## Planning the Light Green Course

### Introduction
The previous articles in this series have covered planning the White, Yellow and Orange courses, and this article assumes that you are familiar with their contents.

The aim of the Planner should be to provide courses that show a clear progression in the use of orienteering skills, and we are now on to 'Technical Difficulty 4'. This level is experienced first by many orienteers as the Light Green course. However it is also the technical difficulty for JM4/JW4 courses at Regional Events; and M14A/W14A, M16B/W16B at National Events. All of these require the same type of planning, so for the purposes of this article I shall refer to them as the Light Green course.

### What are we trying to provide for the Light Green course competitors?
Most Light Green course competitors should have mastered the basic skills of the Orange course so will be used to leaving paths and other major line features to cut across short blocks of forest, or to find controls in the forest but relatively close to good attack points on the line features. They will also have started to make simple route choices, such as choosing between alternative routes following different line features, or in the form of the long but easy versus straight but slightly more difficult option.

Competitors should now be able to read all the information on the map so we want to test the more advanced techniques of the sport:

- How to read contours, and navigate by using them.
- Full use of a compass - when and how to take rough or accurate bearings.
- How to determine the best route choice - the ability to evaluate when to go straight and when to go round.

Some of the competitors are now running fast but their technical ability is still limited, as often are their powers of concentration. Hence they are liable to make mistakes, but as this is part of the learning process we do not want to penalise them so much that they are discouraged. Relocation after an error should therefore be reasonably straight forward, so that errors will not be expensive in terms of time lost.

### What the Light Green course should never be!
One of the main things to consider is that in most parts of England the terrain does not support anything harder than legs of Technical Difficulty 4. Hence the Green course cannot be planned at Technical Difficulty 5 due to the nature of the area. Despite this, the Light Green course should always still be planned to proper TD 4 standard. It should not be made easier just because the Green is easier than it would be on a more complex area.
The 'dumbing down' of the Light Green course is one of the most frequent complaints received about planning, so please remember: if the terrain does not support legs of above TD4 then the Light Green and Green (as well as the Blue and Brown) courses must all be planned at the same level of technical difficulty.
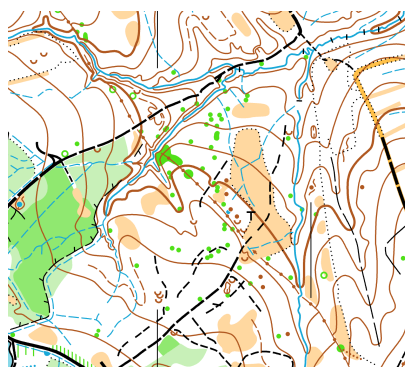


*Map1 : Typical English terrain - nothing harder than TD4.*

### What skills are we trying to test?
The technical difficulty of a course is based on the skills needed to successfully complete it. For the Light Green course these are:

- Navigate long legs on a rough compass bearing to a collecting feature.
- Fine orienteering on short legs using an accurate compass bearing.
- Navigate for short distances using simple contour features – hills, ridges, large reentrants and spurs.

Each of these is building on the technical skills learnt on the Orange course, as well as allowing for significant route choices.
A good Light Green course will test all these skills, demanding the ability to apply the full range of techniques.

### What skills are we not trying to test?
It is worth listing here the skills that the competitor is not expected to have as they are only required at TD5. If a leg requires any of these skills to complete it then it is too hard and needs re-planning:

- Navigate for long distances using only major contour features – hills, ridges, large reentrants and spurs.
- Read and interpret complex contours.
- Concentration over long distances.
- Recognition of indistinct features.

Remember, for this course any errors should not be expensive in terms of time lost. So:

- Collecting features beyond all controls (although these may now be major contour features rather than line features).
- Relocating features near to controls, but not so close as to be used as the 'optimum route' attack points.

### Control sites
Any feature which does not require map reading through complex contour detail, but don't forget the Rules that apply to control sites at any level:

- Features used as control sites shall be clearly defined, distinct from the surrounding terrain, and shall be marked on the map.
- Control sites shall be chosen so that the competitor can locate them with an accuracy consistent with the scale of the map and the amount of detail shown near the control.

Use as few controls as necessary for good planning based on the length of the course. However, remember that boredom sets in with youngsters, so I would expect to see at least 10 to 12 controls on a typical Light Green course.

### How long should the course be?
Guidance on the length of the Light Green course is given in two ways. As a ratio of 0.30 of an imaginary M21L course, or within the range 3.0 to 4.0 km. With most M21L courses being somewhere between 10.0 km and 14.0 km the result should be pretty much the same.
Planners should note that at National Events and above the Light Green is the

same length as the W14A course, whereas the M14A course is longer, with a length ratio of 0.37. This recognises the fact that this is part of the progression towards courses which are longer for M21 than W21.

