



Rules of Orienteering

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CHANGE SHEET			
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DESCRIPTION OF CHANGE			
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DEFINITIONS

1 Orienteering

Orienteering is a sport in which competitors navigate independently through the terrain. Competitors must visit a number of control points marked on the ground, usually in the shortest possible time, aided in navigation by map and compass only.

- 1.1 There are four official orienteering disciplines currently recognised by the International Orienteering Federation (IOF):
- Foot Orienteering (Foot O) requires the competitor to travel on foot through the terrain. The winner is the person who successfully completes the set course in the fastest time.
 - Trail Orienteering (TrailO) involves map and terrain interpretation. Competitors are permitted to use mobility aids to travel through the terrain. Any recognised mobility aids, apart from a combustion engine, are permitted. Recognised physical assistance is also permitted. The winner is the person who scores the greatest number of points on the set course.
 - Ski Orienteering (SkiO) requires the course to be completed predominantly on skis. The winner is the person who successfully completes the set course in the fastest time.
 - Mountain Bike Orienteering (MTBO) requires the course to be completed by the competitor riding, pushing or carrying their mountain bike. The winner is the person who successfully completes the set course in the fastest time.
- 1.2 An “Event” is an orienteering meeting that takes place. The term encompasses all aspects including the planning of the courses and the organisational matters. An event may include one or more competitions.
- 1.3 An “Activity” is a gathering of people who intend to participate in activities related to orienteering: to practise, train or as an introduction to the sport and there is no intention to rank or publish the competitive outcome of the gathering other than results of the coach-led exercises for the purposes of training.
- 1.4 A “Competition” is where people compete under competition rules to determine the final results with winners and places. A competition may involve one or more races.
- 1.5 A “Race” is where people complete an orienteering course in the terrain and are ranked from fastest to slowest.
- 1.6 For any competition, in order to be competitive, a person must be eligible according to the specific competition rules. The person’s result will be used to determine the final position of other competitors in the results.
- 1.7 For many competitions, a person who is non-competitive by virtue of any of these rules is permitted to take part in the race although their result will not be included when determining the final position of other competitors in the results. Some competition rules may specifically prohibit non-competitive entrants.

2 Foot orienteering competitions

There are several types of foot orienteering competitions which consist of different elements. These elements are outlined below.

2.1 Format types:

- Long (Classic) orienteering usually takes place in forest terrain. The emphasis is on route choice to test a competitor's ability to use a variety of navigational techniques. All controls on the course are to be visited in a set order.
- Middle distance orienteering usually takes place in forest terrain. The emphasis is on continuous map reading, there are a high number of controls and frequent changes in direction. All controls on the course are to be visited in a set order.
- Sprint distance orienteering usually takes place in runnable semi urban terrain, subject to suitable arrangements with regard to traffic. The high rate of decision-making, speed of map reading, map interpretation and route choice make up the challenge. The map scale and map type are different to those used in long or middle distance orienteering. All controls on the course are to be visited in a set order.
- Ultra-long orienteering is over very long distances with few controls. Terrain is usually predominantly forest but may be a mixture of semi urban and forest. All controls on the course are to be visited in a set order.
- Urban orienteering usually takes place in urban terrain, predominantly towns or city centres, using public open spaces, pedestrian and trafficked streets as well as parks. The course lengths will be determined by local or specific competition rules and subject to suitable arrangements with regard to traffic. The map scale and map type are different to those used in long or middle distance orienteering. All controls on the course are to be visited in a set order.
- Score orienteering may take place in any type of terrain. The challenge for a competitor is to gain the greatest score in a pre-defined running time. The controls may be visited in any order and need not all be visited.
- String orienteering is designed for children who are not yet able to undertake an orienteering course. Controls on distinctive features are joined by a continuous string. The map is large scale and may have been simplified. The terrain may be either forest or semi urban but there will be an absence of traffic.

2.2 Terrain

- Forest – this consists solely of, or a mixture of, forest, woods, parkland or open moorland. Traffic does not usually present an issue for competitors.
- Urban – terrain that is a mixture of public open spaces, pedestrian and trafficked streets, housing estates as well as city and town parks. The presence of traffic may present an issue for some or all of the competitors.
- Semi urban – this terrain includes some country parks & open spaces, schools and university campuses. The presence of traffic may present an issue for some or all of the competitors.

2.3 Time

- Day – in the hours of daylight.
- Night – in the hours of darkness.

2.4 Nature

- Individual – the competitor competes independently.
- Shadowed – where the competitor is followed by another person who is there to give guidance and assistance as required. Many competitions allow a competitor to be shadowed around a course. Where

shadowing is permitted the specific competition rules will explain how the shadowed competitor's result is to be recorded.

- Relay – usually, two or more team members run consecutive individual races.
- Team – two or more individuals collaborate.

2.5 Competition class

- An age class competition is where competitors are divided into classes according to their age and gender.
- A colour coded competition is where competitors on each particular colour course are ranked against each other regardless of age or gender.
- Other criteria may be used to group together competitors for the purpose of determining results. These will be explained in the specific competition or local rules.
- A junior is an individual who has not reached the age of 21 on the 31st December of the year of competition.
- Competitors aged 20 or younger, change age class at the end of the calendar year in which they reach the given age. They are eligible to compete in older classes up to and including 21.
- Competitors aged 21 and over, change age class at the start of the calendar year in which they reach the given age. They are eligible to compete in younger classes down to and including 21.

2.6 Club

- A closed club is one that restricts membership to individuals associated with an institution (for example: school, college, university, firm, army regiment) and does not accept outside membership.
- An open club is any club other than a closed club.

2.7 Result

- Single race competition – the result of one single race is the final result.
- Multi-race competition – the combined results of two or more races form the final result.
- Qualification race – the competitors qualify for a final race; the competition result is that of the final only.

2.8 Course

- A course consists of a specific set of controls, placed in the terrain, over a distance that is determined by the format, the competition rule and/or Appendix B: Course planning. The controls are to be visited in the order determined by the competition rules and/or the format.
- A course may be for one competition class or many classes may share the same course. A competition may have only one course or there may be several.

2.9 Technical Difficulty (TD) is the type and combination of orienteering skills to be tested together with the options for route choice, the number and type of decisions to be made on each leg of the course. The technical difficulty of a course is that of its hardest component.

3 Event structure and level requirements

The event structure consists of 4 levels of event: A, B, C and D. These levels indicate the type of competitions that may be held at each level of event.

3.1 Each level of event is described below:

3.2 Level D events encompass a wide range of formats and types of event that clubs wish to stage to provide opportunities for participants to orienteer at a venue near to them. These events may be of any format and type in any terrain: clubs decide what suits the needs of the prospective participants.

