



Quick guide



www.imray.com

support@imray.com

Imray Navigator (iOS edition)

Access your charts across your iPad, iPhone and Android devices

Use Imray Navigator for quick reference or to convert your device into a fully-functioning chart plotter.

Get access to an entire library of Chart Sets including Imray's award-winning raster charts and those of other official Hydrographic Offices.

Get quarterly updates with the latest data during the 12 months of your subscription.

Seamlessly zoom and pan to navigate around charts, with easy access to different levels of detail.

Refer to useful georeferenced information including tidal data and aerial photos.

Create and share a personal collection of waypoints and routes.

Use chart indicators to measure distances and bearings.

Provides comprehensive tidal data when used alongside the **Imray Tides Planner app**. Use alongside the **Imray Boat Instruments app** for full AIS/NMEA functionality.

Free app support service





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**NOT TO BE USED FOR NAVIGATION.
USER UNDERTAKES ALL RESPONSIBILITY.**

Imray Navigator Quick Guide, charts and app
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See About section in the app for full terms and conditions, licences etc.



Overview

The app displays charts, corresponding to their paper counterparts, with layers of georeferenced information.

Zoom in and out of the chart to see the image at different scales, carefully selected by our skilled cartographers.

Zoom out for small scale passage charts.

Zoom in for greater detail around harbours, estuaries and coastlines.

Magenta boxes show the edges of each overlapping chart.

Tools and toolbars support waypoints, routes, distance measurement, position and destination. Set display options and preferences including tidal data, aerial photographs, AIS & NMEA.

Instruments Panel

Location coordinates
Distances

Cursor

Tap for coordinates information and to show indicator menu

Charts and account

Purchase, store and manage charts. Log in to your account.

Show/Hide

(scroll down to see all)
Chart outlines
Corrections
Currents (*Tides Planner app required*)
Cursor
Destination
Distance
Notes
Photos
Position
Route
Sketch plans
Tides (*Tides Planner app required*)
Tracks
Track explorer
Waypoints
Scale bar



Speed and Bearing

Speed over ground
Course over ground

Compass

Heading
Course to steer
Magnetic north

Chart

Scroll to pan
Pinch or double tap to zoom

Notes

General notes for downloaded charts

Attribution

Copyright and credits information

GPS

Toggle GPS on/off

Move to

Boat
Coordinate
Cursor
Destination
Distance from
Distance to
Position
Waypoint

Navigation

Create, edit, share, import and export:
Routes
Waypoints
Position
Destination
Tracks
AIS and NMEA

Preferences

Select preferences for:
Units
Date and Time
Display
NMEA
NMEA GPS and logs



Indicator icons

What indicators mean and do

Data additional to that on the chart is shown by indicators - colour-coded icons.

Indicators are connected to a georeferenced position (a coordinate).

Touch-drag indicators to move them.

Tap the indicator to access data or trigger an action:

Single tap - information

Double tap - menu



Boat

Shows your GPS position. Heading line appears when boat is in motion. Heading line relates to COG/SOG display at top of screen.



Corrections

Imray charts only. Derived from Imray Correction Notices. Updated quarterly. Tap to show corrections to chart data.



Currents

Tidal streams. Install **Imray Tides Planner app** for full functionality.

Tap a current arrow to see the bearing, speed, date and time in the top display. Move forwards and backwards in time using the time display at the bottom left of the screen.



Cursor

Tap the cursor to see a coordinate. Use the cursor menu to add position, destination and waypoint indicators to the chart view.



Destination

Set your destination. Tap to see coordinate. Tap blue icon to select and move to another coordinate. Touch drag to move.



Distance A-B

Electronic Bearing Line

Tap end points to see distance and bearing between points A and B. Touch drag to move.



Notes

Notes about the chart. Updated quarterly. Tap the points on the chart to see information. Tap the Notes indicator in the bottom right-hand corner for general notes relating to the charts.



Photos

Tap to see aerial photos. Pinch photo to zoom in and out.



