

## Release 5 Radar

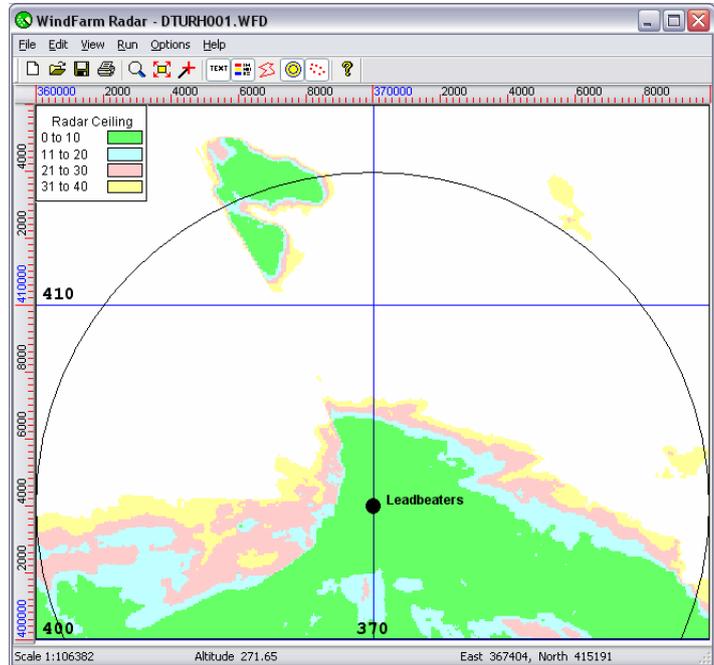
The new features are:

- 1 The toolbar has been extended to enable easier toggling of some of the display attributes
- 2 Interference zone boundaries treated as barriers

Open the TURH project and start the Radar module.

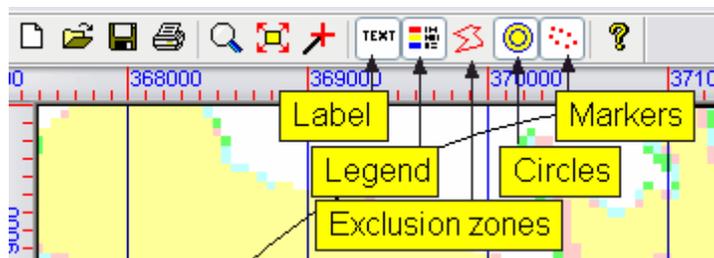
Select the Radar run file DTURH001.WFD, which is a single radar calculation.

Select Calculate Radar Ceilings from the Run menu.



### New Toolbar Buttons

Note the new buttons in the toolbar. They are also in the View menu.

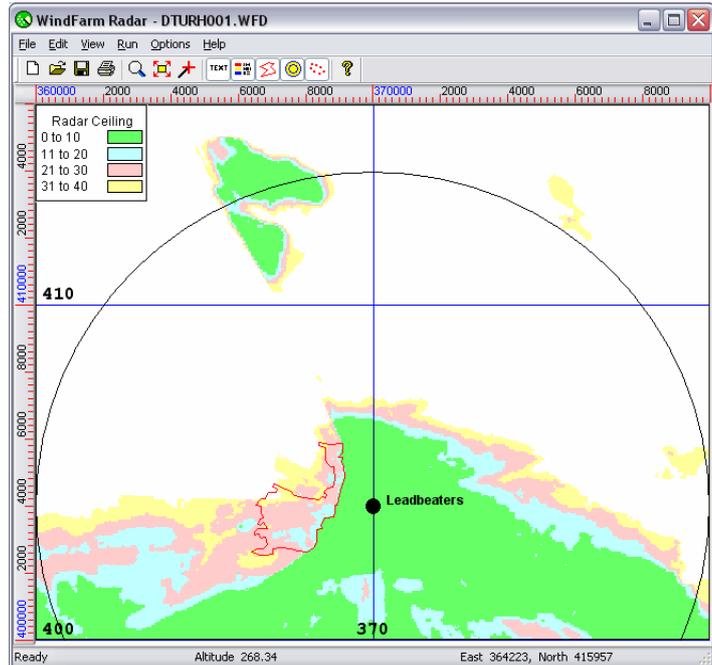


## Interference Zones

Switch on the display of interference zones from the View menu or with the new toolbar button.

The Radar interference zone calculation is handled by changing the height field in a zone. This means that at the edges you have a slope between outside and inside points. A limited amount of shading would therefore happen on the side of the interference zone away from the radar. However, it is possible that a narrow zone could have no height points inside it and therefore no effect at all. At the best it may have holes in the zone's effect due to missing points.