- 3.3 Level C events provide opportunities for participants seeking competition at a wider variety of venues and against a varied group of competitors but without wishing to travel great distances.
- 3.4 Level B events provide opportunities for more experienced competitors who seek a wider variety of terrain, challenging courses and competition. Competitors are prepared to travel longer distances to attend these events.
- 3.5 Level A events are the most prestigious events intended to provide opportunities for competitors to take part in the ultimate orienteering challenges in the UK.

4 Miscellaneous

- 4.1 “Organising body” means the club or association which has accepted responsibility for an event or activity.
- 4.2 Disputes on interpretations of the rules & definitions are to be referred to Events and Competitions Committee.
- 4.3 Where there is the use of 'must' it is a specific requirement affecting Competitors or Event officials and they must comply with these requirements.
- 4.4 The use of 'should' is for matters regarded as minimum good practice, but where there is no specific requirement. These should be followed unless there is a good reason not to.
- 4.5 Where there is an option (or lack of an option) the words ‘permitted’ or ‘not permitted’ have been used.

BRITISH ORIENTEERING RULES OF ORIENTEERING

COMPETITORS

5 Competitors

- 5.1 Competitors, volunteers, and team officials and all other persons connected with the event (whether or not they are members of British Orienteering) are bound by these Rules when they are competing in or attending any orienteering events held in Great Britain and Northern Ireland that are registered with British Orienteering.
- 5.2 Competitors must comply with any additional requirements notified to them by the Organiser, either in advance or during the event.
- 5.3 A competitor who has been found to have broken any rule will be disqualified unless there is a significant reason as to why they should not be. Ignorance of the rules is not a significant reason.

6 Fairness

- 6.1 The spirit of fairness and good fellowship is to be the guiding principle in all aspects of the sport, including the interpretation of these Rules.
- 6.2 Competitors must not try to gain an unfair advantage over other competitors. This includes, but is not limited, to:
 - Looking at the competition courses in advance, unless permitted by the Organiser.
 - Visiting the competition area in advance if it is subject to an embargo.
 - Taking of drugs to enhance their performance.
- 6.3 Competitors taking part in any event under these Rules are deemed to accept the testing procedures, disciplinary procedures and penalties set out by UK Anti-Doping Ltd or its successor.

BRITISH ORIENTEERING RULES OF ORIENTEERING

EVENT OFFICIALS

7 Safety

- 7.1 Competitors are responsible for their own personal safety and for assessing their own abilities to complete the course. However, Organisers must have made reasonable risk management arrangements to mitigate the hazards that a competitor might reasonably not be aware of.
- 7.2 Juniors aged under 16 on the day of the competition are not permitted to compete on courses where there are possible routes that require competitors to cross roads with significant traffic unless appropriate traffic management arrangements have been put in place. A disclaimer signed by a parent or guardian does not circumvent this rule.
- 7.3 If a competitor has started a course, they must report to the finish and/or download before leaving the event, whether or not they have completed their course.

8 Eligibility

- 8.1 A competitor must only compete for the club that is registered with British Orienteering as their 'membership club' except:
- If a competitor's British Orienteering 'membership club' is a closed club, in any one calendar year they are permitted to also compete for one open club of which they are a member.
 - If a competitor's British Orienteering 'membership club' is an open club, in any one calendar year, they are permitted to compete for one closed club of which they are a member.
- 8.2 A competitor is permitted to represent an open club and a closed club in the same event provided this is by prior arrangement with the Organiser.
- 8.3 Women are permitted to be competitive in men's classes but men are not permitted to compete in women's classes.
- 8.4 A competitor is permitted to enter and compete in only one class at any one event unless the rules of the competition specify otherwise.
- 8.5 A competitor is responsible for declaring themselves ineligible in any particular competition based on these rules or the rules of that competition.
- 8.6 A competitor is not permitted to assign their entry to another competitor unless the Organiser agrees. The Organiser has the right to refuse or revoke any entry.
- 8.7 Non-members of British Orienteering are only able to enter certain events and competitions; they must comply with all the entry information requirements.
- 8.8 Non-members of British Orienteering are not eligible for certain award schemes.

9 Conduct

- 9.1 The existence of an orienteering map does not in itself give the right of access to any area for orienteering or any other purpose.
- 9.2 Competitors must show respect and consideration to event officials, landowners, members of the rescue service and members of the public. Competitors are required to follow any reasonable instructions given to them by event officials, landowners, the police or other rescue personnel. If this instruction requires a competitor to abandon or not complete their race, this occurrence is to be reported to the Organiser.
- 9.3 Competitors must not deliberately cause damage to the environment and property. Any damage seen or

caused must be reported to the Organiser.

- 9.4 Competitors, volunteers, event officials, spectators and guests must comply with any requirements set out by the Organiser with regard to the bringing of dogs in the competition area, assembly/arena or car parking areas. The Organiser must state whether dogs are permitted or not and give details of the areas they are allowed into and under what conditions.
- 9.5 Smoking is not permitted in the competition area.
- 9.6 Competitors must not enter out of bounds areas. Competitors who find themselves in an 'out of bounds' area must leave immediately. They may be disqualified.
- 9.7 Competitors must follow any compulsory routes for the whole way (these will be marked by coloured tape (s) other than yellow and black tape).
- 9.8 Competitors must use crossing points if they are shown on the map as being mandatory.
- 9.9 Competitors must not reach through or lean over an impassable feature to punch a control site. This applies to events using a map drawn to the ISSOM specification.
- 9.10 Competitors are required to give help to an injured competitor even if this means giving up their own race.
- 9.11 Competitors must not deliberately draw the attention of other competitors to themselves or parts of the course: shouting and calling is unsporting and not acceptable.
- 9.12 Competitors must not collaborate in any way unless they are competing as a team or a person being shadowed is receiving guidance from the person shadowing them.
- 9.13 Competitors must not intentionally run with or behind other competitors in order to profit from their skill.
- 9.14 The Organiser may permit the shadowing of one competitor by another person. Certain competition rules may prohibit shadowing on certain courses. The competition rules explain how the shadowed competitor's result is to be recorded.
- 9.15 If you are the 'shadower' then you must have completed your own race before undertaking any shadowing. There may be other restrictions imposed on the 'shadower' by the Organiser.
- 9.16 A competitor has completed their course after downloading or if pin punches are used, on submission of their "control card". Competitors are not permitted to return to their course after completion. Competitors must not re-enter the competition area after their race unless the Organiser permits them to do so.