Position

Tap to set a fixed position for reference. Tap blue arrow to display menu to enter a new coordinate.



Route

Use the Navigation menu to add, edit, delete and share routes.



Sketch Plan

Tap to see a non-georeferenced sketch with large scale details.



Tides

Requires **Imray Tides Planner app** for functionality. Tap to see tides graphs and data.



Track

Use the Navigation menu to capture and share tracks. Switch on GPS to capture tracks.



Waypoint

Mark waypoints. Tap once to reveal coordinates and name. Double tap to reveal menu to enable you to change symbol or mark, edit, delete and manage.



Track Explorer

Use Track Explorer to view speed, distance and bearing at any point along a previously recorded track.



Instruments Panel

View data showing position, speed and bearing

Column 1

Origin position
(shown as coordinates)

Can show any location indicator
(tap to change):

- Boat GPS location
- Cursor
- Fixed position indicator
- Destination indicator
- Distance marker A
- Distance marker B

Column 2

Target position - bearing and bearing from origin
(shown as °T and distance unit)

Can show (tap to change):

- Cursor
- Destination indicator

Set distance unit in Preferences menu.

Column 3

Speed (SOG) & heading (COG)
(shown as °T and speed unit)

Shown when valid values are received from the device GPS sensor.

Set speed unit in Preferences menu.

Tap to expand view. Hold and drag to arrange on chart.



GPS accuracy
Appears when GPS is switched on

Compass

Shows magnetic north and course to steer.

Tap to expand/minimise.

Hold and drag to move on the chart.

Needle points to magnetic north (red arrow).

Orange line on compass shows heading/course to steer from GPS location (or fixed position if GPS not available) to destination.

Relates to Destination, Position and Distance EBL indicators. Changes if these are moved by touch-dragging.

Magnetic north and GPS readings must not be used for navigation. The device sensors are not tested for navigation usage.



Charts Buy charts



About

This menu gives access to the Quick Guide, information about help, licences and other apps in the Imray Marine Navigation series.

Login

Before you can subscribe to a chart set, you need to **Login**.

You will be prompted to enter a user name and password.

First time users need to set up an account. Repeat users need to enter a password.

Charts are sold in Chart Sets by geographical area from the Charts section of the app.

Chart Store

Tap to display a list of charts in the Chart Set.

View chart names, scale and edition date.

Select a Chart Set

Tap on the Chart Outline on the world map or go to Chart Store menu.

Subscribe

Login to subscribe (see below left) and to share your charts across multiple devices.

Swipe left to purchase an auto-renewing 12-month subscription to a Chart Set.

Subscription provides quarterly updates with notes, corrections and new editions.

If notifications are switched on, the app will remind you to resubscribe 15 days before expiry. You can manage your subscription (including cancelling) in the Account Settings on iTunes.

See next page for information about how to download and manage your charts.

Voucher codes

If you have been given a voucher code by Imray customer support, use this to access your 12-month subscription to a Chart Set.

Remember that your subscription will expire after a year and you will no longer receive updates unless you choose to subscribe.

Photo Manager

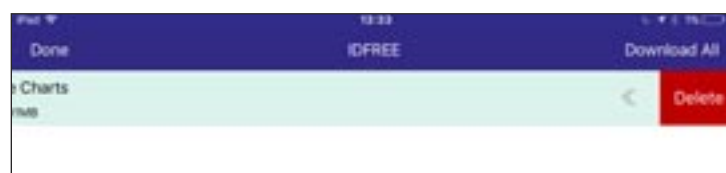
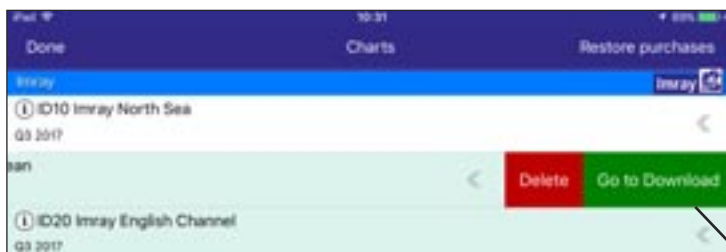
Some Chart Sets include photos.

