How to use Purple Pen

This document describes how to use Purple Pen (PP) software to create the maps and descriptions for a typical orienteering event.

It was created by Mark Roberts of Paradise Lost for Orienteering Queensland during 2015.

This version was created 18th December 2015 and refers to **PP version 2.6.0**

Download the latest version of this docuument from `www.markroberts.id.au/OQ/OQ_PurplePen.pdf`

Please direct your corrections and suggestions to `mark@markroberts.id.au`

Requirements

- A Windows PC (or Windows emulator on a Mac.)
- A reasonably large screen is best.
- A mouse for precision siting of controls.
- The map file, ideally in the original .OCD form, or as a PDF, or (least quality) a raster image eg .GIF.
- You need to know the control codes on your flags / boxes.

Download and install Purple Pen

Purple Pen is free.

Always use the latest version – it is improved and updated frequently.

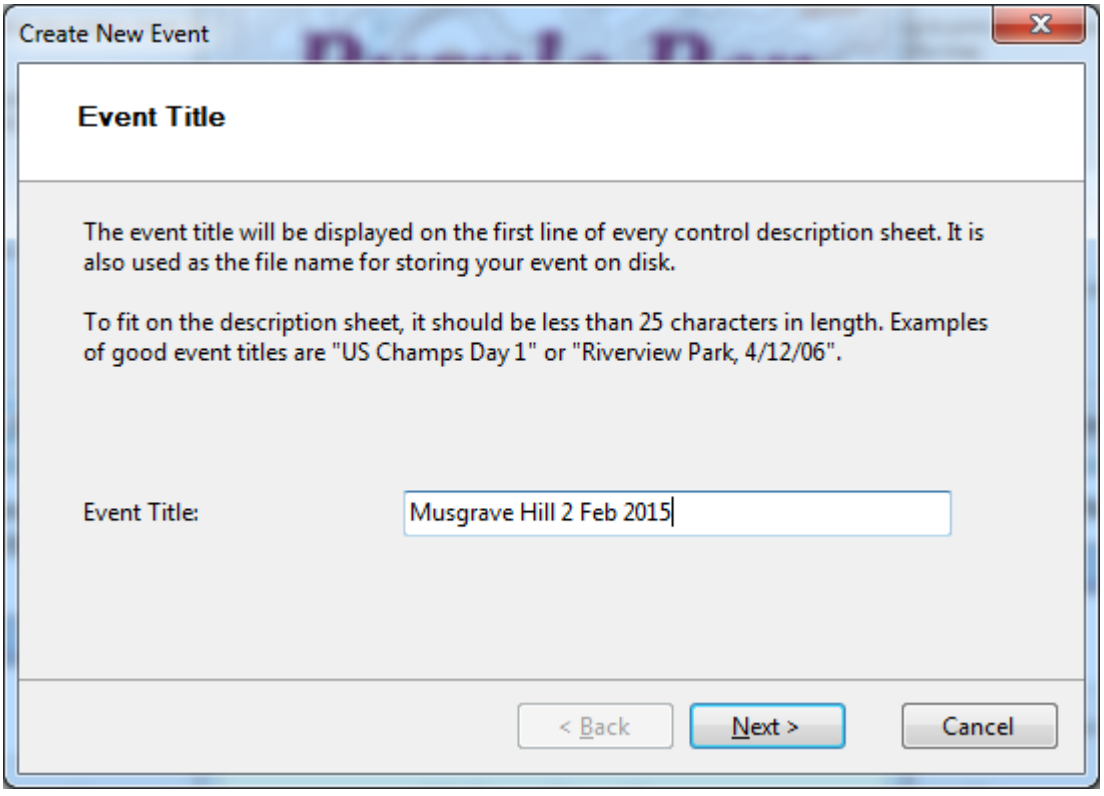
Google "Purple Pen" or go to `http://purplepen.golde.org/download.htm` to download the latest version and install in the usual way.

Consider making a donation to the creators of PP.

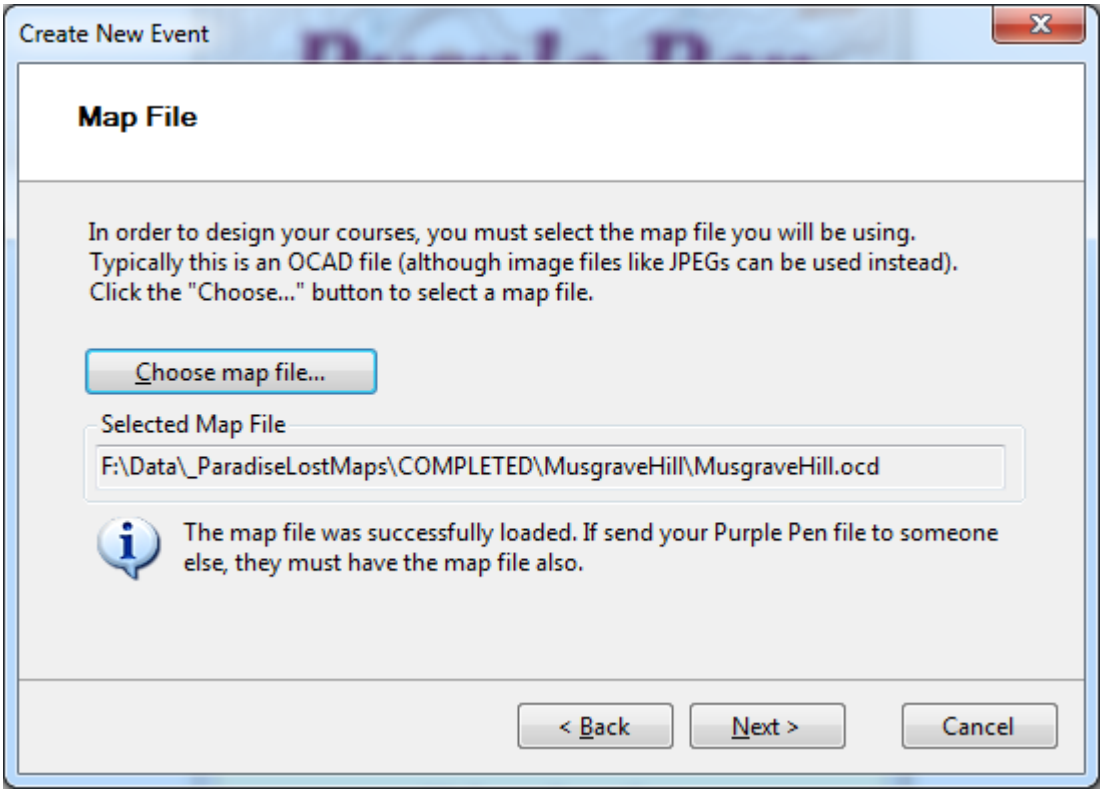
Launch Purple Pen and Create the Event

Double click the PP shortcut to see the initial dialog:

Select item **Create a new event** and click **OK**.



