CREATING SIGMAPLOT GRAPHS FOR META-ANALYSIS DATA

1. Copy stratification data for graphing from Excel to SigmaPlot (including headings)
2. Copy the relevant global estimate data (including headings) and paste underneath stratification data (leave a line between)
3. Make sure the columns for the global estimate and stratification data match up
4. Label the important columns: Qpe (effect size), lower 95% confidence interval, upper 95% confidence interval, sum of total animals, and the labels for the X axis
5. Delete heading rows copied from Excel
6. Insert column next to the sum of total animals column and label 'transformed sum of total animals'
7. Under the 'Transforms' menu select 'Quick transform'
8. Highlight the new column to insert it into the first blank field. Cilick on the 'sqrt' button and then on the original sum of total animals column. Multiply by chosen factor (usually ~5-10) so that e.g. col(10) = sqrt(col(11)) * multiplication factor. Click run and then close
9. Click the graph wizard button

For a bar graph (discrete variables): Vertical bar chart
Simple error bars Asymmetric error bar column XY pair Data for X: select X axis label column Bar: select Qpe column Error: select lower 95% confidence interval column
For a line graph (continuous variables): Line and scatter plot
Simple error bars Asymmetric error bar column XY pair Data for X: select X axis label column Bar: select Qpe column Error: select lower 95% confidence interval column

10. To alter graph properties double click on the graph (click 'Apply' after each change if it is not already highlighted)

PLOTS TAB:	**Settings for:**	Fills	→ Fill colour = None
	Settings for:	Widths	→ Bar thickness = Transformed sum of total animals column → Width style = Variable
	Settings for:	Error bars	→ Direction = Yboth → Remove cap (width = 0.0 mm) → If plotting a line graph, the Symbol size = Transformed sum of total animals column

GRAPH TAB:	**Settings for:**	Backpanes	→ Background colour = None
AXES TAB:	**Settings for:**	Scaling	→ Adjust the Y-axis scale if necessary (e.g. if the 95% confidence interval lines are not seen in full) → If plotting a line graph, the X axis scaling will need to be adjusted so that the Scale type = Category and the Range = Data range for start and end

Click OK

11. If needed, go back to the data entry table and adjust the multiplication factor in the 'Transformed sum of total animals' column so the bars/points on the graph are appropriately spaced
12. Select and delete the unused border axes and the legend
13. Select and label the X and Y axes
14. Zoom into graph and select the draw rectangle tool
15. Draw a rectangle the width of the global estimate 95% confidence interval bars and extend the rectangle to the Y axis using the pointer tool
16. Select the rectangle by double clicking and change the Fill and Line colours to Grey, click Apply and Close
17. Right click on the rectangle and send it to the back of the graph
18. Open the graph properties window again

AXES TAB:	**Settings for:**	Scaling	→ change the X-axis scale so that the bars of interest are centred (exclude the global estimate bar). → Click Apply and OK

19. Re-adjust the grey rectangle to span the width of the X-axis (ensuring that its relative position on the Y-axis doesn't change)
20. Select and Group the graph and grey rectangle

NB: If the Y-axis needs to be adjusted do this before the grey rectangle is drawn. Otherwise the grey rectangle width will need to be re-adjusted by changing the X-axis so that the global estimate bar is visible, altering the grey rectangle and then changing the X-axis settings back.