Once you have downloaded a Chart Set, tap on Photos to access Photo Manager. Swipe left to download or delete photos as required to save space on your device.



Charts

Download, update and manage your charts



Once you have logged in and subscribed to a Chart Set, you will need good internet access to download it.

Chart Sets are split into sections to reduce download time, but they are still large files so may take several minutes to download.

Download

Swipe left on the Chart Store.
Go to Download your Chart Set.

Choose which areas of your Chart Set you want to download. Swipe left to download.

Delete

Swipe left to delete sections of your Chart Set from your device to save storage space (you can restore and download it again any time you have WiFi access).

Restore

Tap Restore Purchases (top right) to reinstall the Chart Set from your iTunes backup.

Chart Archive and Updates

Access previously subscribed-to Chart Sets. If your subscription has expired, these will not be up to date.

A red dot indicates that an update is available. Follow these dots to update your chart set with the latest available data.

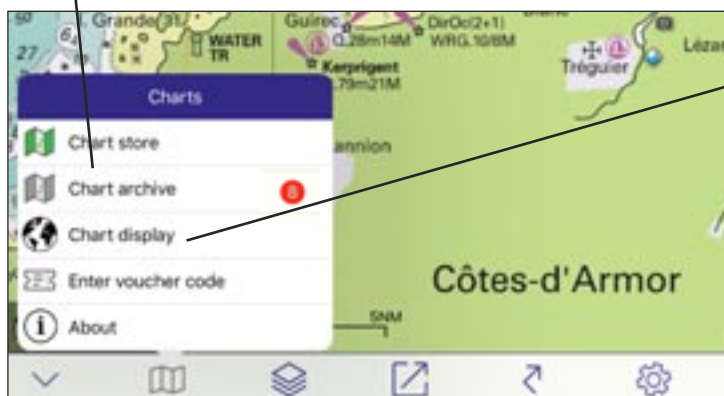


Chart Display

See a list of your downloaded Chart Sets in the Chart Display area

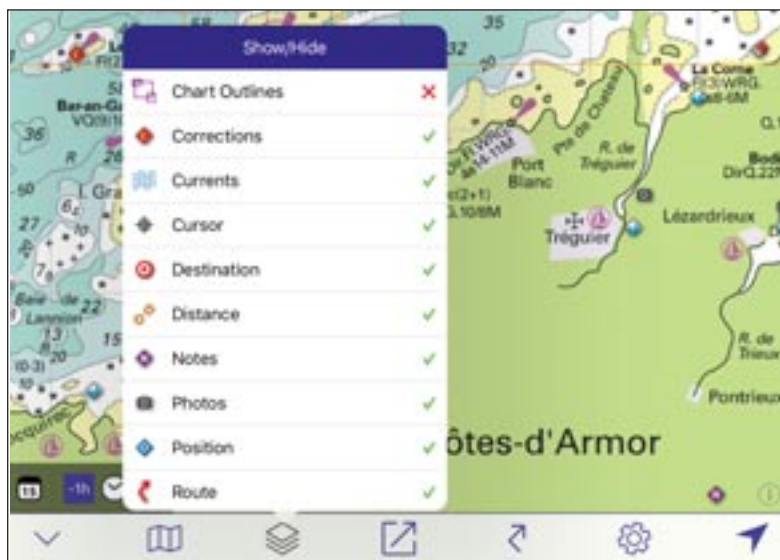
Show or hide Chart Sets by tapping the green arrow/red cross

Press and hold the layer icon (right hand side) to drag and reorder Chart Sets. This is useful if you have overlapping Chart Sets.



