the bridges is then adapted to these details (green: bridge does not have to open, yellow: bridge must open for you (and can open), red: bridge cannot be passed as it is a fixed bridge). This is a very useful feature if you plan a trip on waterways with many bridges and your air draught may be critical. Go to 'Profile' and set the details.

Routes

By clicking on the search/plan route box you can plan a route. This now works for all four countries. Select a destination and it will be shown on the chart. Click on the blue route button. You can add a stopover. The advice is to first save the route and then start it. It may show further possible routes, of which you can select one to start. If you click, after starting a route, on 'more information' it will show you the bridges and locks on the route and any recent fairway information that may affect the route. You can plan, change, share or open a shared route (refer to the FAQ on how this works). You can send a route to a friend and they can open that route in their copy of the Waterkaarten.app. For route planning to work, you need an active internet connection.

Overlay with object information
(bridges, harbours, marinas, Fairway Information)
You can select map overlays with 'Points of Interest'. The advice is to switch most of these on, as this is the most useful aspect of this product. In the app go to your profile, Select POIs and select the POIs you want to see.

Copy of local CEVNI rules and local VHF handbook

The app contains a full copy of the local (currently Dutch only) CEVNI rules (BPR; *Binnenvaartpolitiereglement*) and the local VHF handbook (*Handboek Marifonie*). Both publications are in Dutch only. This can be found under your 'Profile, information'. By having the data available, you have met your legal obligation to carry a copy.

Further details (FAQ)

Can be found under 'Profile, information', 'FAQ'. This requires an active internet connection. You are being sent to the Waterkaarten.app website. Go to 'menu' (right top corner) and select again your language (under *'taal'*).

Windows version

The Windows version is produced by a different company from the app version. Although the underlying content seems to be the same, the features of the Windows version are not entirely the same as those of the app version (and generally more limited and less user-friendly). The look and feel is also somewhat different. It is the author's impression that more development effort is put into the app version.

Starting up the program takes some time (depending on the speed of your internet connection) as a lot of data is downloaded first. Internet connectivity is required. For it to show your position and follow your route, you need to have GPS capability on your PC (or via the AIS connection) and you need to set it in the settings, GPS settings. You may have to install driver software separately.

In the Windows version there is a separate program that you can start with support information (Waterkaarten Support Assistant). It relies on an active internet connection. In the Windows version, you need to select the menu bars left of the search bar (there is no profile 'puppet' symbol). You need to specify the language **upon installing the product**. You can switch from km/h to knots by clicking on the km/h button (Windows: SOG button). You fill out your boat details under the main menu/data.

In the Windows version, taking out a paid subscription is done through an external payment provider, which currently accepts IDEAL (Dutch bank account holder only) and credit card. If you pay through this route on your user account, you can use that user account also to log in on two other devices with the app version. If you have already paid through the app, you do not need to pay again, just log in with your user account and the Windows version should be valid for the same period of time as you paid for the app version. For downloading the maps for offline use go to 'Map settings' and check the offline box.

In the current version of Windows, no legend can be found. Consequently, in the annex we have provided screenshots of the legend for the app version.

You can connect AIS devices with an USB cable to your Waterkaarten device (PC). The author has not tried this. You will have to check whether your AIS device and your PC are compatible. If properly connected, you can also use the AIS's GPS signal (but need to set this under settings/GPS settings – choose AIS as the source of the GPS signal).

The documents for boating (rules and regulations) can be found in a file on your PC: *This PC/Documents/ Promanent/WaterkaartFMX/Library*. Currently, they are only the documents for The Netherlands. Under the folder *PC/Documents/Promanent/WaterkaartFMX* you will also find subfolders for log files, Notes, Routes, Shared routes, and tracks.

Disclaimer

The comments in this Guidance Note are based on the personal experience of an **EIWS** member for the purpose of allowing members and others to understand the product discussed and its features and are not official guidance by the company that sells the product or by the Cruising Association. The comments are based on the version indicated. The app and Windows version is regularly updated, and features may change/be added. No obligation is assumed to update this Guidance Note. The information given is supplied in good faith but no responsibility for loss occasioned to any person acting or refraining from action as a result of the material contained in it is accepted by the writer or the Cruising Association. Where

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Screenshots have been made by the writer for illustration purposes and are the copyright of Waterkaarten.

Annex 1: Terms on the charts in Dutch

Most chart data is now (in the new version) translated. Please find below a list of the most frequently used terms in Dutch in case they have not yet been all translated.

DUTCH	ENGLISH
.. m uit de oever blijven	Keep .. metres from the shore (obstacles)
Aanleggen verboden, Privé ligplaats	No mooring, private mooring
Afsluitbalk	Closing bar
Alleen op verzoek bediend	Only opened on request (usually in advance)
Bakboord	Port
BB	Bridge that can be opened
Bed. op verzoek	Opening on request (usually in advance)
Betonde geul	Buoyed channel
Breedte	Width
Brug geld	Bridge toll charged
Brug, bruggen	Bridge, bridges
Diepgang	Draught
Diepte, diep, ondiep	Depth, deep, shallow
Doorvaart verboden	No passing of ships
Doorvaarthoogte (or: *vrije doorvaarthoogte)*	Maximum draught, free draught
Fietsbrug	Bicycle bridge
Geen doorvaart	No passing
Geen Ligplaats	No mooring
Geen passanten	No visitors
Gem. Haven	Municipal harbour
Gem. passantenhaven	Municipal visitors' harbour
Gemeente	Municipality
Gereed (year)	Available (year) - usually with works in progress
Gesloten	Closed for traffic
Geul zomers bebakend	Channel with buoys in summer time (buoys usually not shown on chart)

