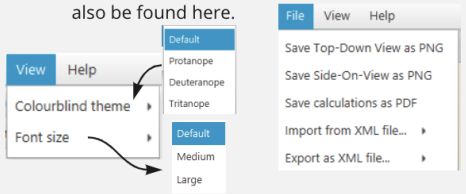
User Guide

Tab controls for switching between the **Side-On** and **Top-Down** view of the runway visualization

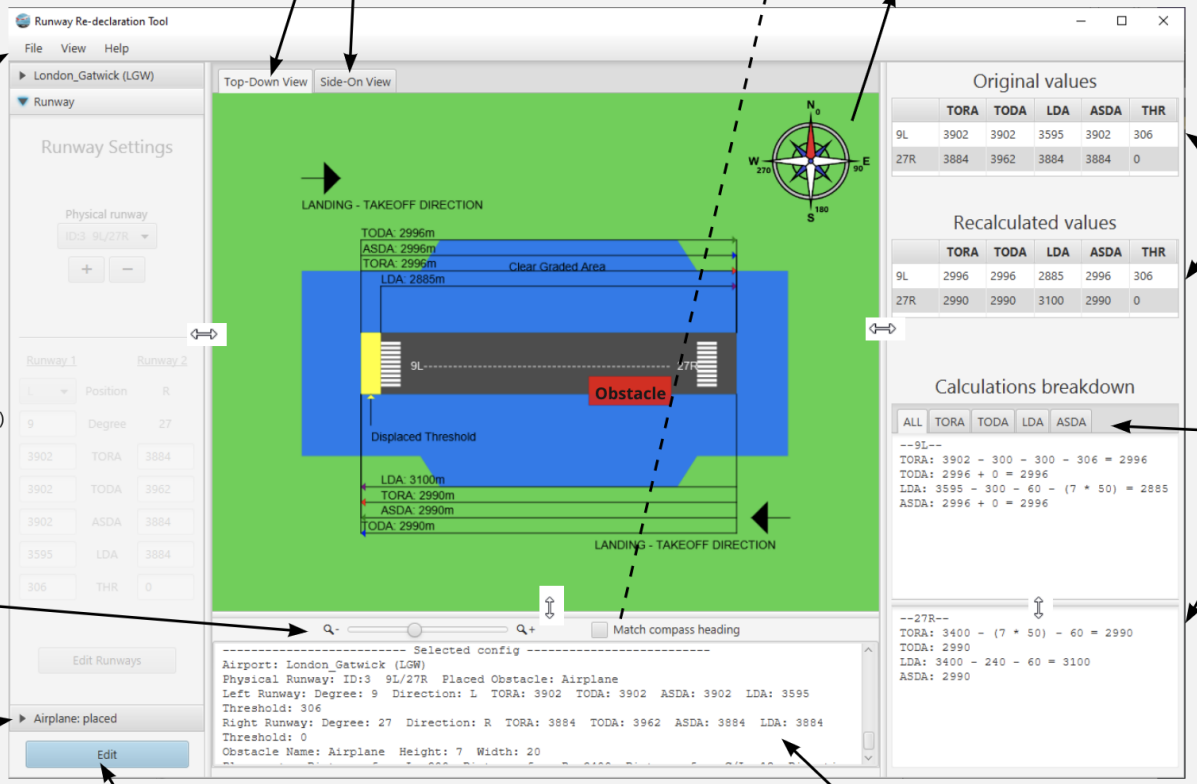
Option that rotates the **Top-Down View,** according to the runway degree, the **Compass** acts as a helper for understanding the runway degrees

Main window controls, covering three menus:
1) **File** options to save in PNG the views individually or the full configuration; Importing and exporting XML configuration files option can also be found here.



2) **View** covers the Font and Colour options; (Default, Medium and Large)
(Protanopia, Deoteranopia and Tritanopia)

3) **Help** opens this user guide.



Original values/Recalculated values tables: Once user performs calculations, these tables will be populated and show the corresponding values

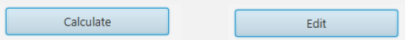
Breakdown displays the calculations, for each runway, the calculations are in a separate area. Different tabs filer the calculations by parameter

A slider responsible for the **zoom**ing of the graphical representation of the calculations

Expandable menus for configuring the airport, runway and obstacle

Elements marked with these symbols can be expanded/collapsed to allow better personalisation

Edit / Calculate buttons: when user decides to perform calculations, he can click **Calculate** button which changes its text to **Edit**, the Expandable menus become disabled and can only be re-enabled by clicking on the **Edit** button.



