

# **NAVIPAC HELMSMANS DISPLAY**

## **SAFETY, EXCLUSION, CONFINEMENT ZONES**

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# 1 Introduction

**NaviPac Helmsman Display** allows for setting different alarms eg visual alarms eg circles or ellipses as well as an audio alarm shown as pop-up window.

You can add three zones around objects or waypoints:

- **Safety zone**  
Ensures that an object does not get too close to another object, eg setup between two objects, like a tug and a barge.  
The user can add visual alarms eg circles around an object shown in the 3D Map view and additionally an audio alarm.  
For the alarm settings calculation a radius (sphere) is used.
- **Exclusion zone**  
Ensures that all objects are excluded unless they are on the allowlist, eg in environmental protected area.  
It is now also based on live data, so if an object has live data to another object, like an anchor, an exclusion zone can be made based on a corridor x meters wide created from the live distance. This can help prevent any objects getting too close to the anchor line.
- **Confinement zone**  
Ensures that an NaviPac object stays within a specified location eg for FPSO position keeping.  
The user can define objects that are not allowed to get out of specified area. When violating a Confinement zone by getting out, an alarm is given.  
It can be used on lines and waypoints.

## 2 Visual alarm (circle on Helmsman's display)

Visual alarms can be added for each of the zone types. They will be shown as circles.

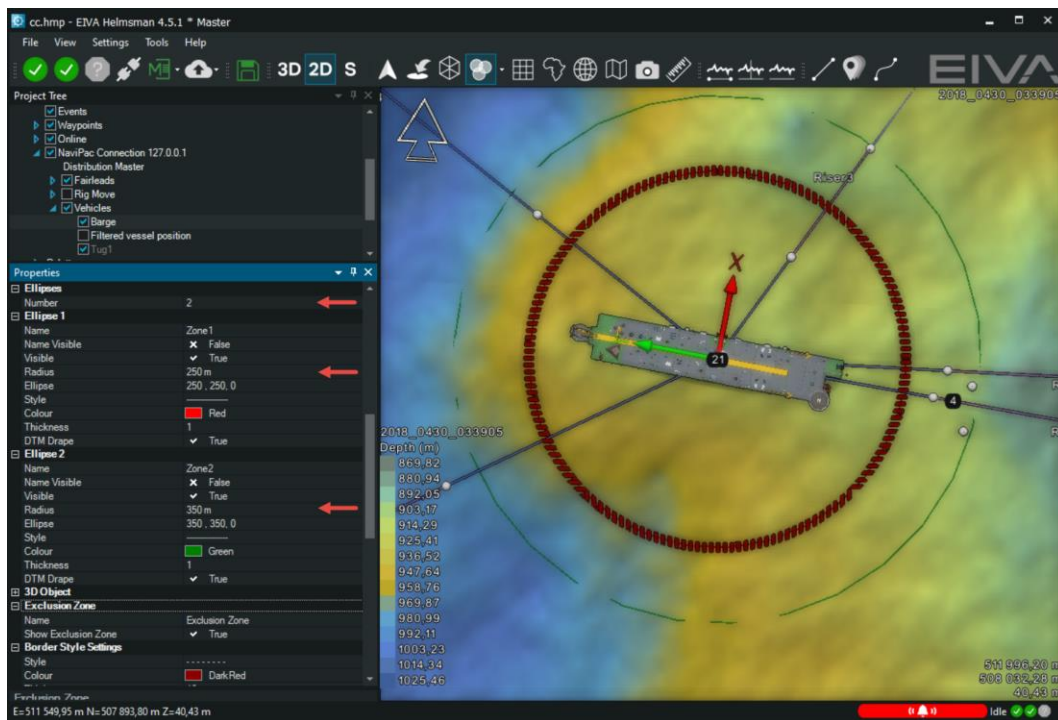


Figure 1 Example of two visual alarms shown as circles

- Open the **NaviPac Helmsman's Display** project tree and browse to the object that should get the visual alarm, eg a navigation object barge or vessel.
- Check the Properties option where you can add one or more ellipses. In the example above two are added.
- Set name, radius and color coding.