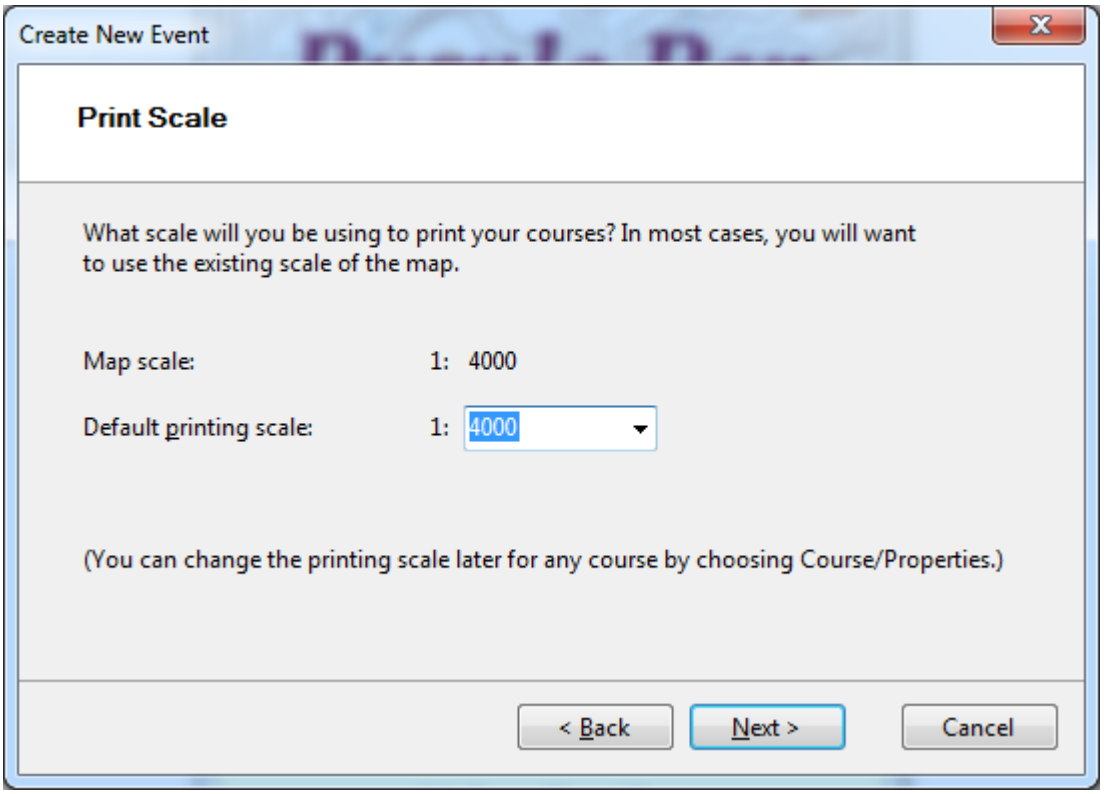
Choose a name carefully as it is used in a number of ways and is difficult to change.



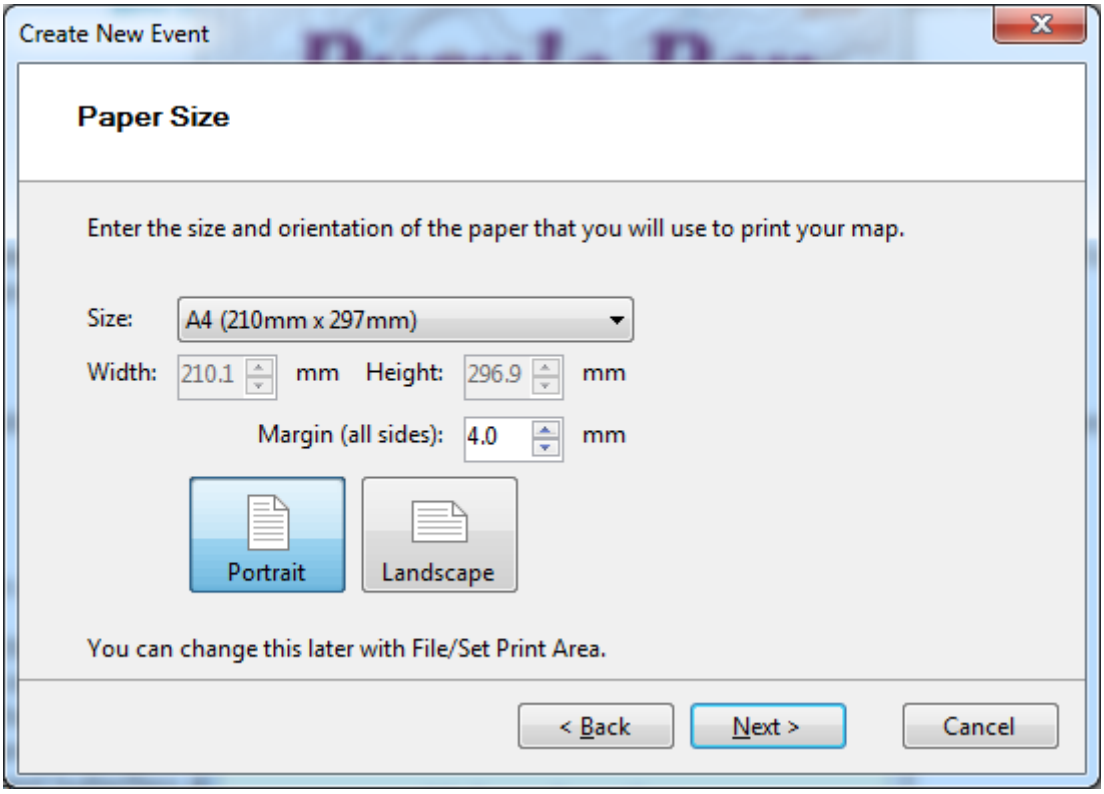
The map file can be an OCAD file of any version (.OCD), or a PDF, or almost any image file. This document assumes it is an .OCD file; PDF is a reasonable compromise, and PP has recently been upgraded to solve the problems experienced with PDFs.

If using PDF, it is worthwhile to check that you can print it from PP before investing a lot of effort in your courses.