**Planning the course**
The basic shape of the course will often follow that of the Orange course, which is only slightly shorter. This will allow the distinct line features used for that course to act as collecting and relocating features in the event of a mistake.

Only use the number of controls needed for planning a good course, but try to set legs of different lengths, make the shape of the course look interesting by changes of direction, and vary the skills required between legs as much as possible. e.g. a short leg requiring an accurate compass bearing followed by a longer leg on a rough bearing.

As the course is relatively short, planners should beware of anything that results in a long path run with little decision making unless there is a much faster direct route.

**The Start**
It is usual to use the same start as that for the other Junior courses (White, Yellow, Orange) but this is not compulsory. Just ensure that the start triangle is very clear both on the map and on the ground. As with all the courses involving Juniors or Novices it is good to give them confidence by making the first control relatively straight forward.
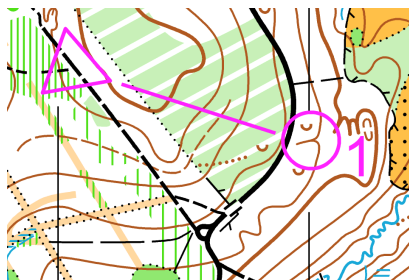


*Map2 : Typical first control on the Light Green course. It can be attacked by cutting through the forest, but some will take the longer, safer, track route.*

**Navigating long legs on a rough compass bearing to a collecting feature**
This is an extension of the skill taught at Orange standard of navigating a short leg on a rough compass bearing. Running on a rough compass bearing, particularly through good runnable

forest or open land, not only teaches the use of a compass, but also the ability to concentrate. The leg should get them off the paths and into the forest with a safe feature to aim at. Often there will be no sensible alternative path or line feature route to follow. It allows the experienced to run fast, whilst the less experienced can take it more steadily, often carefully ticking off features as they go.
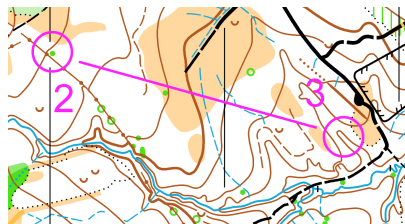


*Map3 : A good long leg to a very obvious control feature with the paths behind it acting as collecting / relocating features.*

**Fine orienteering on short legs using an accurate compass bearing**
Again an extension of the Orange skills of basic use of a compass, but now the bearing must be accurate. Also, the ability to estimate distance through the use of pace counting should come into play to avoid over-running the area where the control is situated. Competitors need to be able to identify an attack point and then execute the compass bearing with confidence. But always remember:

- Collecting features beyond all controls
- Relocating features near to controls

So that errors should not be expensive in terms of time lost.
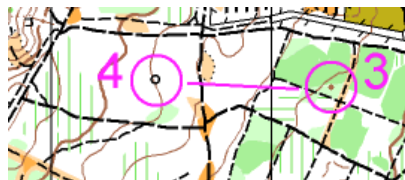


*Map4 : Either a straight route, or a good attack point from one of the path junctions, with accurate compass work to finish the leg.*
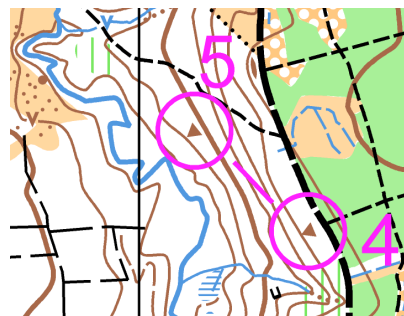


*Map5 : A diagonal leg across a slope provides a good Light Green leg, provided that there are catching features not too far beyond it.*

**Navigate for short distances using simple contour features – hills, ridges, large reentrants and spurs**
Up to this level, large contour features have only been used as control sites and not for navigation. Learning to read contours to identify features on the map and relate them to the ground, and then using them for navigation, is perhaps the hardest skill that has to be learnt in orienteering.

Legs here should teach competitors to identify the major contour features and navigate along them. What the planner is effectively doing is turning contour features such as spurs and re-entrants into line-features. In some cases these are actually easier to find and follow as they tend to be more reliable than paths, which come and go with the seasons.
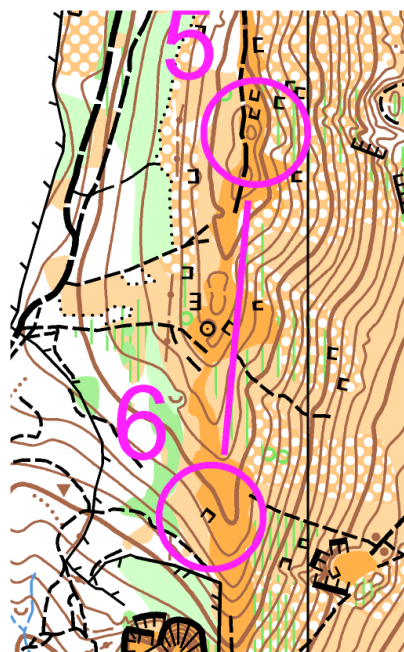