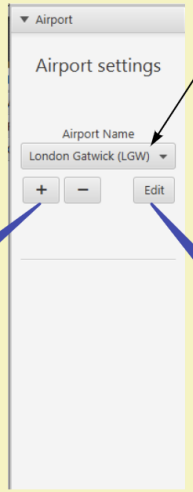
Console that shows a log of what is happening, when interacting with the UI, user can check console for confirmations that action happened

Configuration menus

Common Buttons:

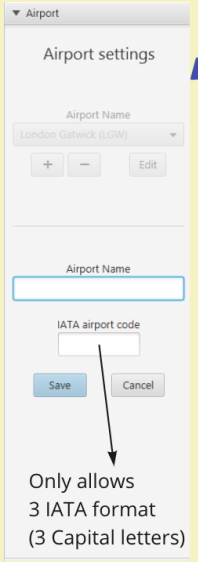
- **+** Go to a menu to create a new Airport/Runway/Obstacle
- **−** To delete selected Airport/Runway/Obstacle
- **Edit** Go to edit menu for the selected Airport/Runway/Obstacle
- **Save** Save a new/edited Airport/Runway/Obstacle
- **Cancel** Cancel creating a new/editing Airport/Runway/Obstacle and return back to the main menu

Airport Configuration menu



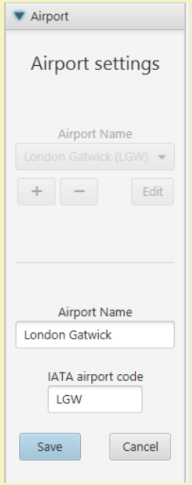
Dropdown showing selected airport, Other airports are shown when **clicked**.

Creating a new airport



Only allows 3 IATA format (3 Capital letters)

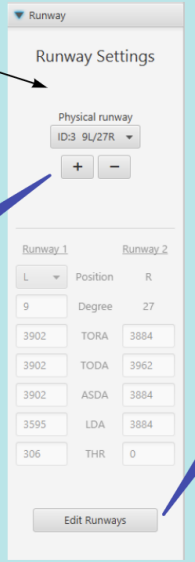
Editing airport



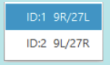
Note: Changing an airport will unselect current Runway and unplace any placed Obstacle

Runway Configuration menu

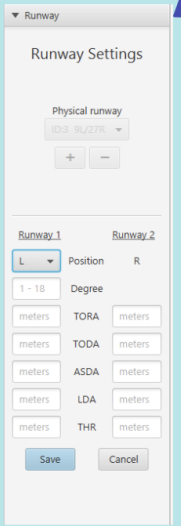
ID number acts as a unique identifier of the runway



Dropdown showing selected runway. Other runways are shown when **clicked.**

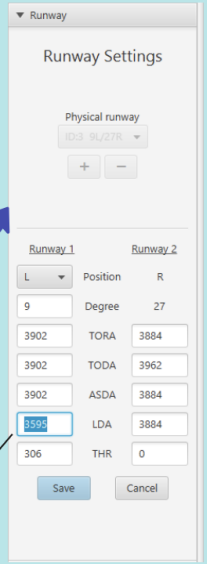


Creating a new runway



Note: Changing a runway will unplace any placed Obstacle

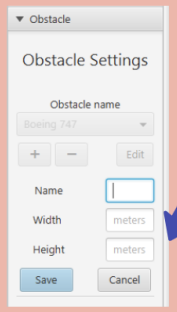
Editing runway

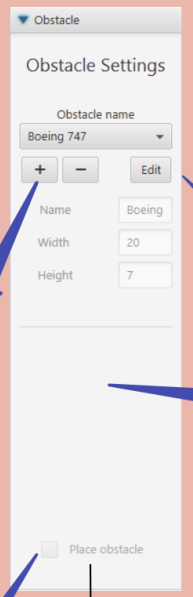


Value range: [0, 9999] m

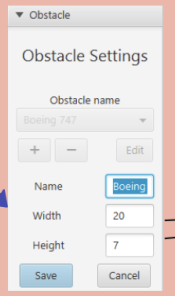
Runway Configuration menu

Creating a new obstacle

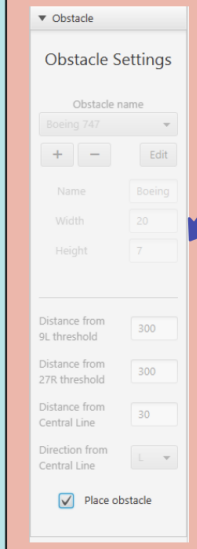




Editing an obstacle

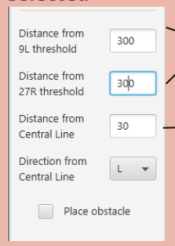


Value range: [1, 999] m



Places the specified obstacle on the runway, **only enabled when a runway is selected**

