LEICESTERSHIRE ORIENTEERING CLUB
'THOUGHTS ON PLANNING'
(Revised February 2018)

These notes are intended to be a guide for a Planner who has agreed to plan a full range of courses at an LEI Level C Regional Colour Coded Event such as an EMOA League Event and they can also be used as a guide for Level D Local Summer and Winter League Events.

THE OFFICIALS:

The Planner - is one of the three main Officials at an event, the others being the Organiser and the Controller. **The Planner is responsible for everything between the start and the finish and all Courses.** More rare than they used to be, the exception if one is set up at an Event, is a String Course.

The Organiser - Within the British Orienteering Rules (available at: https://www.britishorienteering.org.uk/rules) the Organiser has a wide range of responsibilities. These will include being in overall charge of the Event on behalf of the Club and responsible for signage, the assembly area which will include car parking, registration, enquiries, information for new/inexperienced competitors, SI ecard/dibber hire, SI download, arranging for start and finish teams, the production of results including display of the provisional results on the day, and publication of the results post-Event on both the Club's and the British Orienteering websites, together with providing income and expenditure details for the Club Treasurer, which will also include the payment of expenses to the Planner and Controller.

The Controller - is responsible for the event being conducted under British Orienteering Rules and should be contacted if there are any queries or doubts as he/she will have wide orienteering experience and a good knowledge of the Rules and Appendices of our Sport. This Official is there to give guidance when required to the Organiser as well as the Planner, especially the suitability of control sites, the design of the courses and, very importantly, event safety.

As of 2017 all Event Officials are required by British Orienteering to attend an Event Safety & Welfare Workshop.

THE COMPETITION AREA AND THE MAP:

Research the competition area - is the map OK and is there a perceived need to arrange updating if the map is a bit out of date? Do not put control sites in what you and the Controller consider to be serious imperfections on the map. Always remember that the map is as produced by the mapper after hours and days of work both out in the area and at the computer using **OCAD** or **OpenOrienteeringMap** – even with 'in-house' digital printing do not make changes to the map file without first having the courtesy to check with the mapper who will help correct and up-date the map for you if he/she has the time. Obviously there is a limit to what can be done in the time available and it is an expectation that no map should require updating in the last weeks or days just

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before the event is due to take place. **Purple Pen** is the recommended open source software course setting/planning for orienteering and version 3.1.0 is available at: http://purplepen.golde.org/

LEI has a set of 'Standing Orders' available to view and download at:
http://www.leioc.org.uk/members/constitution-etc/
These include *Appendix 6: Mapping policy* which is to be adhered to in order to try and avoid problems. Important aspects of the policy can be summarised as follows:

1.Printing of Maps:
For Level C Regional and D Local Events only maps printed on the Club's digital printer should be used. This is to ensure that a uniform and acceptable quality of map is produced, with map quality to include paper of the correct type and weight, and that the correct colour table is used. Map files should be with the Club's Map Printing Officer Ursula Williamson at least 7 days or earlier before the Event.

2. Changes to Maps:
Planners and Controllers should not make changes to an Event map file. Changes must only be made to maps by mappers authorised by the Club. If, as Planner, changes need to be made to a map then please refer to the Club's Mapping Co-ordinator who will then arrange for the necessary changes to be made. This protocol has been introduced to avoid the confusion of more than one edition of a map existing and to avoid changes being made to maps that can then produce other, often unwanted, 'side effects'.

3. Waterproof and non-waterproof maps:
For the very large majority of Club Events, including Level C Regional and Level D Local, the Club's maps are printed on waterproof paper - if for some reason non-waterproof paper is used then polythene map bags should be available unless the Event Information 'Final Details' indicate that competitors will need to supply their own, in which case the map size e.g. 'A4' needs to be stated.

THE EVENT:

Plan your event to minimise disturbance to any wildlife or nests. Also some marshy/boggy areas are declared OOB, and particular surface vegetation is classified as 'fragile'. Are there any protected areas that must be shown as 'Out Of Bounds'?