*Map6 : Using the hilltops and then the long spur for navigation.*

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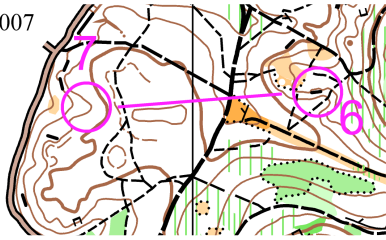


*Map7 : From the clear area, over the long hill and down into the re-entrant.*

### Route choice decisions

With longer legs the competitor now needs to be able to determine the best route choice - the ability to evaluate when to go straight and when to go round. Like any route choice legs these must be fair - if the map says the forest is white then it should be runnable, not full of brambles. But a good route choice leg should mean that the route with the more difficult navigation should take the least time if executed properly.
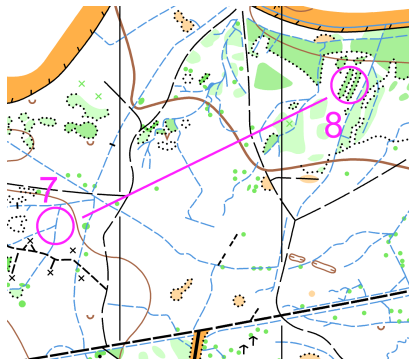


*Map8 : The direct route requires careful navigation, but is significantly shorter than the alternatives.*
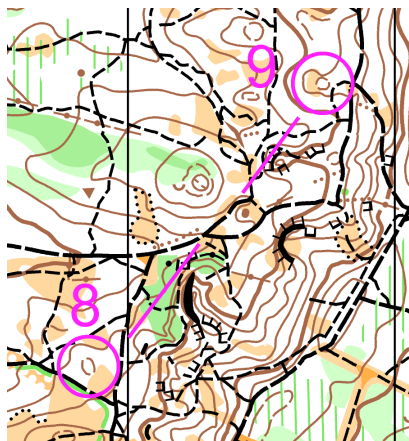


*Map9 : A number of route choice options here. Although largely on paths there are many decision points.*

### The Finish

It is not good practice to have the finish on a feature in the middle of nowhere, and the route to the finish should be obvious from the final control. It is also sensible to give everyone the same or a very similar last leg to bring them all into the finish from the same direction. However, when doing this ensure that the final control and finish are sufficiently distinct from each other that no-one is going to miss out the final control by accident.
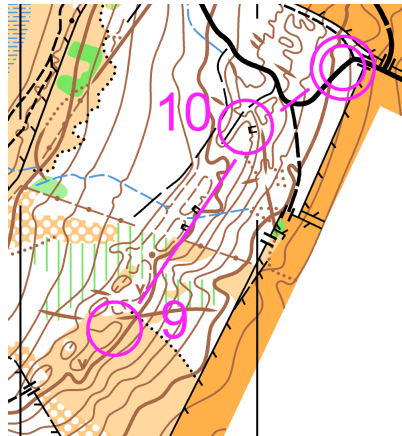


*Map10 : A run along the knolls at the top of the slope, and an obvious route into the finish.*
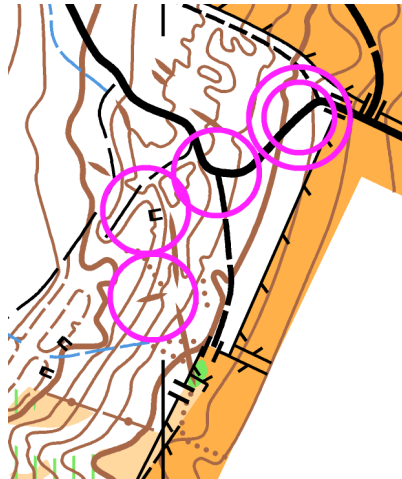


*Map11 : Three final controls can cover all the courses and provide a well ordered run-in to the finish.*

### End result

If your Light Green course follows all the principles outlined in this article then you should have some very satisfied customers who will soon move on to anything that even the most complex terrain can provide.

**References:**
- Course Planning by Graham Nilsen
- British Orienteering Rules
- British Orienteering Appendix B - Course Planning

all of which can be found on the British Orienteering web site via Event Information / Event officials / Planners.

**Author:**
Barry Elkington. May 2008.
Octavian Droobers Orienteering Club.