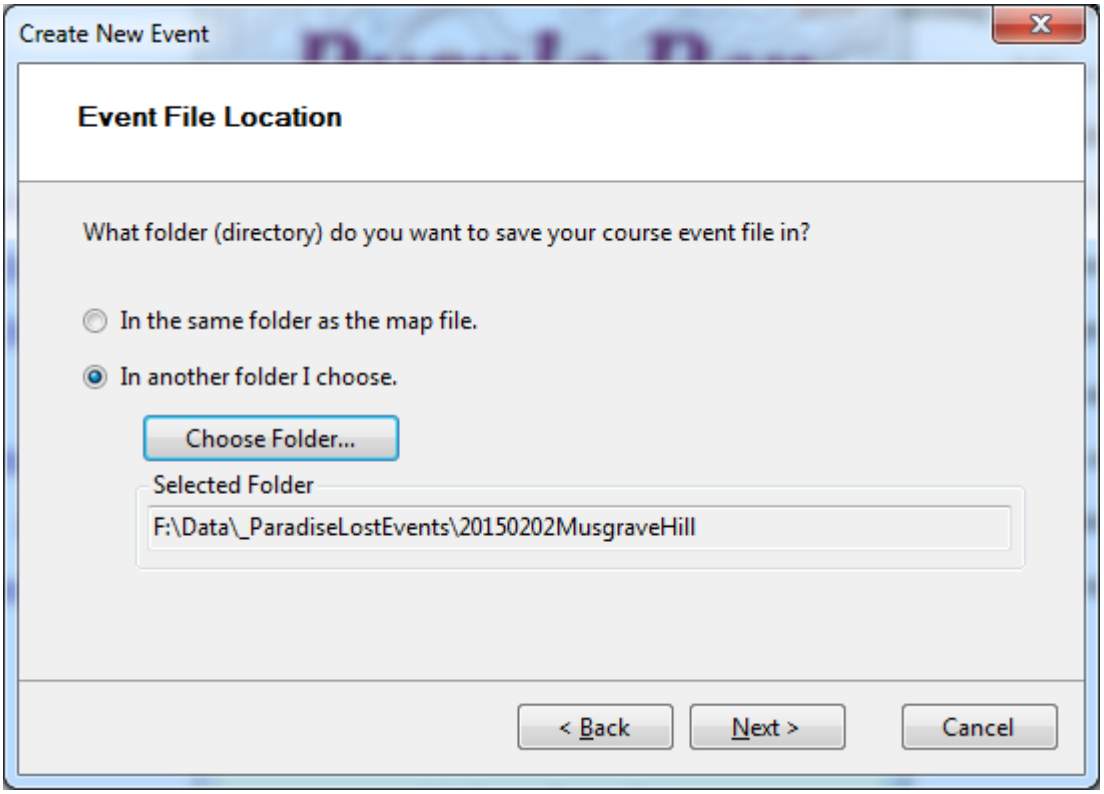
Using any raster image eg .GIF, .PNG, .BMP will potentially lead to an inferior result.



Accept the default scale for now, we may tweak it later.

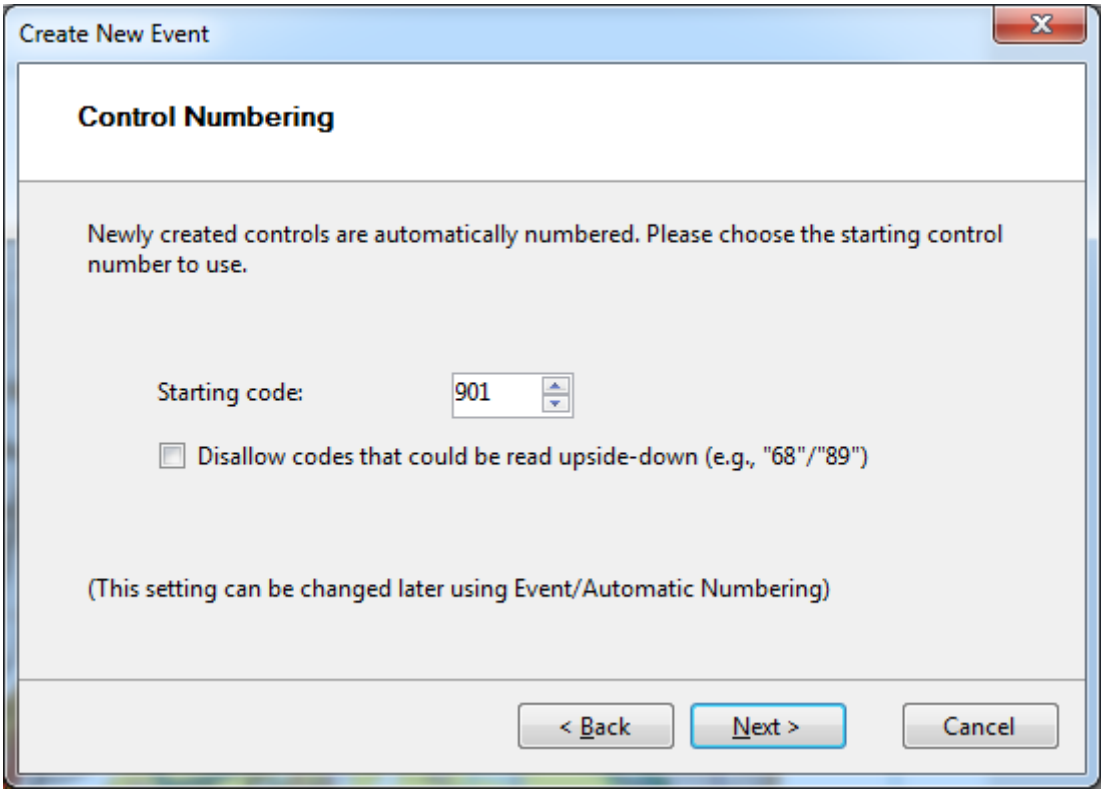


Check this one carefully – PP sometimes gets the default wrong. You almost certainly want A4. The margin depends on your printer; make it 4mm if you aren't sure.