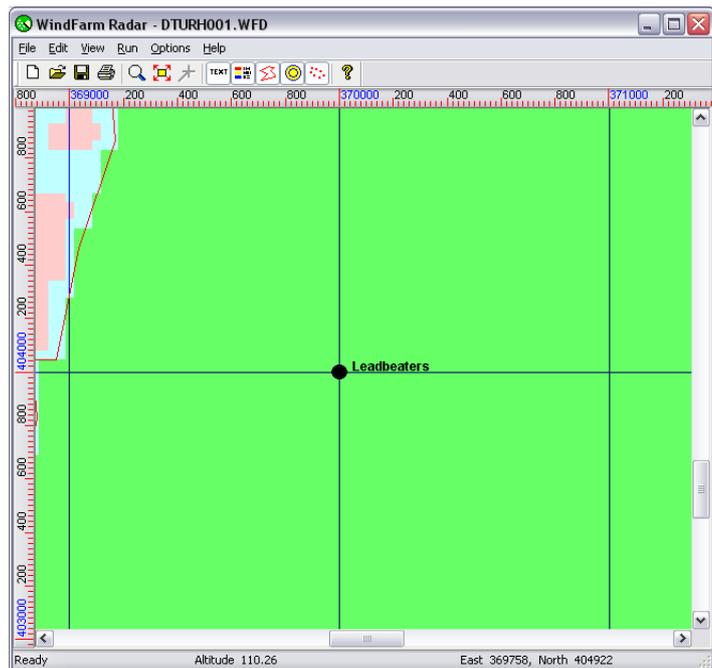
To improve this the boundary of a zone is now treated a barrier with a separate calculation if it intersects the line of sight i.e. the edges of a zone are now vertical and the missing point problem is eradicated.



Use the zoom button to zoom near to the Leadbeaters radar.

Switch off zooming.

Select Add interference zones / Digitise interference zones from the Edit menu. The Radar display will clear.



Click on the map and select New interference zone

Specify the height of the interference zone to be 20m and click on OK.

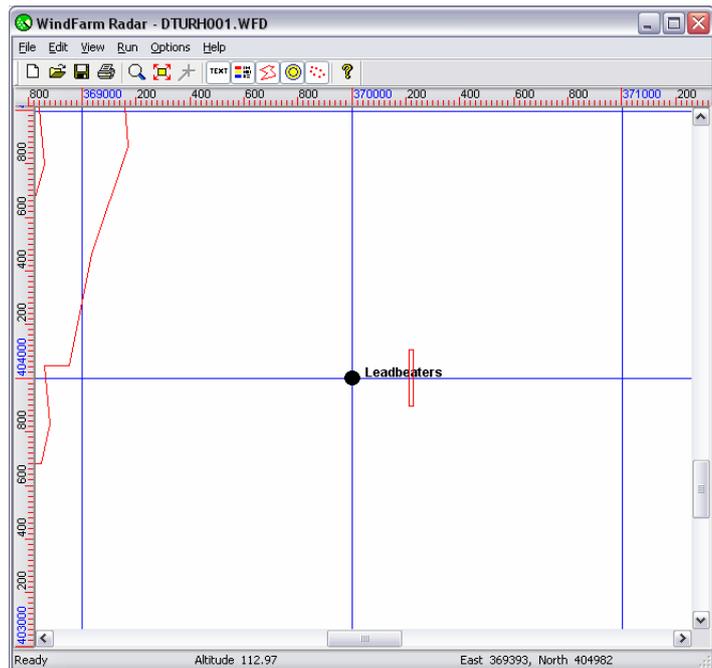
Now digitise a narrow interference zone between 403900 and 404100 North to the East of Leadbeaters.

Make sure that it is narrower than 50m and between the 50m height points in the East-West direction e.g. between 370200 and 370250.

When done right-click and select Close and save interference zone, then Exit.

You now have an interference zone that does not include any height points.

Zoom back out to complete the process and select Save from the File menu.



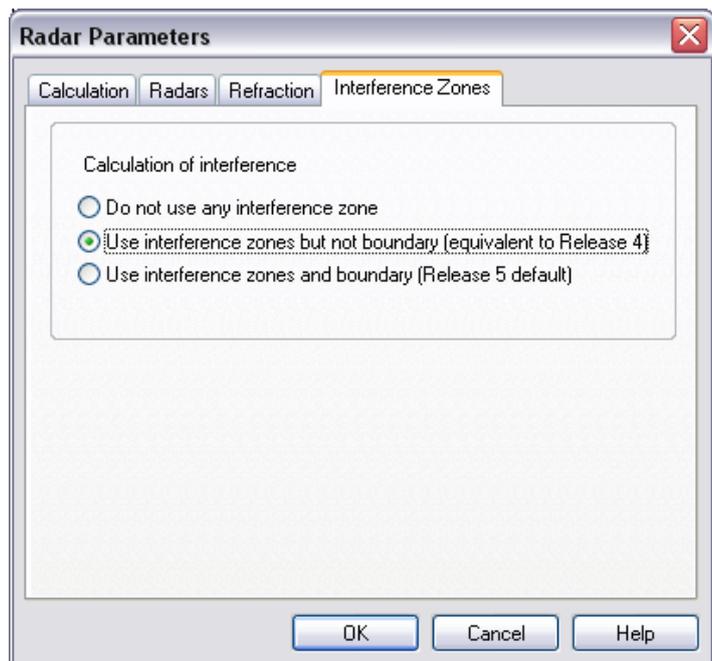
Select Run Data from the Edit menu and then the new Interference Zone tab.