Show/Hide

Turn indicators on or off on the chart display



Tap the cross or tick symbols to turn Chart Indicators and Chart Data on/off. Scroll up and down the menu to see the full list:

- Chart outlines
- Corrections
- Currents and tidal streams
- Cursor
- Destination
- Distance (Electronic Bearing Line)
- Notes
- Photos
- Position
- Route
- Sketch plans
- Tides
- Tracks
- Track Explorer
- Waypoints
- Scale Bar



Tap the indicators on the chart to show useful information

Coordinates
Indicator manager
Waypoint manager



Tap photo indicator to display aerial shots



Move to Move to a place on the chart



Move to

Use the Move to menu to see a particular point on a chart. The chart scrolls to the selected target:

- Boat (GPS Location)
- Centre on coordinate
- Cursor
- Destination
- Distance from
- Distance to
- Position
- Waypoint

Zoom

Double tap on the chart to zoom in or
Pinch two fingers to change the zoom

Scroll

Touch and drag anywhere to scroll the chart



Indicator menu

Touch indicator icon once to show coordinates, bearing and distance or other data.
Double tap to show a popup Edit menu.
Touch-hold then drag to move.
Tap again to hide menu.

Cursor menu

Tap on Cursor to display menu.
Add destination.
Set a fixed position.
Add waypoint.
(Delete these by tapping and clicking Delete in popup)



Navigation Routes, Tracks, Waypoints and AIS/NMEA



Position and Destination

Edit your fixed point position and destination by setting a coordinate.

Distances Electronic Bearing Line

Tap the ends of the Distance indicator (electronic bearing line) to measure distances from A to B.

Routes

Routes can span several individual charts and long distances for easy passage planning.

Use this menu to:

- Create a route (tap +)
- Delete a route (tap x)
- See folders with list of routes
- Edit routes (swipe left)
- Select routes to share.

See page 11 for more information on Routes.

Track

Capture, save and share tracks. See ETA.

Capture a Track

Switch GPS on
Tap Start tracking to capture a journey
Your ETA appears along the track line as you move.
Save track when journey complete. Default name is the date and start time. This can be edited as necessary by typing into the box.

View Track

See Track data (distance, max speed, average speed, start time, end time, duration) in the Track menu.

Add your track to the chart,
Change name or Delete by swiping saved track to the left.
Change track line weight and colour in Preferences menu

Explore Track

Switch on the Explore Track indicator in the Show/Hide menu.
View track data (distance, speed, heading) at any point along a pre-saved track on the chart.

Import/Export

Import from iTunes or export all waypoints, routes or tracks.

Share by email, text message, AirDrop or add to Notes.
Copy to other mapping apps.
To choose which to export, go to Routes, Tracks or Waypoints menu.
Tap Select Route, Track or Waypoint to share.
Click on the circle to the left to select.
Tap Share icon.

AIS and NMEA

Download the **Imray Boat Instruments app** to get AIS and NMEA data.

Use the AIS & NMEA menu to switch on or off various AIS indicators and to see the NMEA log.

Go to Preferences menu to change AIS and NMEA GPS settings.

See page 16 for more information on AIS and NMEA.

Waypoints

Add, manage and share waypoints.

Use this menu to:

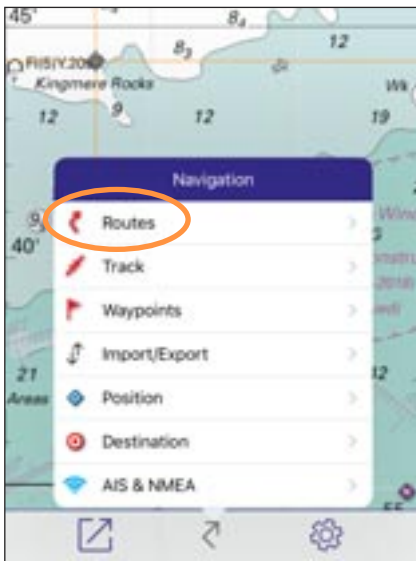
- Add a waypoint (tap +)
- See folders with lists of waypoints
- Delete waypoints by swiping left
- Select waypoints to share.