Havendienst	Harbour authority
Hefbrug	Lifting bridge
Hoogteschaal	Level scale (bridge) showing air draught
In ontwikkeling	Being developed
JH or **JH** followed by a name or **St. JV** name	Marina (with name)
Kantoor ANWB	Office of the ANWB (the Dutch AA)
Keersluis (staat open)	Floodgate (usually open except in case of high water or an emergency)
Kitesurfgebied	Kitesurf area
Lengte	Length
Let op	Attention
Lichttoren	Light tower
Liggeld verplicht	Mooring fee obligatory
Liggeld verschuldigd	Mooring fee obligatory
Liggeld/havengeld	Mooring fee/ harbour fee
Max. doorvaarthoogte H25	Maximum air draught 25 dm (i.e. 2.50m)
Meer	Lake
Meldsteiger	Reporting pontoon
Ondiep	Shallow (do not navigate here)
Overslaghaven	Transhipment port
Part. Haven	Private harbour
Passantenhaven/passanten	Visitor harbour, visitors welcome
Pontonbrug	Pontoon bridge
Reddingsbrigade	SAR station
Sluis, sluizen	Lock, locks
Spoorbrug	Railway bridge
Spuilichten	Sluice lights
Spuisluis	Sluice, spillway
Staat meestal open	Is mostly open
Staat open/openstaand	Is open
Stadshaven or Gemeentehaven	City harbour or municipal harbour
Steiger	Pontoon
Strand	Beach
Stuurboord	Starboard
Toegang betond	Entrance channel with buoys
Toegang ondiep	Entrance channel shallow
Toegestaan	Allowed
Uitwateringssluis	Sluice, spillway

Vaarroute	Shipping route, channel
Vast ged.	Fixed part (of a bridge); usually to indicate maximum air draught of fixed part
Verboden	Prohibited
Verkeersregeling	Traffic control system/regulations in operation
Visstokken / visnetten	Fishing equipment in the water
VV van (date) tot (date)	Foot ferry from (date) to (date)
VVV	Tourist information
Wachtplaats	Waiting area (bridge/lock)
Word niet meer bediend/wordt niet bediend	Is no longer operating (bridge/lock)
Zelfbediening	Self service (bridge/lock)
Zwemstrand	Swimming area with beach

Annex 2 (screenshots legend)

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< **Bridges and structures**

H	Clearance in dm
L	Length of lock chamber
V	Average fall of the lock in dm
W	Width in dm
)(**BB**	Draw bridge
D	Depth in dm
><	Culvert
34	Number of structure (bridge / lock)
≫a >b	Navigation lock / Guard lock
⫞	Weir
)(	Fixed bridge
)(a | b	Footbridge / Dam

Map   DTG   Routes   Search   Profile

Mark at a separation point
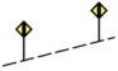
Leading mark with port hand line

Leading mark with starboard hand line

Cardinal mark (South quadrant)

Separation mark (channel of equal importance)

Additional port hand mark

Additional starboard hand mark

Signposted canoe route

Special marks

Cardinal mark (North quadrant)

Cardinal mark (East quadrant)

Cardinal mark (West quadrant)

Various top marks

Leading lights with leading line

Port hand marks

Starboard hand marks

Preferred channel to port

Preferred channel to starboard

Yacht buoyage

Buoyage for docking marina (summer only)

Channel mark on right of left bank

Light buoys

Signposted for harbour entrance on left / right side

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< **Water level / depth**

———— 10 dm depth line

·· ·· ·· 20 dm depth line

GHW   Mean High Water (in dm)

GLLWS Lower low water spring (in dm)

GLW   Mean Low Water (in dm)

KP   Canal level (in dm)

NAP   Normal Amsterdam Level

PP   Polder level (in dm)

SP   Weir level (in dm)

〰️ Recommended course line

D   Depth in dm

☵ Water gauge

⚠️ Rocks / obstructions under water

▱ Breakwater below surface

▭ Channel less than 1 m deep (the IJsselmeer or waters openly connected with it, less than...

▭ Channel less than 1 m deep (the IJsselmeer or waters openly connected with it, less than...

⌐ Warning sign for bridge clearance

⊤ Warning sign lowest level (in navigation channel)

📍 Map   🔺 DTG   ↱ Routes   🔍 Search   👤 Profile

12:47 Wo 22 jan.   91%

< **Facilities**

| Map | DTG | Routes | Search | Profile |

Scaffolding

Quay or bank

Camp site

Temporary berth or mooring

Recreation area

Daytime recreation area

WV / ZV Water sports association / sailing club

Public trailer slipway

Canoeing club

Crossing for canoes

Embarkation point for canoes

Polular diving spot

Bunker station / ship

Wastewater station

B Berth for commercial shipping

Marina

Quay

Map   DTG   Routes   Search   Profile

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< **General topography**

| Map | DTG | Routes | Search | Profile |

Woods

Residential area

Industrial area

Other area

Reeds

Wetlands

A16 Motorway (with number)

Arterial road

++++ National border

Street or road

Motorway under construction

Road under contruction

Dyke

Dyke with road

Bicyle path

Railway with station

Tourist railway

Light railway / underground

Provincial border

Map   DTG   Routes   Search   Profile