10 Clothing and equipment

- 10.1 Competitors must wear clothing that fully covers their torso and legs unless the Organiser has stated otherwise and has permitted shorts to be worn.
- 10.2 If an Organiser has given notice that additional safety measures are required, competitors must comply with these requirements. These will be notified to competitors either in advance or during the event. These measures may include the following:
- The carrying of a lightweight waterproof hooded top or similar waterproof clothing.
 - The carrying of a whistle.
 - The carrying of a spare torch at night events.
- 10.3 In addition to the competition map, competitors are permitted to carry with them the following:
- A compass

- A whistle for use in an emergency.
- A watch/other time keeping device
- A mobile phone for use in an emergency.
- A GPS
- A torch

- 10.4 Competitors must only use the map provided by the Organiser during a race. Each competitor is responsible for checking that they have the correct map for their course. However, they are not permitted to look at their map until the start official allows them to.
- 10.5 The use of any artificial navigational aid other than a compass is not permitted.
- 10.6 Competitors are permitted to only use a GPS device to record data for use in post-race analysis.
- 10.7 Competitors are not permitted to use mobile phones to assist with navigation. They are permitted to be used to call for assistance in the event of an emergency.
- 10.8 Competitors must wear any race numbers provided, the numbers and the name of the sponsor (s) must not be obliterated. The race number should usually be worn on the front of the upper torso or as directed by the Organiser.
- 10.9 Competitors with their own e-card are permitted to use them unless a particular version of an e-card is required.

11 Disqualifications

- 11.1 Competitors must make sure that they clearly show that all the required controls have been visited.
- 11.2 A competitor with a missing or unidentifiable punch will be disqualified unless it can be established with certainty that the missing or unidentifiable punch is not the competitor's fault.
- 11.3 Where a course requires that the controls must be visited in a specified order, competitors who visit a control site out of order will be disqualified unless they also re-visit the control site in the correct order.
- 11.4 Any competitor or official is permitted to lodge a 'complaint' with regard to any competitor or any aspect of the organisation or planning thought to have substantially contravened the rules or other instructions issued by the Organiser.
- 11.5 A competitor or competitors is permitted to make a complaint to the Organiser either orally or in writing. There is no fee for a complaint.
- 11.6 The 'complaint' must be made on the day that the alleged contravention occurred. The Organiser is the adjudicator of a complaint. The appeals procedure contains full details on how to make a complaint, protest or an appeal.

12 Event officials

- 12.1 The spirit of fairness and good fellowship is to be the guiding principle in all aspects of the sport, including the interpretation of these Rules.
- 12.2 Competitors, volunteers, team officials and all other persons connected with the event (whether or not they are members of British Orienteering) are bound by these Rules when they are competing in or attending any orienteering events held in Great Britain and Northern Ireland that are registered with British Orienteering.
- 12.3 Competitors must comply with any additional requirements notified to them by the Organiser, either in advance or during the event. The Organiser is responsible for notifying all competitors of any agreed rule variations or additions.

- 12.4 A competitor who has been found to have broken any rule must be disqualified unless there is a significant reason as to why they should not be. Ignorance of the Rules is not a significant reason.
- 12.5 These Rules apply to all Foot Orienteering events held in Great Britain and Northern Ireland by British Orienteering and all affiliated clubs, organisations and constituent associations unless the event is organised in whole or part under IOF Rules.
- 12.6 If the event is organised in part under IOF Rules the British Orienteering Rules of Orienteering apply to the classes to which the IOF Rules do not apply.
- 12.7 Event and Competitions Committee and the Board have the authority to vary Rules 1 – 17.
- 12.8 The organising body/the Organiser are permitted to vary Rules 18 - 31 The process of how to get approval for any variations depends on the level of the event and is outlined in Rule 17.
- 12.9 The Organiser may permit the shadowing of a competitor by another person, subject to any specific requirements in the competition Rules. The Organiser is permitted to impose any other appropriate restrictions on the 'shadower'.

13 Administration

- 13.1 The organising body/Organiser must obtain permission from the landowner and agree any charges prior to the event or activity taking place. This should be in writing (letter or email). They must also comply with any requests made by the landowner, his agents and tenants if any.
- 13.2 The Organiser must co-operate whenever possible with those statutorily responsible for environmental conservation.
- 13.3 The organising body/the Organiser must make sure that all events and activities are registered in accordance with the current British Orienteering event registration procedures and pay any levy due.
- 13.4 The organising body is responsible for the finances of an event or activity unless prior agreement has been reached with British Orienteering.
- 13.5 The organising body has the right to retain all or part of the fees paid to cover any reasonable costs incurred, where a pre-entry event is cancelled due to circumstances beyond their control.
- 13.6 The Organiser has the right to refuse or revoke an entry. Re-assignment of an entry to another competitor must be agreed by the Organiser in advance of the competition.
- 13.7 The Organiser must ensure there is adequate insurance cover for all aspects of the event or activity. Public liability and professional indemnity insurance is provided by British Orienteering. The policy can be found on the British Orienteering website.
- 13.8 The contact details of all non-members taking part in the event must be collected at the time of entry and stored for 5 years. A standard entry form showing the details that need to be collected can be downloaded from the British Orienteering website.
- 13.9 To comply with the insurance company requirements, for each event British Orienteering requires a full list of participant names: to include non-competing volunteers and 'shadowers'. For Events, the electronic submission of the results to British Orienteering is sufficient. Plus, a list of non-competing volunteers and 'shadowers' and their contact numbers is to be stored by the club/organising body. For Activities, lists of participants must be stored by the club.
- 13.10 Event officials must comply, in so far as is reasonably possible, with the guidance contained in the British Orienteering Environmental Good Practice document.
- 13.11 The Organiser must state whether dogs are permitted or not and give details of the areas they are allowed into and under what conditions.

14 Safety

- 14.1 Safety includes safety and risk management throughout the duration of the event or activity. This includes the competition area & courses, arena/assembly, traffic to/from and in the car parks, routes to and from all these areas, as well as competitors, spectators, members of the public, landowners, traders and First Aid personnel.
- 14.2 See Appendix E: Event safety, for details on how to apply these Rules.
- 14.3 The Organiser must ensure that the necessary safety and risk management arrangements for the event or activity are in place both for competitors and non-competitors.
As a minimum, the Organiser is responsible for the following:
- risk assessment
 - communications
 - First Aid
 - personal safety
 - mandatory competitor equipment/clothing requirements
 - extreme weather arrangements
 - particular terrain hazards
 - electrical and other equipment
 - roads and traffic & mandatory restrictions on under 16's with regard to traffic
 - checks on starters/finishers
 - missing or overdue competitor action plan
 - Casualty rescue plan.
- 14.4 The Organiser must complete and regularly update the risk assessment, in consultation with the Planner, Controller and other key officials.
- 14.5 The Controller (or for level D events if not by a Controller then either a licensed Organiser who has attended a British Orienteering event safety workshop or a licensed coach) must review the risk assessment and sign it to confirm it has been reviewed.
- 14.6 The risk assessment form must be kept for 5 years after an event or activity has taken place.
- 14.7 The Organiser must have a system in place for communicating with key officials at the main locations such as start (s), finish (s), car park, assembly/arena and download.
- 14.8 The Organiser must ensure that appropriate First Aid is available.
- 14.9 First Aid provision must be appropriate to the particular needs of the event bearing in mind:
- the time of year
 - the location of the start (s) & finish
 - the terrain & area involved
 - the format of the competition
 - the nature of the competitors taking part.
- 14.10 Competitors are responsible for their own personal safety and for assessing their own ability to complete the course. However, Organisers must have made reasonable risk management arrangements to mitigate the hazards that a competitor might reasonably not be aware of.
- 14.11 Organisers are permitted to impose whatever additional requirements they think appropriate for an event or activity and must make sure they notify competitors of these requirements
- 14.12 Competitors must wear clothing that fully covers their torso and legs unless the Organiser has stated

otherwise and permitted shorts to be worn (this will depend on the terrain). The Organiser is permitted to prevent competitors who do not comply with the full leg and torso cover requirements from taking part.