See page 13 for more information on managing Waypoints.



Navigation > Routes Add routes

1. Go to Navigation > Routes
Tap +



2. You are now in Routes mode.
The bottom Toolbar on your screen has changed.

Single tap the screen to add a point to your route.

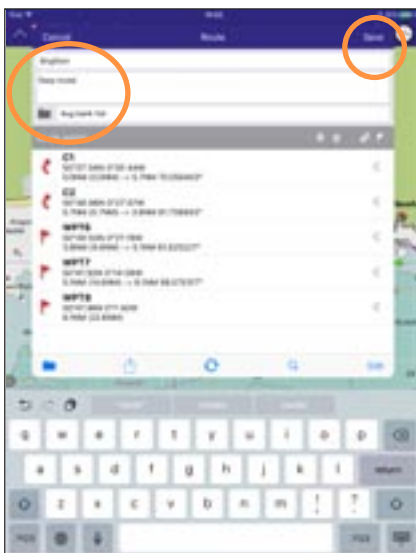


3. Switch to Waypoint mode to add a waypoint.
The waypoint is added to the waypoint list and you can edit it later by tapping.
Tap an existing waypoint to add it to the Route.



4. Tap Save. Route Manager screen will appear.

Type in the boxes to name your route, add notes about the route and name a folder.



5. Save. The route is now stored. Add more points or waypoints. When you have finished, tap Save or Cancel to go back to Chart mode.



Import and Export routes in GPX format using the Import/Export menu. Follow the onscreen instructions to import routes and waypoints into the managers.



Navigation > Waypoints Add and Manage Waypoints

Add waypoints

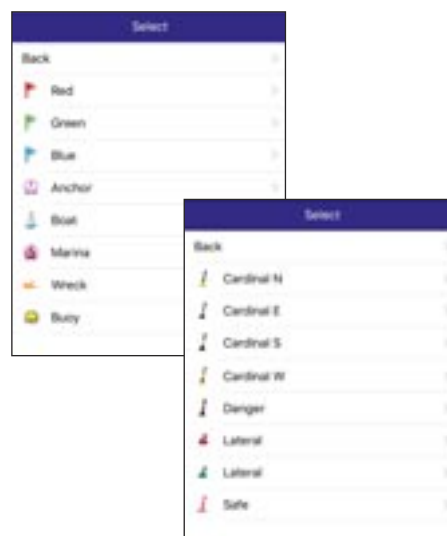
1. Use the Cursor menu
Tap cursor once > Add Waypoint
Waypoint menu appears.



2. Name waypoint and save to make it appear on the chart.
Or, select GPS to drop a waypoint at your current GPS position.

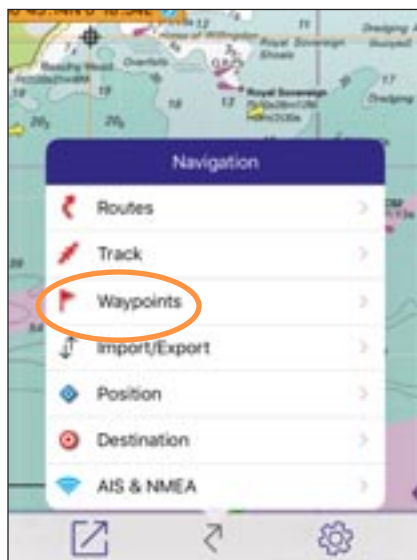


3. Tap waypoint flag to edit the indicator or change to other symbols or marks



Waypoint Manager

1. Go to Navigation > Waypoint
Waypoint Manager menu appears.



2. Edit a waypoint by tapping the name.
Change name, description or folder name.
Change coordinate or move to GPS position.

Swipe left to delete.
Select Waypoints to share.



Import and Export Waypoints

In GPX format into folders using the Import/Export menu. Follow the onscreen instructions.



Preferences



Preferences

Scroll up and down for all options.