In the **Properties view** you can configure:

- **Ellipses**  
Number of ellipses that can be used as Safety zone. The first ellipse is used as Safety zone. Multiple ellipses can be added.
- **Ellipse 1**  
Name of the ellipses  
Name Visible: Toogle on or off  
Visible: True  
Radius: Default is 0 m  
Ellipse: Default 0,0,0. Edit the radius or the Ellipse vector to change the ellipse to the desired size.  
Style: Line style, eg dashed  
Colour  
Thickness  
DTM Drape: False/True

- **Safety zone**  
Name: Safety zone  
Warning distance\_m: 0.00 m  
Alert distance\_m: 0.00 m

## 3 Alarm window

Warnings and audio alarm by the **Alarm window**.

### 3.1 Warnings

Any time a vessel enters a zone, a warning pops up showing the object/vessel that has violated the zone.

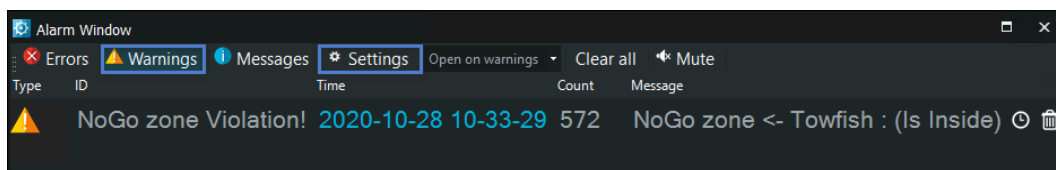


Figure 2 Alarm Window Showing Warnings and the Settings option

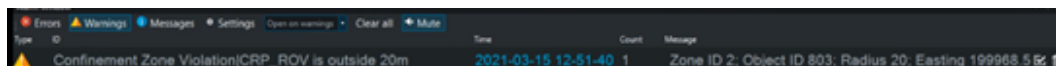


Figure 3 Warning for the confinement zone

You can disable the alarm pop up in the Alarm window by selecting **Never auto-open**.

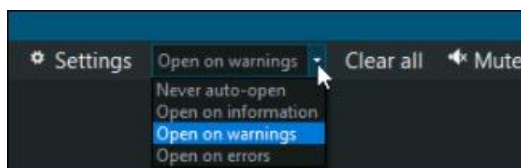


Figure 4 Disable alarms

### 3.2 Audio alarm

Alarms can also be configured as audible warning in **Alarm Window Settings**:

- Alarm Sound File
- Snooze Period
- Sound Alert

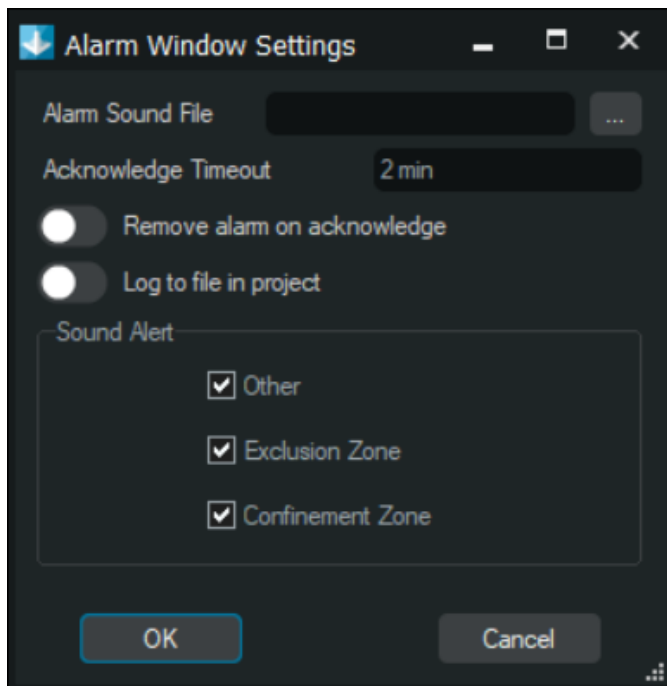


Figure 5 Alarm Window Settings

## 4 Manage a zone

For each zone objects can be configured, that are allowed or not allowed. The following shows you how to manage eg a safety zone.

