

OACT Guidelines For Event Management – Doc 2

SUCCESSFUL COURSE PLANNING

Revised 25 March 2018

For many orienteers, course planning is the most rewarding and enjoyable volunteer role in the sport. Not only does it improve your navigation skills, but it provides a different type of orienteering challenge. It requires you to plan courses which challenge other participants but do not defeat them, and which everyone should enjoy.

It is best to get your first experience in course planning for a low key event (e.g. Metro, Runners Shop Twilight, Midweek), under the guidance of an experienced controller, vetter or mentor, or alternatively working jointly with an experienced course planner. Once you have mastered course planning at that level, you can move on to a Classic event, where some longer and more technically demanding courses are required.

GENERAL ADVICE ON COURSE PLANNING

There is much more to successful course planning than meets the eye, especially at higher level events. If you want detailed advice on course planning, the following books can be borrowed from the library in the OACT Office:

- *Course planning*. British Orienteering Federation.
- *Course planning*. C. Gawelin and J. Nordström. IOF Technical Committee, April 1981.

While these are relatively old books which do not reflect more recent developments in orienteering (e.g. sprint events, electronic punching), they are full of sound advice for new course planners.

Such advice, which is explained and illustrated in those books, includes how to make courses challenging and thought-provoking by:

- creating fair route choices which demand concentration;
- providing a variety of leg lengths, directions and running speeds;
- avoiding 'dog legs', or legs where competitors on different courses run in the opposite direction, giving the control locations away; and
- placing control flags so that competitors need to find the feature, rather than the flag, but not hiding the flags.

As described further below, however, such advice is not necessarily applicable to the easier courses.

The leg is more important than the control location. The main challenge for competitors is to navigate the leg successfully, rather than just to find the control at the end. The successful navigation of a challenging leg should lead to the control. It is easier to adjust a control location than to create a challenging leg.

Controls should always be fair and not dependent on luck to find them. This means:

- not placing controls in areas where the map is wrong or where you have trouble locating the control site;
- avoiding 'bingo' controls in featureless or confusing areas which rely on luck rather than good navigation to find them; and
- not placing controls too close together, especially if they are on similar features and/or have similar or consecutive code numbers.

It is more important for controls to be correctly located, even if this means putting them on features which are easy to find, than to place them in locations which are unfair or questionable.

It is important also when planning courses to put yourself in the shoes of those running the course, whether they are elite orienteers, small children who see the terrain from a lower height, relative novices who are in the early stages of learning navigation, or older orienteers who struggle on steep slopes and uneven ground. Always ask yourself: 'If I was them, would I enjoy this course?'

OACT Guidelines For Event Management – Doc 2

Specific practical information relevant to course planning for the different event programs is found in the following documents:

- **Document 4.** Course planning for Metro and Runners Shop Twilight events
- **Document 7.** Course planning for Classic events
- **Document 10.** Organising and course planning for Midweek events.

In addition, course planning checklists are included in each of the checklist documents for the respective event series: **Document 5** (Metro and Runners Shop Twilight), **Document 8** (Classic) and **Document 11** (Midweek). Even if you are an experienced course planner, it is worth using these checklists to ensure that nothing has been overlooked.

Appendix 2 of the Orienteering Australia Competition Rules also provides general advice on course planning, and you should be familiar with the OA Rules relating to course planning.

If you have no or little experience in course planning, it is recommended that you seek the advice of a mentor, vetter or controller from your club or another OACT club, if such an arrangement has not already been made. Successful course planning is a skilled activity which is learned from both advice and experience. OACT has many experienced course planners who are willing and able to provide such advice if asked.

THE PLANNING PROCESS

Before You Start

Before starting to plan your courses, you need to:

- confirm the assembly area arrangements in consultation with the event organiser;
- confirm the number and types of courses to be planned, depending on the event series;
- acquire an electronic version of the map for the event; and
- download and install course planning software.

Further specific information for the relevant event series is available in the course planning documents listed above.

Initial Planning

Plan your courses on paper (or on screen using Purple Pen, OCAD or other suitable software) and get an experienced orienteer (event controller or vetter) to comment on your courses to ensure they are the correct distance and technical difficulty, and do not conflict with environmentally sensitive areas or other likely approval conditions. Check the relevant Event Planning and Management Guidelines (if available) or previous event approvals for details of the latter.

The initial planning includes determining the Start and Finish locations. It is desirable to have the Finish close to the assembly area, but the Start may be some distance away, if this can improve the courses, e.g. by reducing the amount of climb experienced on the course or by making linear features for the Blue and Green courses more accessible.

It is not necessary to plan a course in the order that competitors will visit the controls. Sometimes it is better to plan the most challenging legs first, then work out how best to connect them. Also, it is often better to plan the shortest or easiest courses first, as they have the most constraints.