- 14.13 The Organiser must give notice if additional safety measures are required, competitors must comply with these requirements. These are to be notified to competitors either in advance or during the event. These measures may include the following:
- The carrying of a lightweight waterproof hooded running jacket or similar waterproof clothing.
 - The carrying of a whistle.
 - The carrying of a spare torch at night events.
- 14.14 The Organiser is responsible for deciding what action to take (For example such as delaying or cancelling the event, shortening courses or providing water points) in exceptional circumstances: this includes extreme weather conditions.
- 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.
- 14.18 The Organiser must ensure that any mains voltage electrical equipment is installed correctly and used appropriately by suitably experienced persons.
- 14.19 The Organiser must include in their risk assessment all road crossings and traffic into and out of the event car park.
- 14.20 The Organiser and Planner must pay particular attention towards competitors under 16 years of age. They must be seen to take precautions over and above what a careful parent would take for the safety of their children.
- 14.21 For those aged under 16 on the day of the event, courses must not have any routes that require them to cross roads with significant traffic unless appropriate traffic management arrangements have been put in place. Such arrangements may include: mandatory safe routes, crossings controlled by lights/marshals, the use of under-passes/bridges, timed controls etc. Roads with traffic management that induce low speeds (15mph as on many campuses) are acceptable but busy public roads are not.
- 14.22 **A parent or guardian is not permitted to sign a disclaimer in order to allow a junior under the age of 16 to compete where the courses have any routes that require competitors to cross roads with significant traffic unless appropriate traffic management arrangements have been put in place.**
- 14.23 The Organiser must inform competitors that they are required to report to the finish and/or download once they have started a course, whether or not they have completed the course.
- 14.24 The Organiser must ensure that a system is in place to confirm that all competitors have returned and have a plan as to how they intend to search for a missing competitor.
- 14.25 The Organiser must prepare a casualty plan if they anticipate any significant difficulties in recovering a casualty from any parts of the competition area.
- 14.26 An Organiser must report a serious incident/accident as soon as possible via an incident report form available on the British Orienteering website. This is to be sent to the British Orienteering National Office. This must be received at the National Office within 14 days of the occurrence.

- 14.27 Incident is a term used to cover all circumstances when there might be a claim. For example, an accident when there is personal injury or when property or livestock are damaged or any other occurrence where a claim might arise.
- 14.28 The Chief Executive must be informed by telephone at the Emergence Contact number included on the [last page](#) of this document, if a serious incident has taken place; such as a fatality or a missing child.
- 14.29 Minor incidents must be recorded by the association/organising body/club/Organiser and retained in case a claim is made at a later date.
- 14.30 Event officials must forward all correspondence regarding an incident, unanswered to British Orienteering or their brokers, as soon as they receive any.

15 Event officials

- 15.1 Certain event officials are named in the Rules – Organiser/Co-ordinator, Planner and Controller. Other event officials include Safety Officer, Mapper, Map Adviser and IOF Event Adviser.
- 15.2 See Appendix C: Event officials, for full details of the training and experience requirements.
- 15.3 The Co-ordinator (if appointed), Organiser, Planner and Controller of an event must each be a member of British Orienteering. They must be appointed in accordance with the requirements contained in Appendix C: Event officials.
- 15.4 The Co-ordinator is responsible, in accordance with the Rules, for the co-ordination of all aspects of a multi-day orienteering event.
- 15.5 The organising body must appoint an Organiser who is responsible, in accordance with the Rules, for the organisational aspects of an event up to the point where a competitor starts their race and from when they finish.
These include the following:
- land access and permissions
 - risk assessment and safety
 - publicity
 - event systems
 - event facilities
 - eligibility & entries
 - prize giving
- 15.6 The Planner is responsible, in accordance with the Rules, for planning aspects of an event, from when a competitor starts their race to when they finish their race.
These include the following:
- terrain suitability
 - map and printing requirements
 - risk assessment and safety in the terrain
 - format and course planning
 - setting out of and collection of controls and other course markers.
- 15.7 The Organiser and/or Planner are permitted to delegate some of their duties to other competent officials but remain responsible for these duties.
- 15.8 Only licensed Controllers are permitted to officiate at events. See Appendix C: Event officials for full details.
- 15.9 The Controller is responsible for ensuring that the Co-ordinator, Organiser and Planner stage the event

fairly and safely, in accordance with the Rules.

- 15.10 The Controller is responsible for reviewing the risk assessment for an event and signing to confirm that it has been reviewed.
- 15.11 If a breach of the Rules occurs or is likely to occur, the Controller must take appropriate action.
- 15.12 The Controller may require the Organiser to cancel the event.
- 15.13 The Controller's decision is final unless a jury has been convened, when the appeals process applies.

16 Complaints, protests and appeals

- 16.1 Any competitor or official is permitted to lodge a 'complaint' with regard to any competitor or any aspect of the organisation or planning thought to have substantially contravened the Rules or other instructions issued by the Organiser.
- 16.2 The complaint must be made to the Organiser either orally or in writing and must be made on the day that the alleged contravention occurred.
- 16.3 The Organiser is the adjudicator of a complaint. The Organiser may consult other members of the organising team before reaching a decision.
- 16.4 A 'protest' is permitted to be made against the decision made by the Organiser with regard to a complaint, or if the Organiser fails to address the complaint in a timely manner. A protest must be made to the Controller/organising body, in writing, as soon as possible.
- 16.5 If the protest occurs once the final results are published, a written protest must be made within twenty-one days of the results being published.
- 16.6 On receipt of a protest the Controller must notify the Organiser. If they agree with the protest they must take the appropriate action.
- 16.7 If either the Controller or the Organiser does not agree with the protest they must convene the jury or, in the case of a written protest made after the event, notify the jury members of the protest together with any other relevant information.
- 16.8 The jury must meet as soon as possible after receipt of a protest and must deal with any protest referred to them in the appropriate manner. If a written protest is made after the event, they should consult together and notify the Organiser of their decision as soon as possible.
- 16.9 An 'appeal' is permitted to be made against the jury's decision with regard to a protest. All appeals must be made in writing and within fourteen days of the decision of the jury being announced or communicated to the persons making the protest.
- 16.10 The appeal must be heard and decided on by the appeal body at the earliest opportunity. The decision of the appeal body is final.
- 16.11 For level D events, the appeal must be made to the executive committee or equivalent of the club which registered the event.
- 16.12 For level C events, the appeal must be made to the executive committee or equivalent of the constituent association in which the event was registered.
- 16.13 For level A and B events the appeal must be made to Events and Competitions Committee.
- 16.14 A jury consists of 3 Controllers of the appropriate level. Appendix A: Event systems contains guidance for juries.
- 16.15 The Organiser is responsible for the appointment of the jury to an event.
- 16.16 The jury for a level A event must consist of three Grade A Controllers. They must not be from the

organising club and preferably not from the host association. They must be appointed at least seven days before the competition.