- Right mouse-click on the barge/vessel, and open its context menu

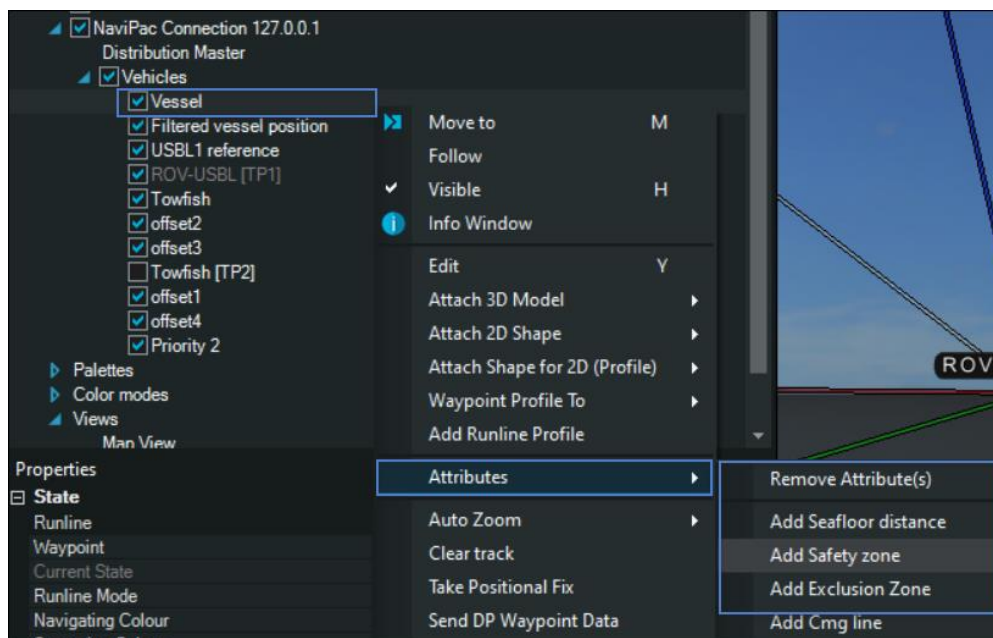


Figure 6 NaviPac Helmsman's Display showing the Safety zone and other zones

- Go to **Attributes / Add Safety zone** and add a Safety zone

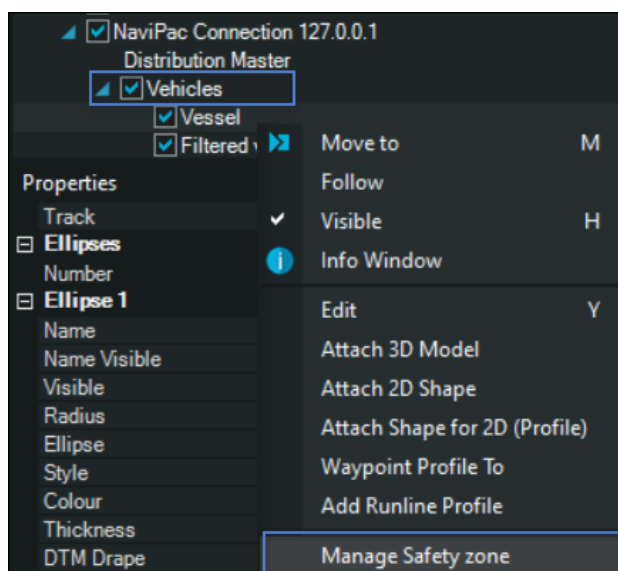


Figure 7 Manage Safety zone

- Go to the option **Manage Safety zone**

- Set a tick mark for the vessel / object that can enter the zone.