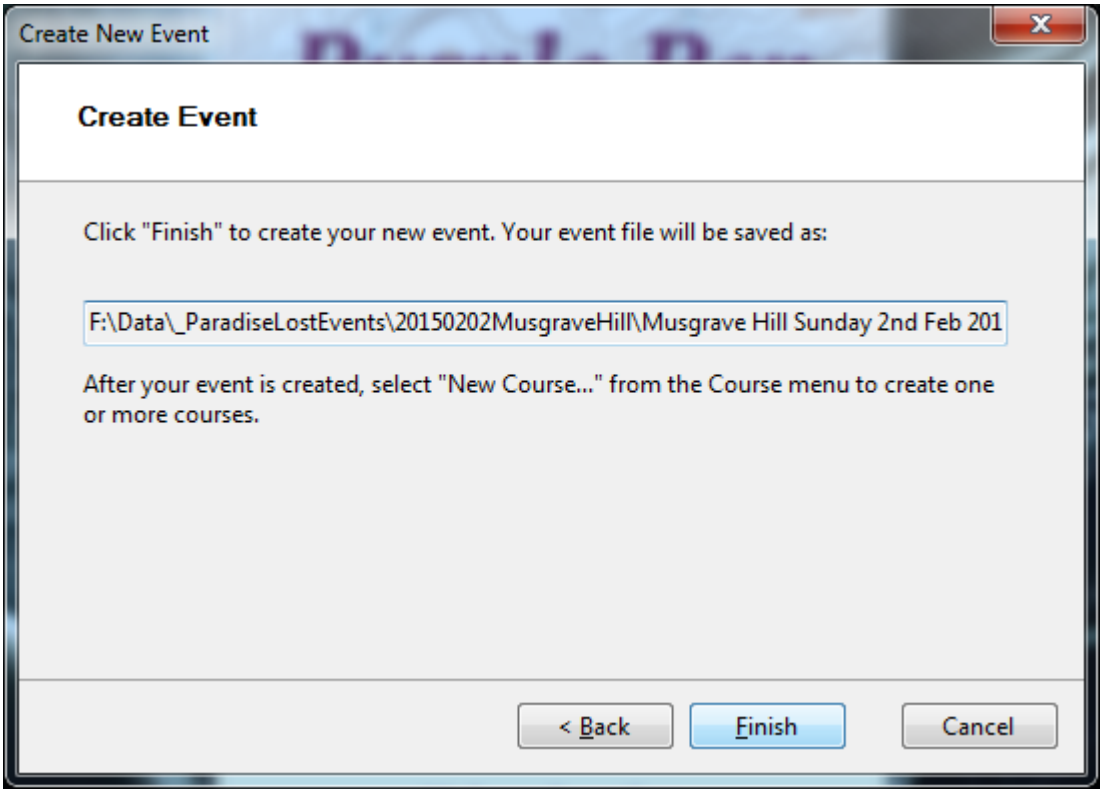
I keep event files in a separate folder from the maps, to avoid confusion when I set a second event on the same map.

My folder name starts with the date in the form year-month-day so that the event folders sort into the correct order.

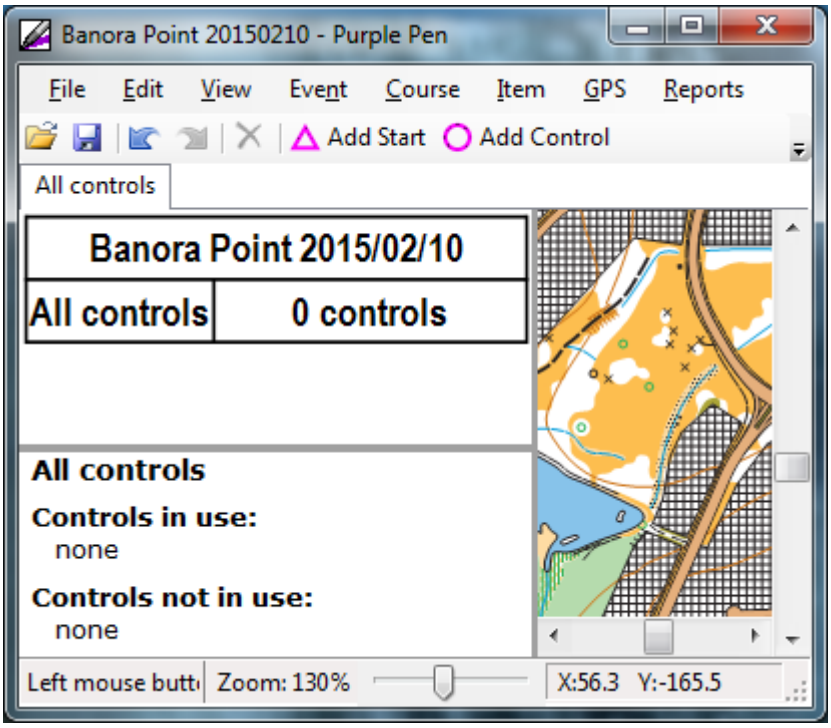


We will be re-allocating control codes later in the process, which is much easier if you choose a start number nowhere near the codes you will be using – I have entered 901.

The **Disallow codes** setting is intended for control codes which are presented horizontally at the controls. We will reallocate later, so disregard this.



PP opens and shows the map with an **All controls** tab:



I have made the PP window very small for this illustration.

Optimise the View

Maximise the PP window.

Switch on menu **View / All Controls.** You can toggle this with **F4** later.

Select menu **View / Entire Map** or press **F3.**

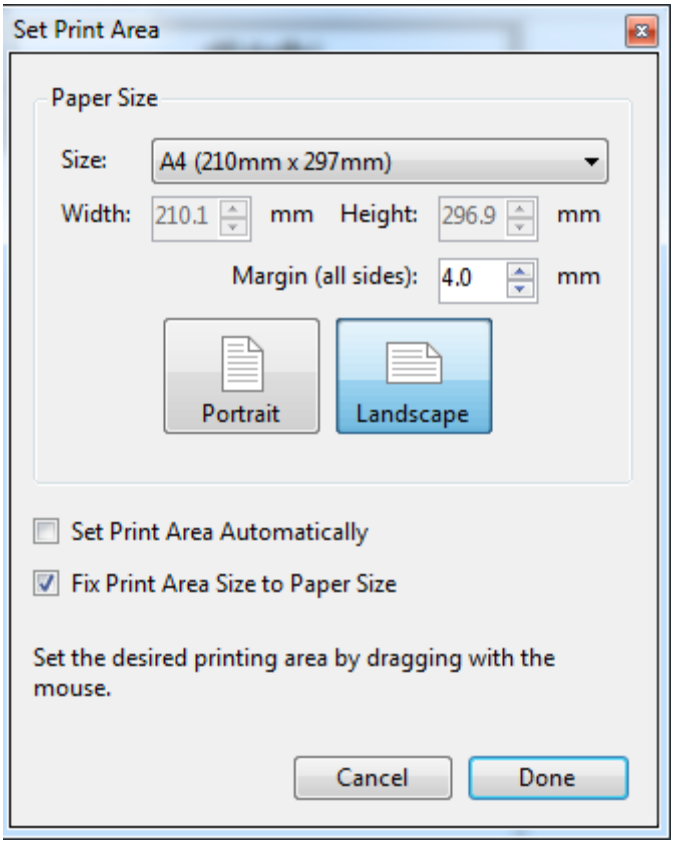
Check that **View / Map Intensity** is **High.**

Check that **View / Map Quality** is **High.**

Set the Print Area

PP often gets this slightly wrong, so we have to set it manually.