- 16.17 At level B events the jury must consist of three experienced Controllers, preferably not from the organising club (Ideally at least Grade B).
- 16.18 At level C events the jury must consist of three Controllers of any grade, preferably not from the organising club.
- 16.19 If the Organiser, Controller or jury consider that the sport has been brought into disrepute they must bring the matter to the attention of the Chair of British Orienteering for consideration by the Board for possible action.**

17 Event structure and level requirements

- 17.1 The event structure consists of 4 levels of event: A, B, C and D. These levels indicate the type of competitions that may be held at each level of event.
- 17.2 Each level of event is described below along with the requirements for each level. It is expected that a club/organising body will meet all these requirements or arrange for any variations with the appropriate person/body.
- 17.3 Level D events encompass a wide range of formats and types that provide opportunities for participants to orienteer at a venue near to them.
- 17.4 The Organiser is permitted to vary Rules 18 – 31 to meet local requirements. Prior approval must be obtained from the Controller and the club responsible for the event.

	Level D events: summary of requirements
Administration	<ul style="list-style-type: none"> Dates and venues arranged by the club. Registration with British Orienteering.
Safety	<ul style="list-style-type: none"> A risk assessment must be completed and updated by the Organiser in consultation with the Planner. It must be reviewed by either a Controller or a licensed Organiser who has attended an event safety workshop, or a licensed coach who signs the risk assessment to confirm it has been reviewed. First Aid provision must be appropriate to the needs of the event.
Event Officials	<ul style="list-style-type: none"> As appointed by the club. They should preferably be either experienced officials or novice officials with an experienced mentor for support.
Publicity	<ul style="list-style-type: none"> The event to be publicised on the British Orienteering fixture list. On a club website or as determined by the club.
Terrain	<ul style="list-style-type: none"> The terrain should be suitable for the format.
Map	<ul style="list-style-type: none"> As determined by the club. See Rules 18 & 19 for mapping rules and Appendix D: Mapping.
Format, courses, classes & eligibility	<ul style="list-style-type: none"> As determined by the club. See Rules 20 - 25 for planning rules and Appendix B: Course planning.
Event Facilities & Systems	<ul style="list-style-type: none"> As determined by the club. See Rules 26 - 31 for organising rules and Appendix A: Event systems.

Results & league	<ul style="list-style-type: none"> As determined by the club.
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17.5 Level C events provide opportunities for participants seeking competition at a wider variety of venues and against a varied group of competitors but without wishing to travel great distances. These events may be of any format and type in any terrain, clubs decide what suits the needs of the British Orienteering members and prospective participants.

17.6 The Organiser is permitted to vary Rules 18 - 31 to meet local requirements. Prior approval must be obtained from the Controller and the club responsible for the event.

	Level C events: summary of requirements
Administration	<ul style="list-style-type: none"> Dates and venues are to be agreed by the association fixtures secretary in consultation with the local clubs. Registration with British Orienteering.
Safety	<ul style="list-style-type: none"> A risk assessment must be completed and updated by the Organiser in consultation with the Planner and other key officials. It must be reviewed by the Controller who signs it to confirm it has been reviewed. First Aid must be appropriate to the needs of the event.
Event Officials	<ul style="list-style-type: none"> The association must ensure that suitably experienced officials are appointed and must assess the competency of any new or unknown officials. The Controller must be Grade C or above and preferably from a different club to the one staging the event.
Publicity	<ul style="list-style-type: none"> The event is to be publicised on the British Orienteering fixture list. There should be a direct link to the event on the club website or dedicated event details page. An advertising flyer may be produced.
Terrain	<ul style="list-style-type: none"> The terrain must be suitable for the format. The association must assess the suitability of the terrain.
Map	<ul style="list-style-type: none"> The map must be to the current IOF international standard for the format and discipline. See Rules 18 & 19 for mapping rules and Appendix D: Mapping.
Format, courses, classes and eligibility	<ul style="list-style-type: none"> These will be determined by the club or local competition Rules. See Rules 20 - 25 for planning rules and Appendix B: Course planning.
Event Facilities & Systems	<ul style="list-style-type: none"> Toilets. Basic start and finish areas. Entry on the day with pre entry where appropriate. An approved electronic punching system must be used. The courses must be pre-printed on the maps. See Rules 26 - 31 for organising rules and Appendix A: Event systems.
Results, ranking & league	<ul style="list-style-type: none"> Results must be on the event website within 24 hours. The results must be published on the British Orienteering website within 7 days.

- 17.7 Level B events provide opportunities for more experienced competitors who seek a wider variety of terrain, challenging courses and competition. Competitors are prepared to travel longer distances to attend these events.
- 17.8 Some national competitions are held at level B events and these competitions have their own competition Rules which take precedence over the level B event requirements set out below.
- 17.9 The Controller and Event and Competitions Committee must approve any rule changes to Rules 18 - 31 if it is a British Orienteering Competition.
- 17.10 If it is not a British Orienteering Competition, then the Controller and the association responsible for the event must approve any changes to Rules 18 - 31.