Obstacle placement menu, **only enabled when a runway is selected**



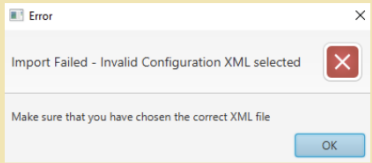
Value range: [-9999, 9999] m

Value range: [-99, 99] m

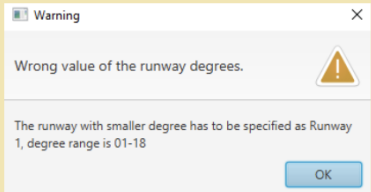
Errors

The runway redeclaration software supports **error/warning messages** with prompts of what to change and probable cause. They cover some cases of inaapropriate user inputs as well as calculation requirements.

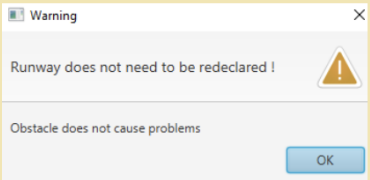
Error arising from importing files

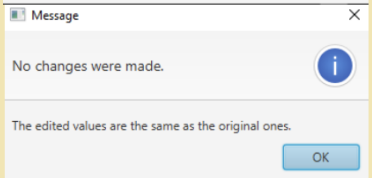


The degree values inputed must be in range.



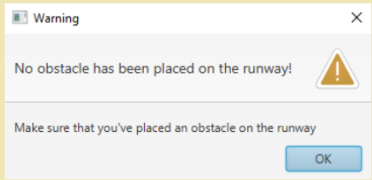
No redeclaration needed when obstacle is **irrelevant** to the runway`s workings.

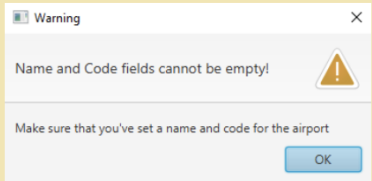




An edit button click **without any alteration** of the previous values.

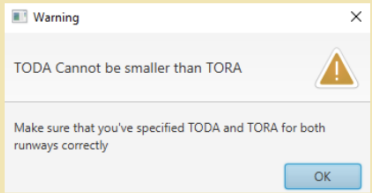
A requirement for recalculating is to have the obstacle **placed.**

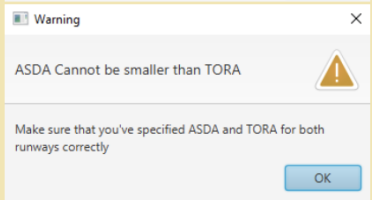




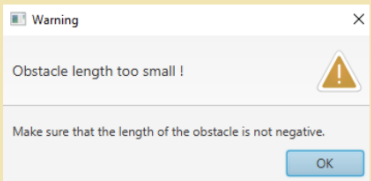
No input field can be left empty,

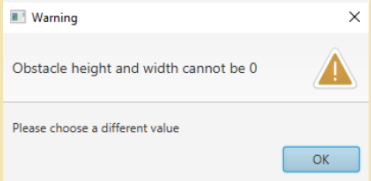
ASDA and TODA **can not realisticaly be smaller** than TORA as they consist of TORA plus other components.





Obstacle lenght, height and width must be **positive non-zero** integers.



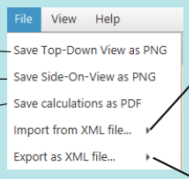


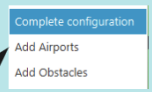
Import/Export

Saves specified views as a picture

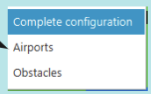
Creates a pdf report of the calculations

note: files can only be saved once calculations are performed





Imports the whole configuration from a XML file and **rewrites any progress made**
Appends the airports with their corresponding **runways**
Appends the **obstacles**



Exports the whole configuration to a XML file
Export only the airports as XML
Export only the obstacles as XML