Select menu **File / Set Print Area / All Courses** and adjust the red box to fit the map snugly, assuming that the map fits into A4. We may adjust this for courses at larger scales later on.



It seems best to let the paper size determine the print area, as shown above.

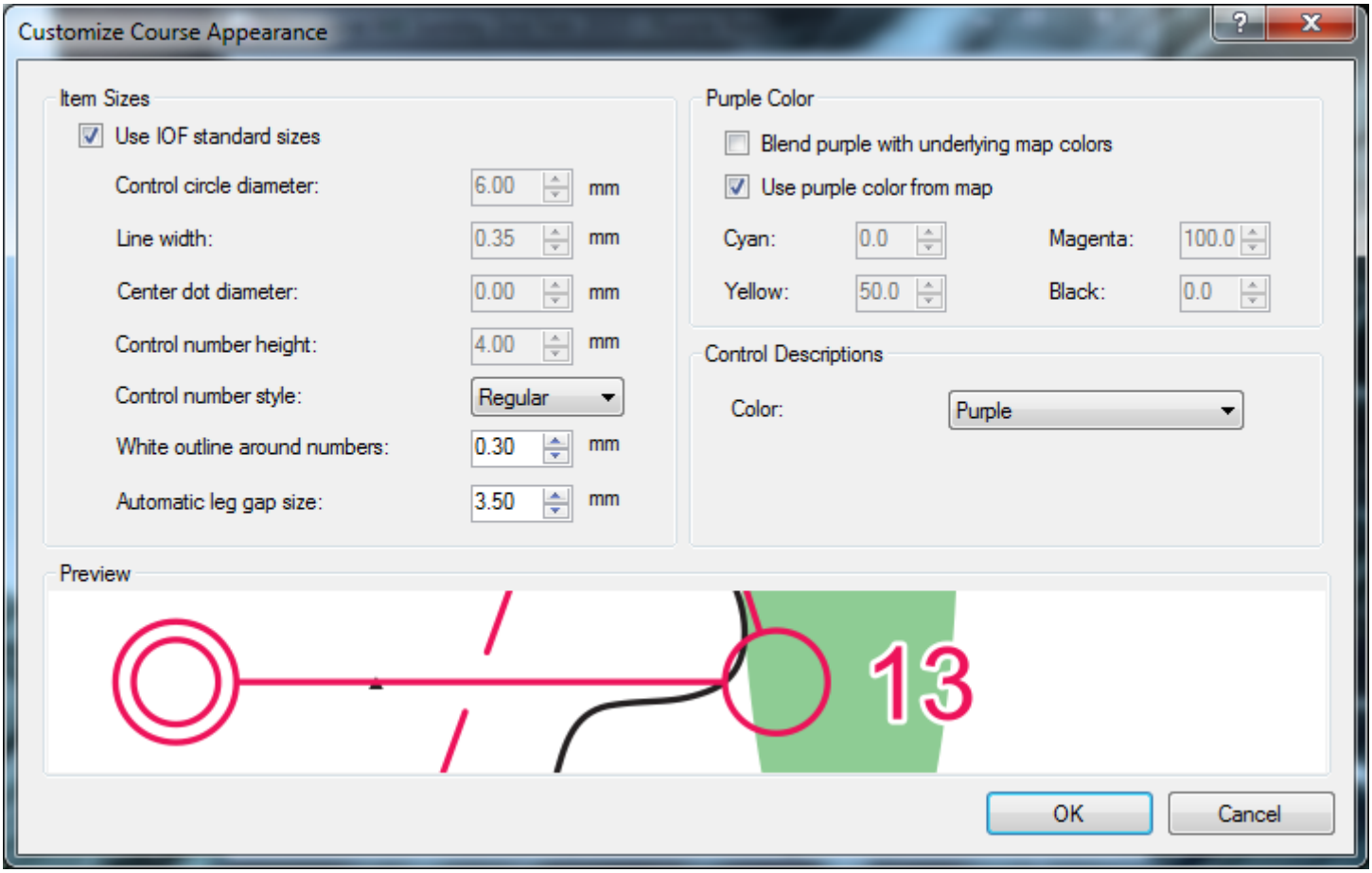
Tweak Course Appearance

Select menu **Event / Customise Course Appearance** and make these recommended changes:

White outline round numbers = 0.3

Purple Colour / Blend purple with underlying map colors = Off

Control Descriptions / Color = Purple

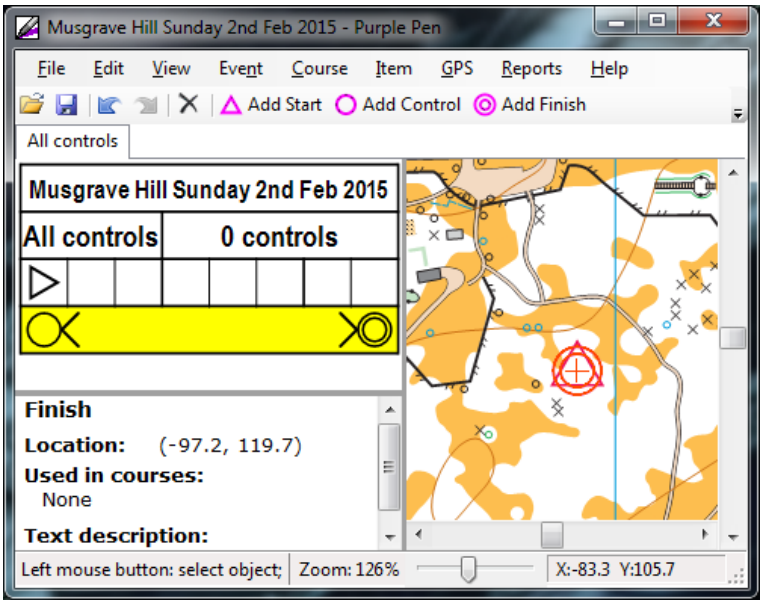


Add Common Course Elements

Before creating a course, we will add all of the elements which will be on every course.