Consider the proposed location, and any detailed restrictions, so that the Event is likely to have the least possible impact on the land and wildlife or other users. Seek to avoid areas where vulnerable features are known to exist. Land owners will normally know of environmental sensitivities, special sites and protected wildlife in relation to their land and it pays to consult with them at the beginning of the planning stage – it is very frustrating to plan the courses and then discover that certain areas and/or control sites are OOB!

Consider safe crossing points in walls etc. or on roads and plan your courses accordingly. If you open a gate don't forget to close it as it may be keeping livestock contained in a field - a gate left open which it should not be can allow farm stock to stray and, although all registered events have British Orienteering Third Party Insurance Cover, the Club would rather not go down that road if at all possible – and certainly not the farmer's stock!

Visit the competition area as often as possible and make yourself familiar with it. Walk and run around the area noticing the good and bad parts. Mark possible control sites on a map - these should primarily involve good legs with the actual control site being a secondary consideration.

Decide where you wish the Start to be – it is ideal if the Start and Finish are close together and

reasonably close to the car park. However, these considerations are not the overriding factors and the best place to start your courses should be chosen. If this is some way from the car park do still try to make life easier for Start and Finish teams carrying kit - if these locations are remote from the assembly area do try if at all possible to make them accessible to the Event Officials and on-the-day helpers by vehicle. Many orienteers enjoy a reasonable but not too long walk or jog to the start as a chance to 'warm-up'.

Try to choose a Start site using most of the following criteria and then talk to the Organiser to see whether your choice of Start area is acceptable:-
(i) Try and make runners pass out of sight of waiting competitors as soon as possible.
(ii) Ensure the vicinity offers a wide variety of first control sites to quickly disperse all competitors.
(iii) Make sure there is enough space to set up the Start as competitors would rather not be jostling and falling over each other juniors and visa versa.
(iv) Ensure that the Start triangle is located on a specific feature and, if at all possible, make it a site that is before rather than spot-on a path or track junction. For White and Yellow the path or track junction is then their first control.
(v) Decide on a Finish location - It is better if it is as near to the car park as possible. Try to make the run in not too long as any dead running should be avoided - a good last control or controls will ensure competitors need to orienteer all the way to the end of their courses. If possible make sure all finishers approach the Finish from the same or similar direction. Try to choose a good spectator point if one is available as this is when and where people like to watch and encourage their fellow Club members. Again, ask the Organiser if the site of the Finish is OK with him/her.

PLANNING THE COURSES:

Study the latest available version of Rules of Orienteering v3.7 February 2018 in full, and particularly Appendix B, sections 7 to 11 - downloadable from the British Orienteering website as a pdf file at: https://www.britishorienteering.org.uk/rules

The use of electronic punching at the Event i.e. SPORTident allows your Courses to criss-cross the area without fear of competitor's cheating by taking controls out of their numerical sequence but this could clutter up the map with lines and numbers in all directions! There is scope for any shape of Course, however care is still needed to avoid obvious dog-legs and to avoid competitors passing too close to later controls on earlier legs in their course. Long courses can be squeezed into even small areas. On very small areas you may still need a second map to avoid clutter although both may be pre-printed back-to-back or the second half picked up half way through the course.

Put equal effort into each of the courses. In many ways the White, Yellow and Orange courses are the hardest to plan. At East Midlands Colour Coded Events White and Yellow Course competitors are allowed to receive their maps at Registration.

Think about the shape of your courses, don't link together pretty control sites with boring legs, the leg the competitor runs is the most important part of orienteering. The control at the end needs to be of an appropriate level of Technical Difficulty (as noted above see Appendix B: Course Planning). Do not compromise the quality of your courses to reduce the number of sites. However, the time spent at a control is now much less with electronic punching being used so more courses can generally visit a single control without causing congestion.