Don't plan too many controls but share selected controls between courses where appropriate. It is desirable for each course to have a different first control. It is usually better for courses sharing controls to run in the same direction, so that competitors on one course leaving a control do not give it away to competitors on another course approaching it.

OACT Guidelines For Event Management – Doc 2

Try to provide variety in terms of lengths and directions of legs, control features and terrain, if the area permits it.

Field Checking

Once your controller or vetter has approved your paper courses, visit the area and tag and number all control sites with flagging tape (available from the OACT storage shed or office) a few weeks before the event. If a control site is unsuitable (e.g. the feature has disappeared or is poorly mapped, or nearby features are poorly mapped/changed), move it to a better feature or redesign the course. The tape should be tied as close as possible to the intended location of the control flag, with a control code written on the tape with an indelible marker. While checking each site, record the control description, including the size of the feature and the location of the control flag with respect to the feature, where applicable. Note if a stand will be required for hanging the flag.

At every control site, always cross-check any surrounding features to ensure you are at the correct location, and also to check the accuracy of the map. If you plan to use linear features (such as watercourses or tracks) as control sites, try to choose a specific and identifiable point such as a bend or intersection. This provides a more definite navigational feature which the competitor can recognise.

If possible, try to run the courses in the same direction as the competitors. This gives you a much better idea of what the competitors will encounter and should identify any problems with the map from the approach side of each control site.

Once you have field-checked all control sites, and made any corrections to your courses, the event controller or vetter should also visit the area and check all your taped control sites to ensure they are in the correct location. If there is uncertainty or disagreement about control locations, a joint visit with the controller or vetter may be worthwhile.

Preparing Maps and Control Descriptions

After the event controller or vetter is satisfied with all control sites, draw up the final maps for each course using Purple Pen, OCAD or other suitable software and write up the control descriptions. Take great care that you transpose each control site accurately and don't obscure important map detail! The course planning software allows you to cut gaps in control circles or connecting lines. Check that the control number is located unambiguously in relation to the control circles.

Once the maps and control descriptions are completed, the vetter or event controller should carefully check the maps to ensure that each control site and control description have been copied accurately. See **Document 13** for further information on preparing pre-marked maps and arranging for printing.

Putting Out the Controls

On the day prior to the event (or on the morning of the event for controls near tracks or public areas) place all control flags in the terrain. At each control site, carefully check that you use the flag and SI unit with the correct control code and remove the flagging tape.

If you get other experienced orienteers to help you put the flags out, advise them that the flag must be hung from the exact location where the tape is placed. All helpers should report back to you with any problems.

The control flag must be hanging freely and visible when the competitor is standing at or near the feature, in accordance with the control description. Do not attempt to hide the flag. Ensure that the flag is fixed firmly so that it won't be blown away, and check that the SI unit (if used) and punch are attached and that the number is visible.

OACT Guidelines For Event Management – Doc 2

If you follow these procedures and the following guidelines, allow yourself plenty of time, and pay attention to detail, the chance of a misplaced control is greatly reduced and you're most likely to have a successful event, as well as enjoy the experience.

COURSE GUIDELINES

The following provides a guide to planning **Blue, Green, Orange** and **Red** courses and sets out for each level of difficulty the objectives one should be aiming to achieve, the desirable area requirements, the typical characteristics of courses, and the course requirements by which the objectives are achieved.

BLUE – VERY EASY

Objectives

- To provide an introduction to basic skills such as understanding and orienting the map.
- To ensure that all competitors successfully complete the course.

Area requirements

- A good network of linear features.
- Good visibility and runnability.
- Well-defined boundaries.

General course characteristics

- Short legs and many controls add interest for young children and give practice in code checking and punching.
- Route choice is unimportant – there should be only one obvious route.
- Streamers should be used if the linear feature is weak or none is available. (This should be a last resort where there no other course options).

Specific course requirements

- Must be based on handrails – strong linear features such as tracks, fences and well-defined watercourses and vegetation boundaries.
- Control sites must be part of the handrail (e.g. track bend) or on obvious features beside or visible from the handrail.
- Must have controls at turning points from one handrail to another and catching features beyond them – locate the flag so that participants are steered onto the next leg.
- Be navigable without compass.
- Require no contour recognition or accurate distance estimation.
- Avoid steep and rough terrain, thick vegetation and difficult fence or watercourse crossings.
- Must have an easily identifiable start triangle that permits map orientation by linear features.
- The control flag must be visible from the approach side of the control site.

GREEN – EASY

Objectives

- To provide an introduction to basic skills:
 - o recognition of major contour features;
 - o compass use in cross-country situations;
 - o simple distance estimation;
 - o elementary route choices.
- To ensure that all competitors successfully complete the course.