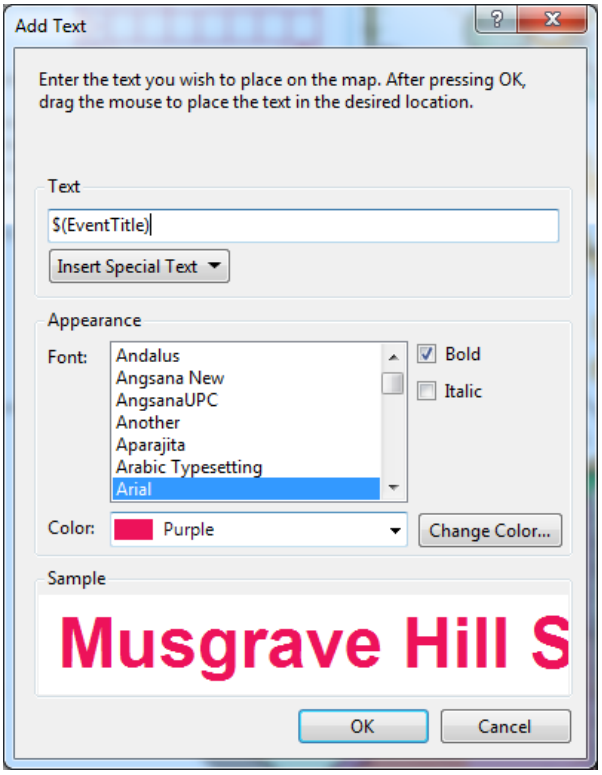
Select toolbar **Add Start** and place it on the map.

Select toolbar **Add Finish** and place it on the map, maybe on top of the Start triangle.



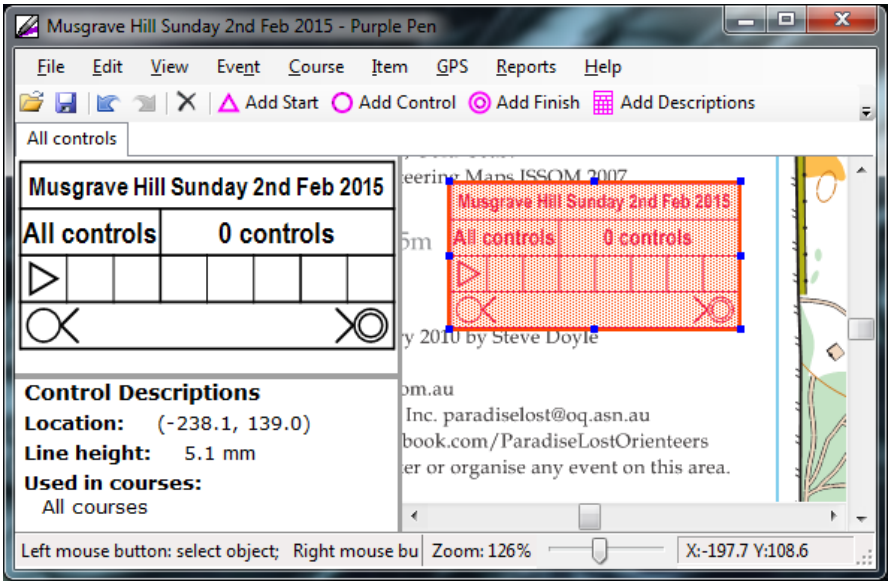
The **event title** will appear on the descriptions, so this is optional:

Select from the toolbar **Add Special Item / Text,** click on **Insert Special Text** and select **Event Title**, then **OK**, then click and drag a rectangle on the map in a suitable place:



OPTIONAL To allow for printing junior courses at different scales, repeat for **Print Scale:**

Also select from the toolbar **Add Descriptions** and draw a box on the map - these need plenty of space below, at the moment there are no controls, so the box has no depth and drawing it is a little fiddly:



Note that a bug in PP2.6 means that Control Descriptions added to the All Controls tab will not be displayed on the first course created, but later courses will have them displayed.

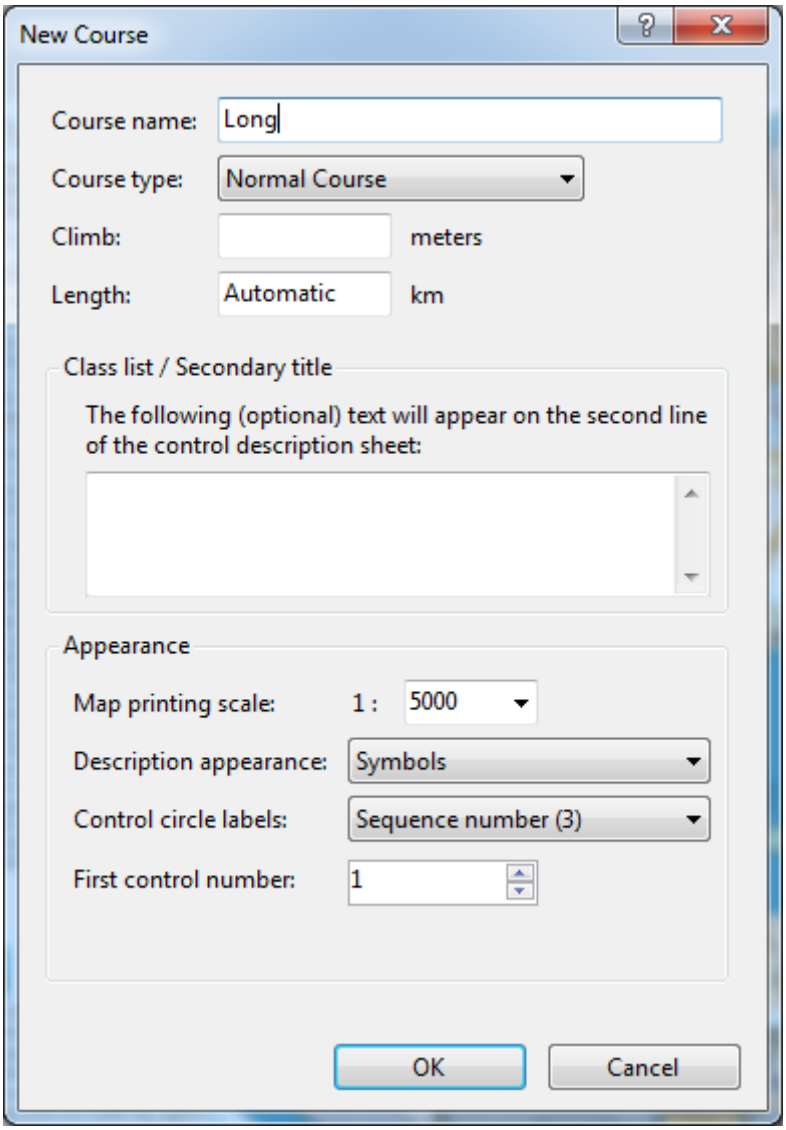
You may also wish to add more elements from the **Item / Add Special Item** menu eg **Out of Bounds areas**.

Now is a good time to save the file.

Add the first Course

When first adding a course, set up its properties carefully, then consider using menu **Course / Duplicate Course** to make further courses with the same settings.

Select from the menu **Course / Add Course**, enter a name, and for most events/courses accept the defaults.