This shows the new calculation options for interference zones.

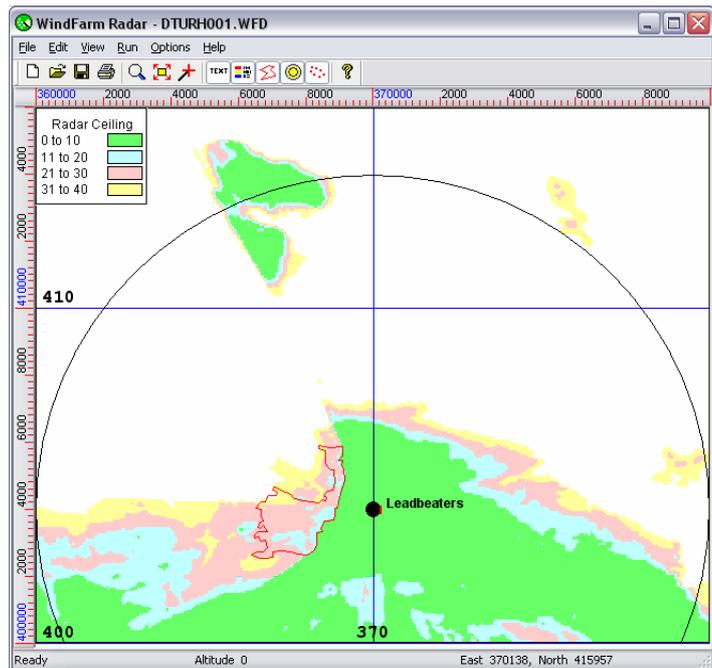
You can choose to calculate using the interference zones but not the boundary effect. This is equivalent to the standard release 4 calculation. If a release 4 run file is opened this will be the default setting.

The 3rd option is to make the calculation including the boundary as a barrier. This is the default setting for new release 5 runs.

Leave it set to the 2nd option (release 4) and click on OK.



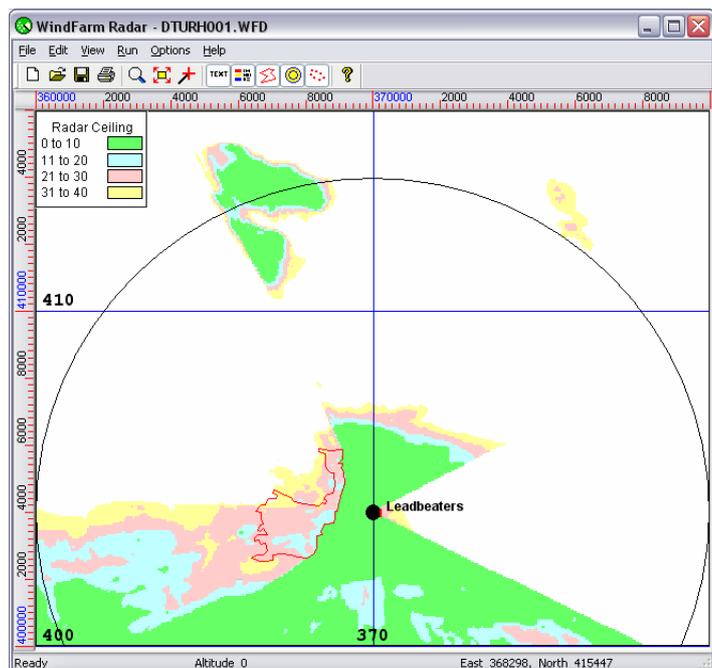
Select Calculate Radar Ceilings from the Run menu and the results displayed will be the same as that shown earlier. The new interference zone has been ignored.



Go back to editing the run data and set the 3rd option for the interference zone calculation (release 5).

Select Calculate Radar Ceilings from the Run menu and the result displayed will be noticeably different where the new barrier is located. The region to the East of the barrier is where the turbines can no longer be seen.

Also note that the regions shaded by the existing zone have also changed slightly (see the East of the zone at the Northern end of the barrier).



## Summary

The following new features have been explained:

- 1 The extended toolbar
- 2 Using interference zone boundaries as barriers