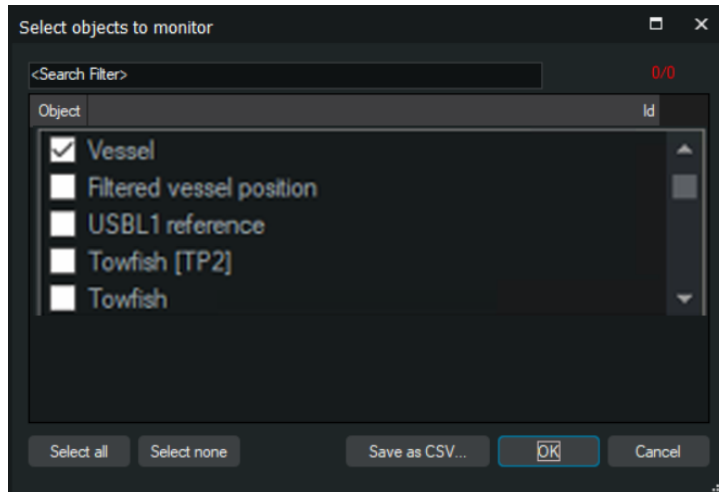


Figure 8 Select object to monitor and allowed to enter the Safety zone

## 5 Options

In the project options the user can set also set popup alert an alert if range Bearing passes through exclusion zone.

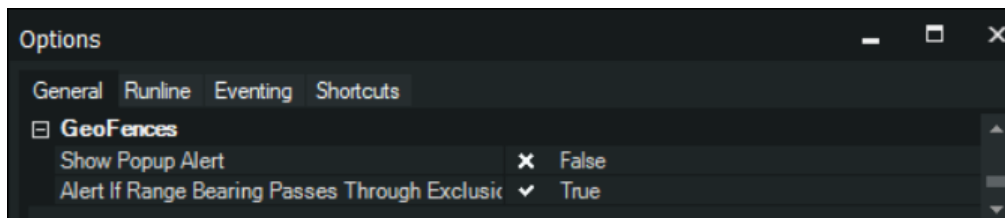


Figure 9 Options / General / GeoFences

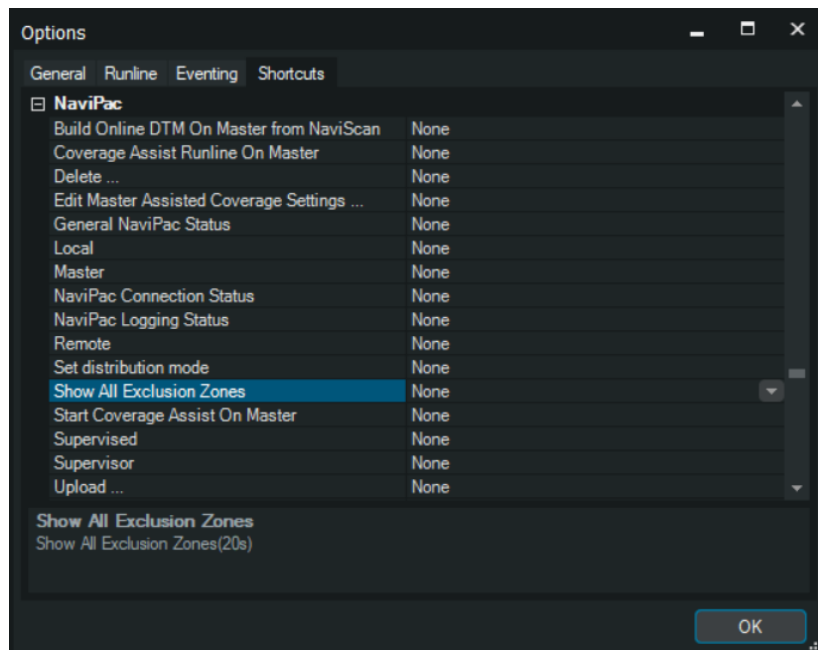


Figure 10 Create a keyboard shortcut for Show All Exclusion zones

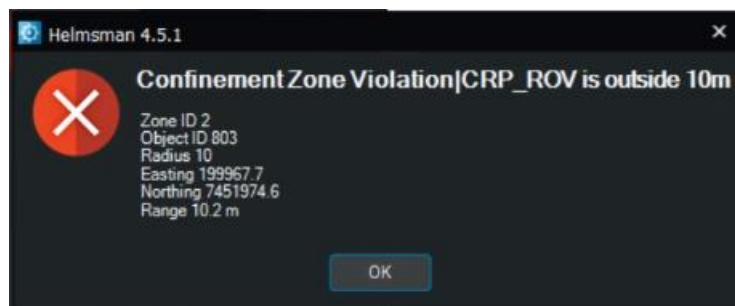


Figure 11 Example of a popup alert