For a junior or short CATI course consider:

- Changing the scale - note that PP does this rather better than OCAD CS
- Description appearance = Text

Fix up the Control Descriptions

A bug in PP2.6 means that the Control Descriptions box added to the All Controls tab will not appear on the first course created, but later courses will have it.

After creating the first course, go back to the **All Controls** tab, select the **Control Descriptions** item, then use menu **Item / Change Displayed Courses** to switch it on for the new course.

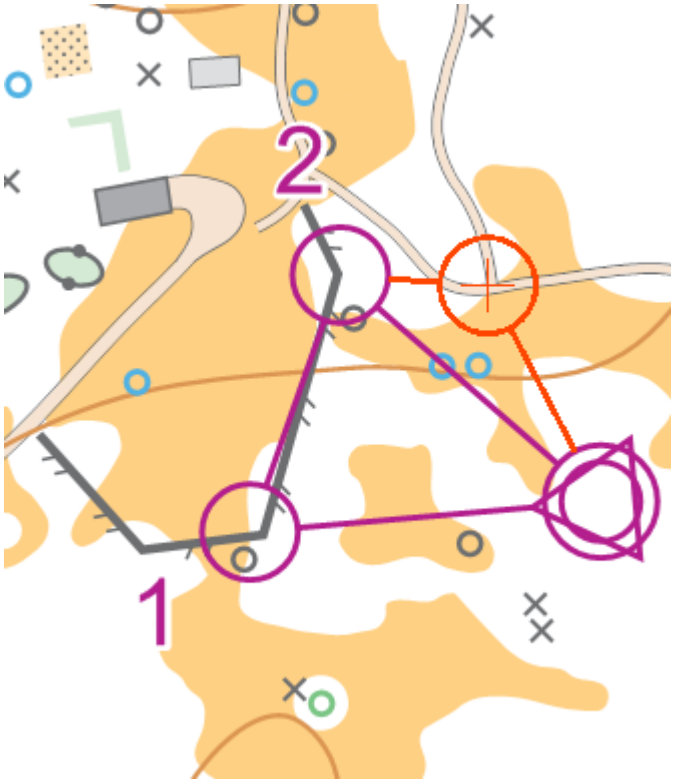
Adding further courses

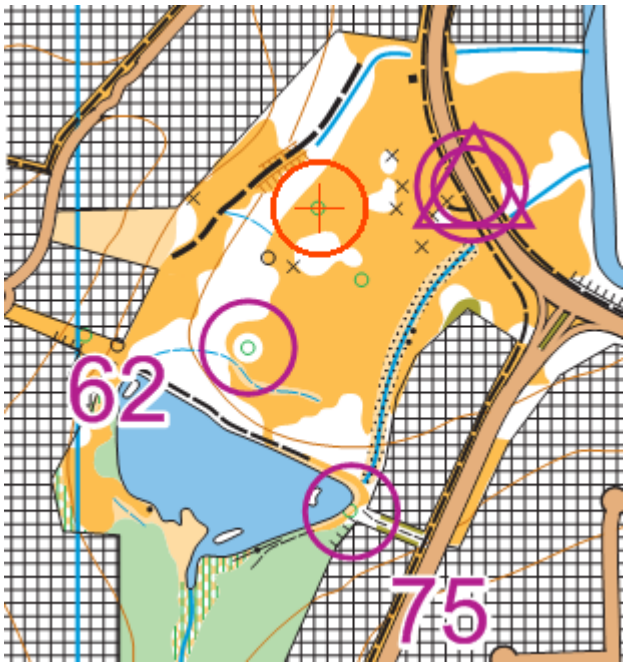
Consider using menu **Course / Duplicate Course** to avoid repeatedly entering course settings.

Adding Controls to a Course

Remember to select the correct course tab, especially for a Score course – the All Controls course looks and feels very similar. You can add new controls in either but it's best to add controls on a course tab.

To add successive controls, put one hand on the mouse, use the other hand to press Ctrl-A, then click on the map. On the left is a **NORMAL** course; on the right a **SCORE** course, in each case a fresh control is being added:





Unused controls are pink; the course you have created is purple.

Press **Ctrl-A** then click on one of the pink circles to add that control to the course.

Press **Ctrl-A** then click anywhere else to add a new control.

Press **Ctrl-Z** to undo.

Press **Esc** to abandon adding a control.

To insert a control into a normal course, click on the previous control then **Ctrl-A**.

To delete a control from a course, click on the control then press **Delete**. If the control is not used on any other course, PP may ask if you want to delete it from the file. Be very careful!

Moving around the map

PP has completely different navigation from OCAD!

- Left click and drag to pan.
- Mouse wheel to zoom.

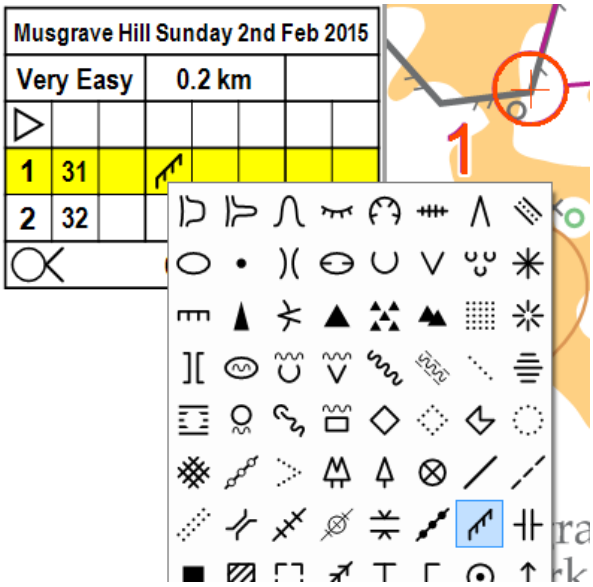
Adding Control Descriptions

It is best to add descriptions late in the project when control sites have settled down and been checked.

Zoom in so that you can see the control site clearly. When you click on the control in the description box at left the map view will shift to show that control.

Click on the correct row and each column of the control description box at left to select the symbols.

You have to use these symbols even when you are printing text descriptions; PP translates them into text for you.



Perfecting your courses

Use **Item / Add Bend** to tweak the lines between controls, usually to avoid a major barrier.

Use **Item / Add Gap** to stop control circles obscuring something important.

Breaking Control Circles

Look at and review every control circle.

A good way to do this is to choose the All Controls tab, zoom in tight to one control, then click on each control one by one at the list on the left, which will shift the focus to the relevant area of the map.

Ask yourself if any important map details are obscured by the circle.

If so, use **Item / Add Gap** (Ctrl G) to cut the gap as required.

Tweaking control number locations

For each course, look at each control number and ask yourself whether it is in the ideal position.

If not, click on the circle to select the control, then click and drag the number.