	Level B events: summary of requirements
Administration	<ul style="list-style-type: none"> • Dates and venues are to be agreed by Event Scheduling Group after consultation with associations. • Registration with British Orienteering.
Safety	<ul style="list-style-type: none"> • A risk assessment must be completed and updated by the Organiser in consultation with the Planner and other key officials. • It must be reviewed by the Controller who must sign it to confirm it has been reviewed. • First Aid must be appropriate to the needs of the event.
Event Officials	<ul style="list-style-type: none"> • The Organiser must be licenced, if not then their competency must be established. • The Planner must have experience of planning the format(s) if not then their competency must be established. • The Controller must be Grade B or above and from a different club to the one staging the event.
Publicity	<ul style="list-style-type: none"> • The event is to be publicised on the British Orienteering Fixture list. • There should be a direct link to the event on the club website or dedicated event details page. • An advertising flyer may be produced.
Terrain	<ul style="list-style-type: none"> • The terrain must be suitable for the format. • An assessment of the suitability of the terrain must be made by a Controller.
Map	<ul style="list-style-type: none"> • The map must be to the current IOF international standard for the format and discipline. • The map must be printed by an approved printer. • See Rules 18 & 19 for mapping rules and Appendix D: Mapping
Format, courses classes & eligibility	<ul style="list-style-type: none"> • The format, courses, classes and eligibility are all determined by the specific national or local competition Rules. • See Rules 20 - 25 for planning rules and Appendix B: Course planning
Event Facilities & Systems	<ul style="list-style-type: none"> • Toilets sufficient for the number of entrants. • Assembly, Start and Finish areas. • Food and equipment traders to be invited (if permitted by landowner). • All facilities must be capable of handling the expected number of

	<p>competitors and spectators.</p> <ul style="list-style-type: none"> • There must be pre-entry for competition courses with entry on the day if possible. Although pre-entry may be provided, there must be entry on the day for non-competition/recreational courses. • An approved electronic punching system must be used, with a back-up punching system. • The courses must be pre-printed on the maps. • Pre-allocated punching start times. • Seeding and selection if required by the specific competition rule. • See Rules 26 - 31 for organising rules and Appendix A: Event systems.
Prize Giving	<ul style="list-style-type: none"> • If required in the competition rule, this should be set up to allow as many spectators as possible a good view of the ceremony. • If flowers, prizes, trophies and medals are specified in the competition rule they must be presented as soon as practical after the final result of the competition is known.
Results, ranking and league	<ul style="list-style-type: none"> • Results must be on the event website within 24 hours. • Post event route analysis and graphical split time analysis must be offered via the website. • The results must be published on the British Orienteering website within 7 days.

17.11 Level A events are the most prestigious events intended to provide opportunities for competitors to take part in the ultimate orienteering challenges in the UK. Level A events support a programme of competitions that currently include:

- British Long distance Championships
- British Relay Championships
- British Sprint distance Championships
- British Middle Distance Championships
- British Night Championships
- The Jan Kjellstrom festival of orienteering (JK)
- The Southern, Northern and Midland Area Championships (and may also include the Welsh, Scottish and NI Champs).

17.12 Each one of these competitions has its own set of competition Rules with regard to matters such as eligibility and courses but the organisational requirements for level A events are set out in the section below. If a level A event incorporates an IOF event, then the IOF Rules take precedence over these requirements for the relevant courses/classes.

17.13 Any rule changes must be approved by the Controller and Event and Competitions Committee.

	Level A Events: summary of requirement
Administration	<ul style="list-style-type: none"> • Dates and venues are to be agreed by Event and Competitions Committee in consultation with Event Scheduling Group. • Level A events may be scheduled by invitation, rota or bidding process.
Safety	<ul style="list-style-type: none"> • A Safety Officer must be appointed for the event. • A risk assessment must be completed and updated by the Organiser in consultation with the Planner and other key officials.

	<ul style="list-style-type: none"> • It must be reviewed by the Controller who signs it to confirm it has been reviewed. • First Aid must be provided and be appropriate to the needs of the event.
Event Officials	<ul style="list-style-type: none"> • A Co-ordinator should be appointed if the event is staged over more than one day. • The Organiser must be licensed and have previous experience of organising a level A or B event. • The Planner must have experience of planning a level A or B event and planning the format(s) required by the specific competition rule. • The Controller must be appointed by Event and Competitions Committee.
Publicity	<ul style="list-style-type: none"> • The event must be publicised on the British Orienteering Fixture list. • There must be a direct link to the event website or a dedicated event details page. • There should be a pre event advertising flyer and advertisements in relevant publications. • All sponsors requirements with regard to publicity must be complied with.
Terrain	<ul style="list-style-type: none"> • The terrain must be suitable for the format required in the specific competition rule. • An assessment of the suitability of the terrain must be made by a Grade A Controller.
Map	<ul style="list-style-type: none"> • The map must be to the current IOF international standard for the discipline. • The map must be to the scale required by the specific competition rule. • The map must be current and reflect the state of the terrain at the time of the event. • The map must be printed by an approved printer. • The courses must be pre-printed on the maps. • The method of printing is specified in the competition rule. • There may be a Map Adviser appointed to assist. • See Rules 18 & 19 on mapping rules and Appendix D: Mapping.
Format, courses, classes & eligibility	<ul style="list-style-type: none"> • The format, courses, classes and eligibility are all determined by the specific competition rule. • To allow competitors to comply with the requirements on embargoed areas, the competition area (s) must be published on the British Orienteering website 24 months prior to the event or as soon as the areas are confirmed. • See Rules 20 - 25 for planning rules and Appendix B: Course planning.
Event Facilities and Systems	<ul style="list-style-type: none"> • There must be toilets sufficient for the number of entrants. • There must be an arena for spectators and competitors. • Finish and download to be in the arena. • Results display in the arena. • Food and equipment traders in the arena if permitted by landowner. • All facilities must be capable of handling the expected number of competitors and spectators. • There must be pre-entry only for all championship courses. • Closing date no more than 28 days before the event. • Non championship courses may be by pre entry but should also allow entry on the day. • Seeding and selection as required by the specific competition rule.

	<ul style="list-style-type: none"> • An approved electronic punching system must be used, with a back-up punching system. • Appropriately located Start (s). • Start list in arena and pre start. • Start interval and method as specified in the competition Rules. • A PA system, if permitted by the landowner, is to be provided along with radio controls, a spectator control and commentary on the races. • Ways of informing the spectators about the courses and competitors should be provided. Such as GPS tracking, arena intranet, live results on a screen. • Back up timing & results system. • See Rules 26 - 31 for organising rules and Appendix A: Event systems.
Prize Giving	<ul style="list-style-type: none"> • If flowers, prizes, trophies and medals are specified in the competition rule they must be presented as soon as practical after the final result of the competition is known.
Results, ranking and League	<ul style="list-style-type: none"> • Results must be displayed at the arena. • They must be on the event website within 24 hours. • Post event route analysis and graphical split time analysis must be offered via the website. • The results must be published on the British Orienteering website within 7 days.

