Step by step guide on what to do if you have a problem with your RRRAP.

Step	Actions	Checked
1	Read and follow the RRRAP Guidance Manual – Highways England have produced a document "Guidance for the use of the Road Restraint Risk Assessment Process (RRRAP)" which can be found on the Standards for Highways website. This manual contains lots of useful information and tips for producing better RRRAPs.	
2	Use the checklist relating to each of the worksheets (below) as entries are made.	
3	Read and follow the RRRAP Guidance and the helps within the RRRAP as you go through the data entry.	
4	Check for error codes – The guidance manual also includes a list of the most common error codes and highlights what to change / check to fix the error.	
5	Check a previous successful RRRAP – several issues have arisen due to apparent incompatibility between the current RRRAP spreadsheet (version 1.3a available from the Standards for Highways website) and the various versions of Microsoft Excel software. It is possible that your IT department may have updated some but, not all, relevant Microsoft Excel 'patches' and updates. Check for compatibility issues and updates and re-run the RRRAP. Check previous successful RRRAPs to see if you now have issues especially if you have updated your software recently.	
6	Consult with senior colleagues – the use of the RRRAP is a long established practice and it may be that issues can be resolved by consulting with colleagues.	
7	Contact Highways England – Once you have undertaken the above steps, if you have still not been able to resolve the problem, your next step is to contact Highways England. There are several ways of doing this. The most efficient being contacting us via our feedback page, found on the Standards for Highways website below the RRRAP download links or by emailing us directly at Standards_Enquiries@highwaysengland.co.uk	

RRRAP entries - Check for	Comment	Likely Error messages if incorrect or missing input	Checked
Basic (Common) Details worksheet ✓ *All asterisked cells in completed?*	Programme will not run or may give incorrect results. • If AADT figure is missing • If %LGV or MGV missing	• Run time error '5' • No value is given for: dbl/accidentsPerYrPerKm	
✓ *Drop downs for these have been completed in the following order.* • Road Classification, • Road Subtype, • Nearside or Offside verge, • Does road have full width near side hardshoulder or hardstrip • Permanent Speed Limit	Entering out of order or changing one of these figures after others have been completed may result in earlier entry being deleted or overwritten by the programme.		
✓ *Scheme duration details for following added* • Start year • End year • Discount rate • Use default values?	Accessed using macro button 'Go to barrier options' and entered on Barrier and Options Costs worksheet Discount rate must be added as a decimal non-zero figure	Run time error '13'	
H-S & Verge Widths ✓ *Only those columns that have header text in purple row completed.* ✓ *First and last chainage entries under Chainage heading match auto-filled Start and End Chainages of Section at top of worksheet?* ✓ *Chainages are in numerical ascending order?* ✓ *Verge widths all > 0 m*	• Data in column that has no header text may incorrectly be used in calculation. • Error message will be returned • May produce and output that will be nonsensical. • A zero value will return an error message	Run time error '13' 'No value given for: dblVergeWidth' or 'No value given for: dblHardshoulderWidth '	

RRRAP entries - Check for	Comment	Likely Error messages if incorrect or missing input	Checked
300 Fencing, 500 Drainage, ✓ *All the yellow and green cells in the row relating to each hazard have been completed?*	May work without some of these but may return an incorrect result based on an assumed input value		
600 Earthworks ✓ *All the yellow and green cells in the row relating to each hazard have been completed?* ✓ *First and last chainage entries under Chainage heading match auto-filled Start and End Chainages of Section at top of worksheet?* ✓ *Chainages are in numerical ascending order?* ✓ Earthworks inputs have not resulted in in column H indicating that the "Height of slope has an incorrect sign". ✓ Height and width entries for level verge have been entered as described in Help menu.	• May work without some of these but may return an incorrect result based on an assumed input value • Error message will be returned • Error message will be returned • Error message will be returned • Error message will be returned	Run time error '13' 'Full section chainage must be input for earthworks' Run time error '13' Run time error '13' Data cannot be zero	
1100 Kerbs ✓ *Chainages are in numerical ascending order?* ✓ *First and last chainage entries under Chainage heading match auto-filled Start and End Chainages of Section at top of worksheet?*	• Error message will be returned • Error message will be returned	Run time error '13' Run time error '13'	
1200 Traffic Signs, 1300 Lighting Columns, 1500 M'way Comms, 1600 Retaining Walls, 2500 Special Structures, OH's – Poles and Pylons, OH's – Trees, OH's – Water, OH's – Buildings, OH's – Chemical or Fuel ✓ *All the yellow and green cells in the row relating to each hazard have been completed?*	May work without some complete but may return an incorrect result based on an assumed input value or an error message e.g. with OH's-buildings, Chemical or Fuel	Data cannot be zero	

RRRAP entries - Check for	Comment	Likely Error messages if incorrect or missing input	Checked
1700-400 Structures – Parapets **OH's Railways, OH's – Roads** ✓ *All the yellow and green cells in the row relating to each hazard have been completed?* ✓ *Protected ID correlates with the appropriate Road/Rail entries*	Complete the OH's - Roads and OH's – Railways worksheets first then correlate correct Road/Rail entries with Parapets. • May work without some complete but may return an incorrect result based on an assumed input value • May return wrong details or error message if IDs do not correlate	Run time error 91	
Hazards Listing ✓ *All relevant hazard types and hazards have been entered.* ✓ *'To collate data on hazards' macro button pressed*			
Collation of Data on Hazards ✓ *Calculate Risk button has been pressed.* ✓ *Where Risk level with optimum length of VRS is tolerable or unacceptable, a higher containment level safety has been selected and Calculate Risk button pressed again resulting in an acceptable level of risk.* ✓ *The maximum working width class achievable within constraints of location has been selected and risk recalculated.*	• Risk may be higher than ALARP if higher containment not tried. • VRS with a small working width may be chosen where a less expensive VRS having a larger working width may suffice.		