Adding climb

Climb is calculated on the route that you would take if you ran the course.

Work out the route you would take – (not the route which minimises climb!) - and count the rising contours along the route.

Multiply by the contour interval to calculate climb and type that into Course / Properties after selecting the course tab.

Final Checks

Print one map for each course (except All Controls) and check –

- ◪ Does the map look good in daylight?
- ◪ Have you remembered the event title, print scale, descriptions?
- ◪ Do the control descriptions match the control sites?
- ◪ Is the control description style suitable for the users of the course?
- ◪ Are the control numbers clear and out of the way of map detail?
- ◪ Do the control circles obscure anything important?
- ◪ Do the lines between controls cross dangerous obstacles / major barriers?

Preparing a "Control Hanging" Course

Do this when the courses are finalised.

Hanging the controls out in control number order from a sorted box/bag is much quicker.

This also make is both harder and less painful to get a control wrong. If you miss a control or hang the wrong flag, it becomes apparent at the very next control, because you now have the wrong flag at the top of the pile.

So we need to number the controls in some logical progression, eg 31-50, and prepare and print a "Control Hanging" course just for that purpose.

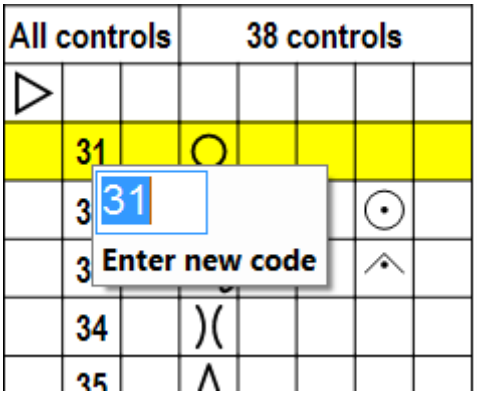
For a Score Event, if you choose to number controls on the optimal route, an imaginative participant will spot this and gain an advantage.

Tidy up using menu item **Event / Remove unused controls**.

Make a new course and add all controls to it on the optimal route.

Double-check you have them all by comparing with the number of controls on the All Controls tab.

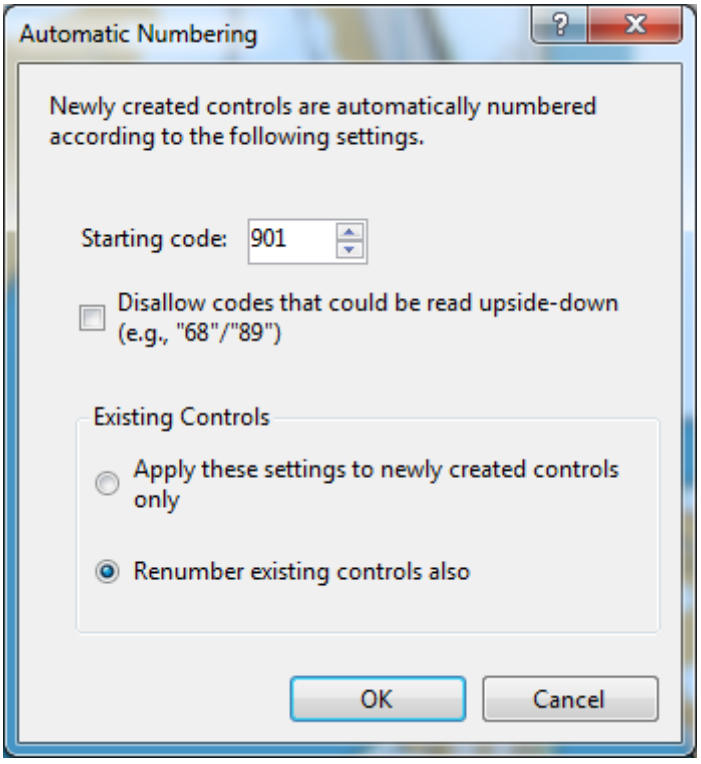
Click on the descriptions at the left of the screen, starting at the first, to change each control code on the course so that the codes are in the order they are stored eg 31, 32, 33 etc.



This is a bit fiddly. You have to click on the code field twice, then type in the new number, then click on the next one.

If any of the controls are already numbered in your control code range this does not work – PP changes the course instead of changing the codes! They have to be numbered using a different range, which is why we began with eg 901.

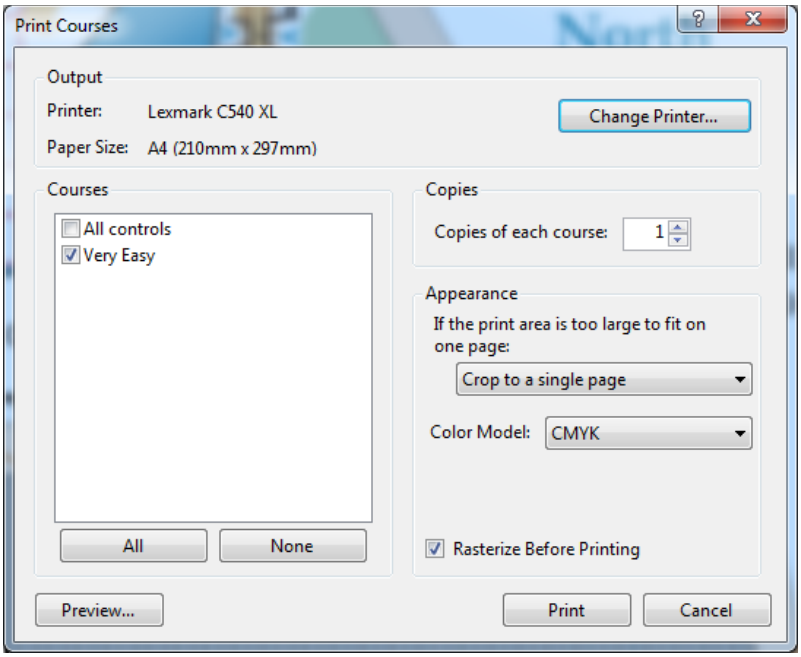
If you find yourself in this situation, first use menu **Event / Automatic Numbering** with **Renumber existing** switched on to change all codes to a different number range:



Printing a Course

If necessary, select menu **File / Set Print Area / This Course** and adjust the box to fit the map or the course snugly.

Select menu **File / Print Courses**.



A **Preview** step is wise.

Use 100gsm paper if you have it.

Optimising Print Quality

IMPORTANT: Check print quality and course appearance by looking at a printed map in daylight.

If your print doesn't look very good, try these options:

- On the **Print Dialog** switch **Rasterize Before Printing** either on or off.
- Use menu **File / Create PDFs** and print the PDF.

Sometimes these changes lead to very long printing times.