18 Mapping

- 18.1 See Appendix D: Mapping, for how to apply these Rules.
- 18.2 The map must be produced to achieve a clear readable map at the appropriate scale for the format/competition.
- 18.3 The Mapper must ensure that any map used for a competition at level A, level B and level C is drawn according to the current issue of 'International Specification for Orienteering Maps' (ISOM) or 'International Specification for Sprint Maps' (ISSOM), subject to any specific British Orienteering amendments.
- 18.4 The Organiser must ensure that any special feature map symbols or map symbols that are additional to or different from those defined above are fully described in pre-race information supplied to competitors.
- 18.5 The Mapper is responsible for producing the map according to the guidelines in ISOM, ISSOM or British Orienteering Specification for School Orienteering Maps. The Mapper must produce artwork for the map to the appropriate specification.
- 18.6 The Mapper is responsible for ensuring that certain tasks are completed before entering an area to map. These include the following:
- Obtaining permission from land owners to access land on a certain date(s).
 - Obtaining information relating to activities on the land on the day(s) of mapping.
 - Satisfying any other requirements specified by the landowner.
- 18.7 The Mapper must obtain the permission of all holders of copyright of any map or map information before using such a map or map information in the preparation of a new map.
- 18.8 The Mapper is responsible for ensuring that all essential information is shown on the map, this includes all of the following:

- name of area
- grid reference of a defined point on the map or the centre of the mapped area
- scale and scale bar
- contour interval
- north lines with the date of magnetic north
- date of the map
- names of surveyor(s) and cartographer(s)
- holder of copyright of printed map and artwork
- map or event registration number
- access and permission statement
- any legal requirements for copyright of source material used to prepare the map
- specification used, whether ISOM or ISSOM
- legend – see Appendix D: Mapping for Level A exceptions.

- 18.9 The Mapper must define any ‘special feature’ symbols used as defined in ISOM or ISSOM on the map whether or not a full legend is printed. This includes ISSOM symbols that show features that are forbidden to cross.
- 18.10 The required scale, symbol size and contour interval for each format at each event level are set out in the tables 1- 4, Appendix D: Mapping.
- 18.11 Where enlargements are to be used they must be provided for classes M/W16 and below and M/W45 and above or in accordance with the relevant competition rule.
- 18.12 The Ordnance Survey has copyright on all material produced by them. Consequently, any map based, however indirectly, on OS material is covered by a copyright contract with the OS.
- 18.13 The Mapper must ensure that The Ordnance Survey licence number for British Orienteering is printed on the map together with the event registration number, using the following wording:
- “© Crown Copyright. All rights reserved. 100015287. Event Registration No ...”
- 18.14 The map printing method for each format type and level of event must be in accordance with tables 1- 4, Appendix D: Mapping.
- 18.15 Level A event maps must be printed by off-set litho. or other method as per Table 1 or the relevant competition rule, provided that the professional print firm is approved. See Appendix D: Mapping for this approval process.
- 18.16 Level B event maps must be printed by an approved professional print firm or by an approved club printer. See Appendix D: Mapping for details.

19 Mappers and Map Advisers

- 19.1 In order to fulfil the eligibility requirements to be covered by the British Orienteering public liability and professional indemnity insurance a Mapper must either be a member of British Orienteering or hold their own insurance.
- 19.2 The Mapper must be listed as part of the event registration process.
- 19.3 Mappers who are members of British Orienteering must be listed on the British Orienteering Mapper database, full details of the requirements for Mappers are contained in Appendix C: Event officials.
- 19.4 The Map Adviser must be a member of British Orienteering.
- 19.5 The Map Adviser is appointed to provide advice to the Mapper, Organiser and Planner of a level A event to ensure that the map is of the correct standard.

19.6 The Map Adviser is permitted to claim reasonable travel expenses from the relevant event budget.

20 Course planning

- 20.1 The format, course and class details are set out in the national, local competition Rules, Appendix B: Course planning or are determined by the club.
- 20.2 The courses must be planned in accordance with the requirements of any competition rule and Appendix B: Course planning. The technical difficulty of a course is that of its hardest component.
- 20.3 The element of luck must be minimised; problems must not be deliberately set to catch out competitors.
- 20.4 Where the terrain only allows courses of Technical Difficulty 1, 2, 3 and 4 to be planned, the Planner must plan to the correct level for those courses and accept that the courses that should be of Technical Difficulty 5 will only be at 4 – the highest the terrain allows.
- 20.5 In terrain where there is an absence of paths it may be possible to plan a Technical Difficulty 1 course by using prominent line features. If competitors are required to cross open ground a taped route must be used. This taped route must start and finish at the controls of the leg in question.

21 Course drawing

- 21.1 The Planner must ensure that any course markings used for a competition at level A, level B and level C events are drawn according to the current issue of 'International Specification for Orienteering Maps' (ISOM) or 'International Specification for Sprint Maps' (ISSOM), subject to any specific British Orienteering amendments listed in Appendix D: Mapping, including enlarged map scales, over print colour definition and urban maps.
- 21.2 The courses and map corrections must be printed in purple (red/violet) colour. All line thicknesses are to be 0.35mm at 1:15,000 scale. (0.4mm for enlarged scales). Appendix D: Mapping recommendation is for at least CMYK 20,100,0,0.
- 21.3 The starting point of the course must be marked by an equilateral triangle of side 7mm which points towards the first control. The centre of the triangle shows the precise position of the start point.
- 21.4 The site of each control must be shown as the centre of a circle of 6mm diameter. The circle should be broken to avoid obscuring important detail. If the control feature is shown on the map *symbolically* rather than to scale, the circle should be drawn so that the symbol lies exactly at the centre.
- 21.5 The position of the finish must be shown as the centre of two concentric circles of diameter 5mm and 7mm. Where a course uses two or more maps with map exchanges then the finish should be shown on all maps.
- 21.6 If the controls are to be visited in a prescribed order they must be numbered in that sequence and joined by straight lines. The numbers must be printed on a north-south axis, with the top north, and should be positioned so that they do not obscure any important detail.
- 21.7 For Sprint/Urban maps (ISSOM drawn) the lines drawn between control circles are not broken or diverted around impassable objects but go straight across them instead, the exception being where they are diverted to pass through a compulsory crossing point.
- 21.8 Any part of the course where the competitor is obliged to follow a compulsory route must be clearly and precisely indicated on the map by a dashed line.
- 21.9 Forbidden routes (e.g. busy roads, railways) must be shown by a chain of crosses.
- 21.10 A boundary which is forbidden for competitors to cross and which affects the courses must be marked as "forbidden to cross" on the competition map. At events using maps produced to the ISOM or ISSOM specifications, any "out-of-bounds" areas, "forbidden to cross" boundaries, crossing points or compulsory

routes which are marked on the competition map must be marked in the manner specified in the relevant map specification.

21.11 Crossing points must be indicated by curved brackets.

- Where there is only one valid option for crossing an "uncrossable" boundary the line between controls should be bent to this point.
- Where there is more than one option for crossing the "uncrossable" boundary the line between controls should be broken either side of the boundary.

21.12 If the format is long, middle or ultra-long, the course length must be given as that of the straight line route from the start via the controls to the finish deviating for, and only for, physically impassable obstructions (high fences, lakes, impassable cliffs etc.), 'out of bounds' areas and marked routes. This is the shortest route which a competitor could reasonably possibly take, irrespective of whether or not the competitor would be sensible to do so.

21.13 If the format is urban and sprint, the course length must be given as that of the route from the start via the controls to the finish as shown by the line on the map.