OACT Guidelines For Event Management – Doc 2

Area requirements

- A good network of linear features to act as handrails and catching features.
- Some prominent point features near handrails.
- Good visibility and runnability.
- Well-defined boundaries.

General course characteristics

- Short legs and many controls, which add interest for young children and give practice in code checking and punching.
- Control sites away from corners or changes between handrails.
- Basic route choice of the corner-cutting variety.
- Use streamers if linear feature is weak or none is available (last resort).

Specific course requirements

- Be built around handrails, such as tracks, fences and watercourses but which may also include strong contour features when used in conjunction with good catching features.
- Have control sites either on handrails or on large visible point or line features within sight of the handrail.
- Permit the map to be oriented by linear features alone and be navigable without compass as a route choice option.
- Avoid steep and rough terrain, thick vegetation and difficult fence or watercourse crossings.
- Have the control flag visible from the approach side of the control site.

ORANGE – MODERATE

Objectives

- To reinforce skills such as navigation by compass, distance estimation and the use of attack points.
- To introduce navigation based on contour interpretation.
- To provide technical challenge without allowing serious errors to occur.

Area requirements

- Broad network of linear features.
- Good visibility and runnability.
- Well-defined boundaries.
- Less complex contour formations.
- Prominent point features readily located from handrails and contours.

General course characteristics

- May include rough compass running and fine compass navigation up to 100 metres.
- Should have good boundary catching features.

Specific course requirements

- Provide cross-country legs with handrail options for assistance.
- Routes involving handrail options should be the least attractive, i.e. cross-country routes should be potentially faster.
- Allow good map contact throughout the leg by crossing or following well-defined contour features, or passing prominent point or vegetation features or 'sign posts'.
- Have control sites on easier (upstanding, not depressed) point features and well-defined contour features.
- Must have strong attack points to, and good catching features behind, controls.
- Have control flags on the far side of features so that the feature is seen first.
- Design the shortest orange course for older and less physically able competitors, by aiming to minimise steep or rough terrain.

OACT Guidelines For Event Management – Doc 2

RED – HARD

Objectives

- To test a wide range of navigational skills to the utmost.
- To require competitors to concentrate constantly and make as many decisions as possible.
- To match the course to competitors' physical abilities for their age.
- To provide a satisfying challenge for competitors, but not defeat them (i.e. all competitors should successfully complete the course).

Area requirements

- Complex terrain features (contours, rock, vegetation etc.) but not so complex that they cannot be clearly represented on the map.
- Reasonable runnability, not excessively steep or dense.
- Sufficient features to offer constant map reading without relying solely on compass bearings.
- Not too many handrails which could reduce the need for careful map reading.
- Variability in terrain if possible.

General course characteristics:

Particularly on Red courses, the course characteristics vary with the type of event, depending on whether it provides **Long, Middle** or **Sprint Distance** courses. Further details on relative course lengths are provided in **Document 7**. See also Appendix 8 of the Orienteering Australia Competition Rules.

Long Distance

The features of Long Distance courses are:

- Winning times at the championship level of 90 minutes for M21E and 70 minutes for W21E, with shorter times for other classes as in Orienteering Australia guidelines (typically 40 to 70 minutes). Longest winning times may be reduced for local events (see **Document 7**).
- Long route choice legs a must.
- Competitors should be tested in their ability to plan for a long and physically demanding race.
- Techniques can be used for breaking up groups of runners, such as butterfly loops.

Middle Distance

The features of Middle Distance courses are:

- 25 - 35 minutes winning time.
- Technically difficult.
- Frequent direction changes.
- Route choices small to large scale.
- High speed with runners having to adjust their speed to technical difficulties.
- Fast accurate orienteering.

Sprint Distance

The features of Sprint Distance courses are:

- 12 – 15 minutes winning time.
- High running speed.
- Difficult route choice.
- Technical areas for tempo changes.
- Terrain can be urban/campus, park, forest or a mix.
- Fair course setting.
- Promotional tool*.
- Spectacular controls*.
- Opportunities for spectators to see the runners during the course*.
- On-the-ball exciting commentator*.

*Relevant primarily to sprint events promoted for their spectator value.

OACT Guidelines For Event Management – Doc 2

Specific course requirements (long and middle distance)

- Provide a course which is as challenging as possible without introducing a significant element of luck.
- Provide variation and tempo change requiring different techniques including:
 - route choice;
 - technical, slow running;
 - fast orienteering;
 - high to low visibility;
 - long and short legs;
 - approach from above, below, diagonal downhill, diagonal uphill, on the contour;
 - direction control;
 - mix up legs, mix it up within legs.
- Have control flags on the far side of features so that the feature is seen first.
- Design the shortest Red course for older and less physically able competitors, by aiming to minimise steep or rough terrain.

Specific requirements relating to sprint events are discussed in **Document 15**.