The technicality of a course is dictated by the hardest leg/control. It is not often possible to have all legs/controls at the top level permitted but as many as practical should be. Appendix B sections 2.2 and 2.3 has details of Technical Difficulty 1 to 5 – if an any doubt refer to the table showing 'Routes and route choices', 'Number of controls', 'Control sites', 'Relocation and cost of errors', and 'Skills required' - and these are an excellent series of guidelines for all Course Planning and should be used alongside the tables with 'Course Length Ratios' and 'Min/Max

length'. These tables in Appendix B for various types of 'O' Event are as follows:
Section 7: Running speed ratios
Section 8: Long distance course planning
Section 9: Middle distance course planning
Section 10: Sprint course planning
Section 11: Urban course planning
Section 12: Relay course planning
Section 13: Score course planning
Section 14: Ultra-long distance course planning
Section 15: Night course planning

Use of the 'Course Length Ratios with M21=1.00' and the 'Min/Max length' gives a range of distances within which allowance should be made for the type of terrain to try and target the correct time range to be taken for a specific course. A workable guide on the amount of height climb equates 100 metres of climb to 1 kilometre of length e.g. 3.5 km length + 100m climb = 4.5 km. With this in mind take care that, when making this allowance, the effective course length plus climb does not exceed the expected range of course length and finish times as detailed in Appendix B (details are given in **'THE ACTUAL COURSES'** section later in this document).

After your courses are planned try walking or running around them all and try to take on the attitude of a competitor at that level, i.e. on White and Yellow if you can go wrong do so - and then change the course, remembering at all times that many competitors are children not adults – if in doubt squat or kneel down to see a control site from a child's eye-view! On Green, Blue and Brown if you have lots of time to think, it's too easy - change it if the terrain permits!

Mark all your control sites and write the code on them. Check control description sheets against the codes on your personal master maps then do it again - and then again! Avoid similar codes near to each other and similar features within 60 metres. No matter how you view a particular feature if it has been seen by the mapper and can be seen by the competitor as a re-entrant then you must treat it as though it is one – the map legend and the map drawing is the guide and the control description should be exactly the same i.e. if there is no vegetation boundary shown on the map then the control description cannot be 'Vegetation Boundary' with the same going for, for example, clearings and similar features.

With electronic controls decide well in advance in conjunction with the Controller who will program the control boxes. This could be an E-coordinator or another experienced helper appointed by the Club but it is your responsibility to ensure it is done and, if you have been trained to do so, you might want to take this on yourself. Consider what help you might require to put out controls bearing in mind that the Controller needs time to check them. This is especially important and the Controller should be involved in these considerations.

Where a helper or helpers are involved in putting out controls it may be possible for them to participate in the event afterwards e.g. get the helper to put out the White and Yellow controls which should not compromise them if they want to run a longer and more technical course later in the day. The Controller can then decide whether they ought to be treated as 'Non-competitive' or 'Competitive'.

Many controls make heavy work and remember it is your responsibility to hang them out. Controls can be grouped together but placement must adhere to Rule 22: Control sites– not closer than 30 metres to each other and not within 60 metres if similar features are used. Make them as secure as possible and whilst also making them easy to reach. Also check what your Controller thinks about the control site before final decisions are made.

When retrieving controls after the Event secure any gates opened during the duration of the event and remove all tapes and tags at control sites. Getting help from one or more orienteering friends,

acquaintances or volunteer Club members is vital at the end of what can be a long and hard day. Discuss this with the Organiser – he/she may be able to allocate a helper or two or three for this task from their on-the-day list of volunteer helpers.

THE ACTUAL COURSES:

Particularly useful alongside the Rules Appendix B: Course Planning and available on the national website is a section titled 'Get involved' - 'Organising and Planning Events' - 'Resource Library' which includes downloadable documents such as Hilary Quick's 'Orienteering Course Planning – Practical Guidance' and the series of five 'Advice on Planning' articles by Barry Elkington of OD which range through Colour Coded Courses from White to Black.