Set personal preferences for:

Units

- >Depth (metres or feet)
- >Length (metres or feet)
- >Distance (km, miles or nautical miles)
- >Speed (km/h, mph or Knots)
- >Draught (in metres)

Date and Time

- >Timezone (local or UTC)
- >Time (12h/24h)

Display

- Autolock
- Text colour (changes text in Instruments Panel)
- >Night mode (choose on or off to dim display brightness)
- >Navigation bar (shows or hides instruments panel)
- >Toolbar (show or hides bottom toolbar)
- >Track Line (changes colour)
- >Notifications (allows you to receive notifications and information from Imray)
- >Distance points

NMEA Settings

[\(see page 16 for further instructions on NMEA\)](#)

- On/Off
- NMEA Source (type name of NMEA device in box)
- IP Protocol (TCP or UDP for NMEA device)
- IP Address (enter IP address of your NMEA device)
- Port (enter device Port number)

NMEA GPS

- MMSI (enter in box)
- AIS safe distance (choose the distance that relates to AIS warnings on the AIS display on the chart)
- AIS log (choose how frequently you want this to update)



GPS



Tap the GPS tool to switch GPS on/off. Boat indicator icon appears to show your GPS position.

Use GPS directly from your iPhone or iPad 3G/4G devices.

This data is assisted by a mobile network connection for the initial location, but it does work independently and can lock onto GPS satellites anywhere at sea.

Bluetooth independent GPS receivers such as GNS devices, e.g. BadElf or Dual.

Pair these receivers to the iPhone or iPad through Bluetooth and the GPS data is received by the Imray Navigator app.

There are major iPhone and iPad battery advantages in using an external device; power drain from the GPS hardware in the iPhone or iPad is significant.



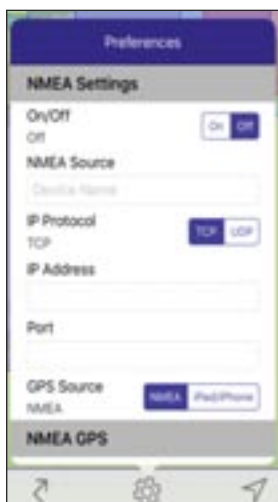
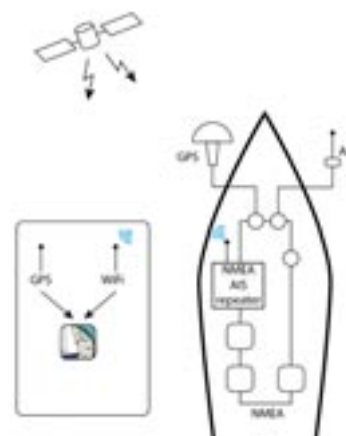
AIS and NMEA



Prerequisites

Purchase and download **Imray Boat Instruments app** from the App Store for NMEA and AIS functionality.

Your hardware on board also needs to include:
 A NMEA WiFi gateway to allow for messages to be sent over WiFi.
 An AIS receiver
 A GPS antenna.



Imray Navigator Preferences menu

NMEA Settings

On/Off (turns NMEA on and off)
NMEA Source (enter the source name of your NMEA device)
IP Protocol (Set the network protocol for the NMEA device)
IP Address (enter IP address of your NMEA device if using TCP/IP as the protocol)
Port (enter NMEA device Port number 0 to 65535)
GPS Source (sets whether the device will use NMEA or the phone/iPad GPS as the source for the app).

NMEA GPS

MMSI (enter in box)
AIS safe distance (choose the distance that relates to AIS warnings on the AIS display on the chart)
AIS log (choose how frequently you want this to update)

1. Connect your iOS device to the NMEA gateway.

Open the iOS device settings app and connect to the NMEA WiFi gateway.

2. Configure Imray Navigator NMEA Settings.

Choose the protocol for connecting your iOS device to the NMEA gateway

UDP

IP address can be left blank
 Port enter the port used by the NMEA gateway eg 10110
 IP Protocol set to UDP
 GPS source if your NMEA has GPS select NMEA. If not, select iPad/iPhone for GPS positioning.
 NMEA source enter a source name for your NMEA device
 On/Off turn NMEA on.

