

QTRA Version 5 Calculator for Windows Desktop – User guidance notes

Introduction

Use of the application is described below, beginning with setting up and saving a new job through to the export of data to a spreadsheet or database table.

These guidance notes may develop over the beta test period as we receive feedback from users. Although we would like to encourage discussion on the QTRA Registered User Discussion List, all substantive user feedback should be submitted by email to admin@qtra.co.uk with the subject BETA CALCULATOR.

New Job

Select the **'New Job'** button to select a location, job reference (filename) and preferences for each new job.

- Click the **'Folder icon'** Browse to select a folder in which to save the job file
- The job can be saved in either XML (Extensible Markup Language) format, which includes programming code, or CSV (comma separated values) format. The CSV format can be opened in a spreadsheet and other tabulated documents.
- **'Job Reference'** - enter a filename in the box.
- **'Tick boxes'** - select as required.
 - **'Only export the worst case Risk of Harm'** (for each risk assessment, you will have the opportunity to make a calculation for each target type: Vehicle/Human/Property. You have the option here to set whether all calculations are saved or to save just the Worst Case).
 - Where a Risk of Harm (RoH) is lower the 1 in 1 000 000, the calculator will default to recording a capped RoH of <1/1 000 000. You can also save the uncapped RoH by selecting **'Include Uncapped Risk of Harm'**.
- Using the **'Move Up'** and **'Move Down'** buttons, you can select the order of your outputs
- **'Save Options'** - your options will be saved and outputs will be saved in the chosen folder under the allocated 'Job Reference'. The 'Job Reference' will automatically be allocated a suffix of 'QtraData' and a file extension of '.xml'/.csv'.

Open Job

This button opens a new form, within which you can view and select saved jobs.

Save

Saves the calculations for the tree or group identified in the **'Reference'** box. Multiple records can be saved for a single tree or group without overwriting earlier records for that item. If you are calculating different risk combinations for the same tree or group, you can save calculations for three different Target types in a single **'Save'**; one each of **'Vehicle'**, **'Human'** and **'Property'**, but do not click 'Save' until all of the calculations are complete, otherwise multiple copies will be saved to file.

New Tree

Refreshes the form. This button does not save the current calculation. Be sure to save your last calculation before selecting **'New Tree'**.

Close

Closes the calculator but does not save the current calculation. Be sure to save your last calculation before selecting **'Close'**.

Vehicle/Human/Property

For each tree or group identified in the 'Reference' box, you can carry out a calculation for a 'Vehicle', 'Human' and 'Property' target type or just one or two of these. When you have completed a calculation for a Target type, the colour of the respective button will change to the colour (red, amber, yellow, green) according to the RoH for that calculation. Do not click '**Save**' until you have completed all calculations for the tree or group, as all completed calculations for the current tree or group will be saved each time you click '**Save**'.

For each Target type, select from a drop-down list of Target Ranges 1-6. You cannot refine within a Range.

Vehicle

- When you select a Target Range for '**Vehicle**', a second drop down box allows you the option of recording the combination of Daily Flow Rate and Road Speed.
- Click on the box to the far right of '**Multiple Targets**' to select '**kph**' or '**mph**' as your preferred unit of measurement.
- Where the Daily Flow Rate exceeds constant occupation, there is an option to apply '**Multiple Targets**' where the increased occupation can be accounted for (e.g. a measured flow rate of 48 000 vehicles per day on a road of an average speed 120kph is double that of 1 in 1 occupation and a Multiple Target of 2 would be applied).

Human

- When you select a Target Range for '**Human**' Targets, selecting the '**Pedestrian**' button will display the number of pedestrians for that Target Range, and selecting '**Occupancy**' will display the level of occupancy as a unit of time, e.g. hours per day.
- Where occupation by many people is being considered, there is an option to apply '**Multiple Targets**' where the increased occupation can be accounted for. This will usually be necessary only when there is a possibility that there will be constant occupation by more than one person.

Property

- The default currency is UK Sterling (£).
- International currencies can be selected by clicking on the button to the far right of '**Multiple Targets**' the 'Targets Range' boxes. Here a currency '**Symbol**' can be entered and here the conversion '**Rate**' must be set. Conversion rates are revised at January 1st each year and are available on the Downloads page on the QTRA Users section of the QTRA website.
- Where the repair or replacement cost is estimated to be greater than £2 000 000 or an equivalent value (\$/€/¥), there is an option to apply '**Multiple Targets**' where the increased value can be accounted for.

Size

Select '**Size**' from a drop-down list of Ranges 1-4. You cannot refine within a Range.

- Where the mass of a branch has been reduced as a result of dieback, there is an option to account for this by selecting a '**Reduced Mass**' of 50% or 25%.
- 'Size' is not available when calculating the Risk of Harm to '**Property**' Targets.

Probability of Failure

Select '**Failure**' from a drop-down list of Ranges 1-7. You cannot refine within a Range.

Risk of Harm

The Risk of Harm for the current calculation. This is a live, colour-coded (red, amber, yellow, green) value that changes during the calculation and is an extremely useful tool for assessing the effects of modifying the components of the calculation. The colour codes relate to the QTRA Advisory Risk Thresholds (see the Quantified Tree Risk Assessment User Manual – Version 5, page 14).

Cap RoH

Where a Risk of Harm (RoH) is lower than 1 in 1 000 000, the calculator will default to displaying and recording a capped RoH of <1/1 000 000.

Tree Part and Target

When all calculations for a tree or group are complete, the '**Tree Part**' of the tree or group and the '**Target**' to which it relates can be recorded either by selecting a description from a pick-list or by entering a user defined description. Both are editable to enable the user to develop customised lists.

The Worst Case function allows the user to output a description of the relationship that has been risk assessed and quantified. An output might read 'Risk assessment of (whole tree failure) (onto private track)' (the selected descriptions in parentheses).