It is good practice to see when a particular area was last used at a similar time of year and to then ascertain the times taken for the distances offered – because of the differing nature of the terrain in LEI areas 'minutes per kilometre' times can vary area by area - RouteGadget2 is particularly useful for this: http://www.leioc.routegadget.co.uk/rg2/

The Club will decide what courses are to be provided subject to the Planner and Controller feeling that they are possible on the area. A Level C Regional Event will have White, Yellow, Orange, Light Green, Short Green, Green, Blue, and Brown Courses – very, very rarely, due to the terrain and lack of suitable paths, a White course may not be provided but if the event is an EMOA League Event then a full range of courses must be provided from White through to Brown. It used to be Club policy in the past to include, if possible, a Long Orange or Red Course at Level C Events to encourage members of Running Clubs etc but this is not now a planning priority. If the Club has decided that the event could be thought of as 'Limited Colour Coded' e.g. Level D Local Summer and Winter League Events, then only three courses may be on offer i.e. Yellow/Short, Light Green/Medium, and Short Blue/Long. (See '*Notes for Summer and Winter League Level D/Local Informal Event Organisers/Planners Information*' further on in this document)

Where an area will not sustain the Technical Difficulty normally required for Green and above, i.e. TD 5, these courses should be put on with the highest level of TD achievable (normally TD 4) but Light Green (TD 4) and those below (TD 3, 2 and 1) should not be made any easier. This situation because of the nature of the terrain should be explained in Pre-Event Notices/Final Details but more often than not it isn't!

White: CLR = 0.14: Length 1.0 to 1.9 km: TD1:
(Expected times for most competitors = 15 to 35 minutes)

Make it very easy as normally attracts young children. If any competitors go wrong then the Planner has failed. There must be no route choice at all and try to avoid any sudden change of direction. Make the legs of similar length and quite short, preferably no more than 200 metres between controls - children enjoy finding controls. Make the first control very close to the start. Use paths and tracks wherever possible. If competitors have to go off-path ensure event notices warn parents of this and ensure that the off-path route is marked with red and white tape throughout the length of this section or sections of the course. Put controls wherever you do change the direction of the course - children will always charge straight on unless you stop them and there must be a control at every decision point. There is a strong case for making the next control visible from the one the competitor is at if at all possible. There should be no need for a compass. Remember little legs will not jump as well as you and low heads do not see as far. Don't make your control descriptions an endless list of path junctions. Try to use a bit of imagination if at all possible.

Yellow: CLR = 0.22: Length 2.0 to 2.9 km: TD 2:
(Expected times for most competitors = 25 to 45 minutes)

Yellow should be well-nigh as easy as White but longer. There should be no route choice or use of compass. Some controls could be just away from corners. Use only strong line features for routes, e.g. paths, walls, hedges, fences, streams or very obvious ditches. Start very easy, save slightly harder controls until later. Make the legs of largely similar length, preferably no more than 350 metres and with no more than 2 decision points per leg.

Orange: CLR = 0.25: TD 3: Length 2.5 - 3.5 km:
(Expected times for most competitors = 35 to 60 minutes)

Offer some route choice with large catching features behind the more difficult control sites. Give the brave orienteer a chance to strike out across country but allow the timid to navigate on paths to a good attack point - however, reward bravery! Use more difficult control sites - large point features e.g. thicket, large depression or pond or use more subtle line features e.g. on a ditch or a gully bend. Introduce some different length legs, some simple compass work, and very limited contour reading.

Light Green: CLR = 0.30: TD 4: Length 3.0 to 4.0 km:
(Expected times for most competitors = 35 to 60 minutes)

This course is aimed at helping competitors progress from Orange to Short Green/Green. It should be technically medium-hard encouraging compass and map reading techniques. Give significant route choice wherever possible. Controls can be on any point or simple contour features with collecting features behind controls. Errors should not be expensive in terms of time lost. Many mature competitors choose this course expecting reasonable technicality but without wishing to tackle lengthy or physically difficult courses.

Short Green: CLR = 0.33: TD 5: Length 3.0 - 4.0 km:
(Expected times for most competitors = 40 to 70 minutes)

Often used by competitors either moving up from Light Green or those requiring a shorter Course but with a reasonably high level of Technical Difficulty or, more often than not, older competitors who want the technical challenge but not the length or height climb. Requirements are as for Green below but definitely not forgetting height loss as opposed to height gain - both younger and older competitors find steep downhill sections difficult and possibly dangerous and should be avoided if at all possible.