TCP/IP

IP address enter IP address of the gateway eg 192.168.4.1
 Port enter the port used by the NMEA gateway eg 10110
 IP Protocol set to TCP/IP
 GPS source if your NMEA has GPS select NMEA. If not, select iPad/iPhone for GPS positioning.
 NMEA source enter a source name for your NMEA device
 On/Off turn NMEA on.



Using NMEA and AIS



Switch on AIS in the Navigation menu.

Status	Shows connection to NMEA gateway
AIS	Displays AIS targets on the charts. If set to false, AIS Distance & AIS Vector will also not be visible.
AIS distance	Displays distance rings around your boat location
AIS vector	Displays vector lines of AIS targets
AIS info	Displays AIS info of target
AIS relative	Displays a safety circle around an AIS target when you are too close
AIS targets	Opens a new tab listing all the AIS targets visible to the device
NMEA log	View the NMEA sentences received by the app

The AIS overlay on the chart shows relative position, speed and course for nearby targets that the onboard AIS receiver is reporting.

A minimum safe distance can be used to show warnings about potential collisions (set safe distance in Preferences menu).

The relative direction of travel of targets is shown in colours to indicate relative position in 5, 10 and 20 minutes.



AIS on. AIS Distances showing. Change distance units in Preferences menu



AIS targets and alarms. AIS info showing. Relative direction of travel of targets is shown in colours to indicate relative position in 5, 10 and 20 minutes.

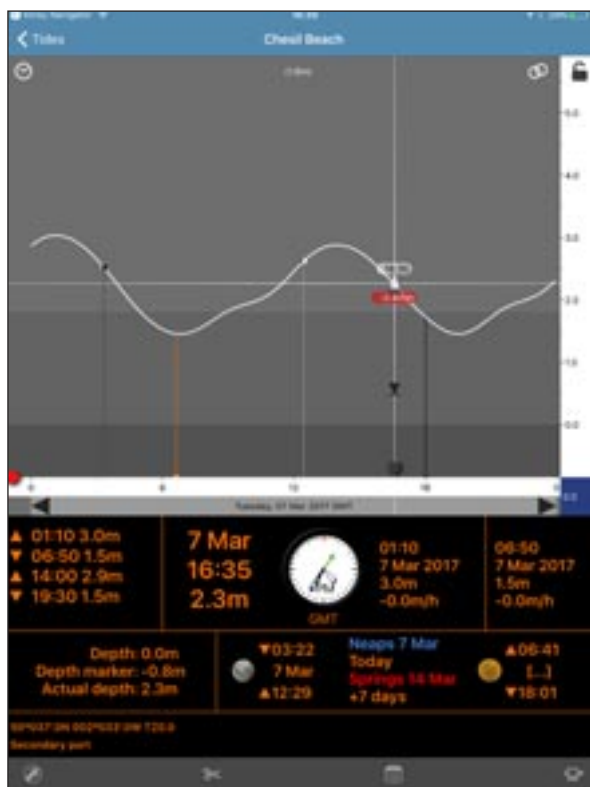




Tides and currents



Download free Imray **Tides Planner app** for full functionality. Go to Show/Hide menu and switch on Tides and/or Currents.



Tidal data

 Tap the Tides indicator.

A tidal graph will appear for the nearest port (data is taken from Tides Planner app).

Use this to view a tidal curve and data for today's date.

Purchase App Extensions and Licences in Tides Planner to see future or past dates.

Tap <Navigator (top left) to return to Chart view.



Currents

When Currents are switched on in the Show/Hide menu, arrows will appear on screen indicating tidal streams.

Tap an arrow to see speed, bearing and time data for that point (information in bar at top of screen).

Use the calendar, -1hr and +1hr to move forwards and back in time.

Purchase App Extensions and Licences in Tides Planner to see future or past dates.