Green: CLR = 0.39: TD 5: Length 3.5 - 5.0 km:
(Expected times for most competitors = 45 to 75 minutes)

The course should provide difficult navigation with a mixture of skills. Use widely different length legs offering as much route choice as possible. Make any path route alternative much longer to reward ambition. Concentrate on planning the leg and be prepared to move the control site to improve the leg. Avoid dog legs and dead running whenever possible. Avoid line features linking controls or attack points. Introduce contour navigation not just for control sites but also for route choices. A Green course competitor should be able to use a compass well. In all LEI areas a Green course should be as difficult as the terrain permits.

Blue: CLR = 0.56: TD 5: Length 5.5 - 7.5 km:
(Expected times for most competitors = 55 to 90 minutes)
and
Brown: CLR = 0.85: TD 5: Length 8.5 – 12.0 km:
(Expected times for most competitors = 65 to 105 minutes)

Make the Blue and Brown courses as hard as possible given the constraints of the area. Offer multiple route choices with few paths or easy line features to follow direct to a control. Make the

orienteer think at all times, even making them navigate to the last control just before the finish. Try to have one or two long or even very long legs on the course. Avoid long path runs - use more controls to avoid these. Offer long compass runs but don't use bingo controls. Use complex contour routes and control sites.

Black: CLR = 1.00: TD 5: Length 10.0 to 14.0 km:
(Expected times for most competitors = 75 to 120 minutes)

There is limited demand as Black Courses of this length do not feature in the EMOA League. British Orienteering, however, are keen to keep Black courses available even though they are very rarely put on at Level C Regional and virtually never at Level D Local Events!

Long Orange/Red: CLR = 0.50: TD 3: Length 5.0 to 7.0 km:
(Expected times for most competitors = 45 to 75 minutes)

Not seen at many Colour Coded Events nowadays but when included at an Event what was a Red Course in the past is now a categorised as a 'Long Orange Course' aimed at older or more confident novices who may be experienced athletes and wanting a longer run. Controls should be of the same degree of Technical Difficulty as on Orange but longer legs can be introduced and with slightly more physical challenge.

SOME THINGS TO AVOID DOING WHENEVER IT IS PRACTICAL TO DO SO:

Dog legs - people leaving controls can give the site away to other competitors. Not all dog legs are apparent as the route is drawn but are a give-away on the optimum route on the ground It is occasionally possible dog legs are not a problem as runners departing the control site are out of sight of runners coming to it from another angle.

Gold rush - where the runner at the control shows all the other competitors who are also lost where the control is! A typical 'gold rush' control is a pit in a rough open, often bracken/bramble covered, area. Another term for this is:-

Bingo controls - a control where luck plays just as much a part in finding it as skill does - a 2 metre wide clearing or a small pit 100 metres or more from an attack point. If in doubt hang the control a bit higher to be more visible. Rule 22.2 states 'Control sites must be chosen so that the competitor is able to locate them with an accuracy consistent with the scale of the map and the amount of detail shown near the control.'

Beacon controls - a control visible from 100 metres or more – often a control on a facing hill side in open country which the competitor can see from the other side of the valley.

Catch-before feature - a large path junction just before a difficult point feature makes the control easy. Similarly, on technically difficult Courses a large feature just past the control is a soft option for experienced competitors who will deliberately aim to 'bounce off' the feature**!**

Path running - If 90% of the leg is along a path or fence etc., it means only 10% is orienteering!

Unnecessary control - is the control there for a reason? Can you take it out? It is not advisable to compromise the quality of your Courses in order to reduce the number of sites. However, less sites tend to give more route choice.

Leg across or a control in an area with badly mapped runnability - keep well clear of it – basically, is the route through the forest as clear as it looks? The only answer is to test

run/jog/walk/fight through the area and approach the control site from various directions to see for yourself!

Too much climb - avoid long climbs just for the sake of it. Also, long descents are very hard on the knees and other joints of competitors, especially those of a more mature age.

Dangerous areas especially vertical descents - if any possible route goes near such an area it must be taped off using black and yellow tape – this two-coloured tape must only be used for this purpose and no other purpose during an event. *(See also extract from the Rules re Safety below)*

An invitation to cheat - avoid tempting competitors to cross out of bounds areas – this is not only against the principles of the sport and is unfair to the law-abiding competitors but, just as importantly, the Club could lose the area – Belvoir Castle was a classic example of this from the 1980s and a lot of lost years and hard work ensued before the Club could get permission to be able to use the area again, albeit with certain restrictions.

Crowding controls - avoid too many competitors arriving at any control at the same time. Where Course design means several Courses will do so, consider putting out a duplicate set of SI boxes. However, with electronic punching the time spent at a control is very short, so in these circumstances, different Courses can often visit a single control without causing too much congestion.

ALWAYS ASK YOURSELF – "WOULD I LIKE TO RUN THESE COURSES?"

Notes for Summer and Winter League Level D /Local Informal Event Organisers/Planners:
These 'Thoughts on Planning' notes have been written mainly with the Planners of Level C Regional Colour Coded Events' on LEI areas in mind but if you have volunteered or been asked to organise and plan three courses for an LEI Summer League Level D Event then these notes are applicable to your event i.e. the 'Short/Easy' course will be of approximately Yellow (TD 2) standard, the 'Medium' course will be of approximately Light Green (TD 4) standard and the 'Long/Technical' course will be of approximately Short Blue (TD 5) standard, available terrain permitting. It is worth repeating that where an area will not sustain the Technical Difficulty normally required for Green and above, i.e. TD 5, these courses should be put on with the highest level of TD achievable but Light Green (TD 4) and those below (TD 3, 2 and 1) should not be made any easier.

You will not have a Controller as such for your BOF Registered Level D Event but any experienced LEI Planner or Controller will be willing to act as a 'Mentor' to give advice and help as to the suitability of the courses planned for the area and terrain to be used at the mid-week, mid-morning or evening event – if in doubt contact the Summer or Winter League Co-ordinator who, together with the Club Chairman, the Club President and the Club Captain, will put you in touch with someone happy to mentor, help and advise.

It is also very worthwhile to have an assistant during a mid-morning or early evening Event to look after registration and entry procedure however self-help or informal these may be – after all, if you as the Organiser/Planner are in the woods putting out controls then an assistant will be able to deal with the competitors arriving early and keen to get out and about as well as being available to help during the Event itself.

SAFETY:
Extracts from Rule 14 re Safety:
14.4 The Organiser must complete and regularly update the risk assessment, **in consultation with the Planner**, Controller and other key officials.

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14.5 The Controller (for level D events if not by a Club Controller then either a licensed Organiser who has attended a British Orienteering Event Safety & Welfare Workshop or a licensed Coach) must review the risk assessment and sign it to confirm it has been reviewed.

14.15 The Planner has responsibility delegated to them by the Organiser for ensuring that the courses are planned in a safe manner and that any risks on the courses are managed effectively.

14.16 The Planner must take into consideration all hazards that competitors may encounter. This must include all possible routes between controls, as well as significant hazards away from the expected routes.

14.17 The Planner must ensure that dangerous features are marked with yellow or yellow and black tape if they are likely to be visited by any competitors and are not already clearly marked on the ground as dangerous.

As all LEI Events are registered with British Orienteering - an absolute essential in order that the Third Party Insurance Cover is available - you must be a member of British Orienteering.

As stated in Appendix C:
1.1.5 All event officials should be on the Register of licensed Event Officials before undertaking their roles, except in the case of level D events where a new Event Official will be under the supervision of an experienced mentor.

1.3 Planners

Level	Responsibility for appointment to event	Experience advised
A	By Organising body and to be approved by Event and Competitions Committee	Successfully planned or controlled a minimum of 2 events at level B or above within the last 10 years (one within the last 5 years). Have experience of the role of the Organiser.
B	Regional Association	Successfully planned or controlled a minimum of 2 events at level C or above within the last 10 years (one within the last 5 years).
C	Club	Successfully planned or controlled a minimum of 2 events at level D or above within the last 10 years (one within the last 5 years).
D	Club	If a novice then an experienced mentor is required. Completion of Planner training.

Good Luck with your future planning!