21.14 The total climb must be given as the climb in metres along the shortest sensible route. This may well be longer than the route used for measuring the course length.

22 Control sites

22.1 Features used as control sites must be clearly defined, distinct from the surrounding terrain and marked on the map. Control sites should be uniquely described.

22.2 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.

22.3 Controls should not be sited within 30 metres of each other or 15m for map scales 1:5,000 or less.

22.4 Controls within 60 metres of each other must not be positioned on similar features or on features that appear similar in the terrain. This is reduced to 30 metres for map scales 1:5,000 or less.

23 Control banner

23.1 The control site must be identified on the ground by a three sided banner with each side vertical and around 30 cm square, divided diagonally from corner to corner, the top half being white and the other half usually being orange. (Pantone Colour PMS 165).

23.2 The control banner must be hung at the feature indicated on the map in accordance with the control description. The control banner must be visible to the competitors when they see the described position.

23.3 Punching stations must be clearly visible and easily accessible from the control banner.

23.4 For level A and B events, the layout of the control banner, control code and punching stations must be the same for all control sites.

23.5 For level A and B events a back-up system of punching must be provided in the event of the electronic system failing. This is to be by pin punch at each control site or paper card in the case of EMIT.

23.6 For all events, care must be taken not to cover any light display on the punching station.

24 Control codes

24.1 The control code must be clearly displayed near the control banner and visible from the punching station.

24.2 The numbers or letters must be black, between 3 and 10 cm in height and have a line thickness of 3 to 10 mm.

- 24.3 The control code must be a number greater than 30 or two letters and control codes that could be easily confused are not to be used on control sites that are close to each other.

25 Control descriptions

- 25.1 Control descriptions must be prepared for all courses in accordance with the “International Specification for Control Descriptions” (Most recent edition).
- 25.2 A British Orienteering addition to the above is that the final box on the pictorial version or the final line on the written version must give details of the course closing time.
- 25.3 If non-standard symbols are used, then information about them must be supplied to competitors in the final event details.
- 25.4 The Organiser must state clearly in the final event details where and how control descriptions are to be provided. This is particularly important if they are not printed on the map.
- 25.5 For level A events the control descriptions must be printed on either the front or the back of the map and with the exception of relays also provided as a separate sheet.
- 25.6 For level B, C and D events the control description list must be printed on the map and/or provided as a separate sheet to each competitor.

26 Event organisation

- 26.1 Appendix A: Event systems, contains full details on how to apply these Rules.
- 26.2 The Organiser is responsible for the decision as to which punching system is to be used subject to any specific requirements in the competition Rules.
- 26.3 Only approved punching systems are to be used at level A, B & C events. The current approved punching systems are:
- Pin punch and paper control card.
 - Emit system – e-card (Brikke) with or without digital display and punching station with or without light display on punching.
 - SportIdent system – e-card and punching stations with light & sound on punching.
- 26.4 For level A and B events, a back-up punching system must be at each control.
- 26.5 Competitors must make sure that they clearly show that all the required controls have been visited.
- 26.6 A competitor with a missing or unidentifiable punch must be disqualified unless it can be established with certainty that the missing or unidentifiable punch is not the competitor’s fault.
- 26.7 Where a course requires that the controls must to be visited in a specified order, Competitors who visit a control site out of order must be disqualified unless they also re-visit the control site in the correct order.

27 Selection, seeding and start times

- 27.1 Appendix A: Event systems, contains details on how to carry out the seeding and selection process. The competition Rules give details of when and if seeding and selection are required.
- 27.2 The Organiser must ensure compliance with all the relevant requirements of seeding, selection and start times as specified in the specific competition Rules.
- 27.3 The Controller must review the systems used for selection, seeding, and start time allocation, and be satisfied that the criteria have been fully and consistently followed. Once this has been done, the Organiser’s decision is final.
- 27.4 At level A, B and C events no competitor must be timed to start within one minute of another competitor

on the same course, with the exception of:

- Mass start events such as relays.
- Chasing start events, where start times are determined by previous results.
- Circumstances deemed by the Organiser to necessitate a reduction to less than one minute.
- The competition Rules specify otherwise.

27.5 For level A events a timed start must be used.

27.6 At level A events, competitors late for their starts through no fault of the Organiser are permitted to start. The start official will determine at what time they are permitted to start, giving due consideration to the possible influence on other competitors.

27.7 The competitors must be timed as if they had started at the time given on the start list. Their actual start times must be recorded for use in any possible subsequent complaint.

27.8 At level B and C events, the Organiser is permitted to change the start times of competitors late for their starts through no fault of the Organiser.

27.9 Competitors who are late for their start time through a fault of the organisation of the event must be given a new start time.

28 The start

28.1 The position of the centre of the start triangle (including the start triangle on second and subsequent maps) shown on the map must be on a mapped feature and identified on the ground by a control banner.

28.2 For TD1 and TD2 courses this feature must be a path or similar feature; it must not be at a junction or intersection, as this would require a decision on which way to go without knowing where they have just come from.

28.3 Where a map exchange is used the position of the start of the next section of the course must be marked on the ground by a control banner if it is a significant distance away from the previous control site.

28.4 If pre-marked maps are used, copies of the map showing no information other than any map corrections essential to the event should be displayed and available for study before the start line.

28.5 Competitors must receive their pre-marked maps not more than 10 seconds before their start time, subject to the rule below. Arrangements for relays are different.

28.6 At level B, C and D events, courses planned to TD 1 and 2 standards must be available to be seen by competitors in advance of their start time unless stated otherwise in a specific competition rule. This may be either by displaying the map and courses in a suitably prominent position, or by issuing competitors with their maps prior to the start.

29 Out of bounds, crossing points and compulsory routes

29.1 Any area for which permission for orienteering has not been obtained, or has been refused, must be clearly notified as 'out of bounds' to the competitor, or must be clearly avoided by all courses.

29.2 Crossing points must be shown on the map. It must be clearly indicated on the map if their use is optional or mandatory.

29.3 Organisers must use tape other than yellow and yellow/black to mark compulsory routes in the terrain.

30 The finish

30.1 The precise location of the finishing line or point must be clear to all competitors approaching it.

- 30.2 The finishing time must be measured when the competitor punches at the finish point or crosses the finish at events where there is no electronic punching system in use. Finish times must be rounded down to the completed second.
- 30.3 Where there is a mass start or chasing start, the order in which the competitors cross the finishing line will determine their position (or their team's position) in the results.

31 Results

- 31.1 If an individual start is used (ie not a mass start or chasing start) two or more competitors having the same elapsed time must be given the same placing in the results.
- 31.2 If a serious problem has been identified and is found to have affected the outcome of a competition, then appropriate action must be taken. Full details regarding what constitutes a serious problem and the consequences of results adjustment are contained in Appendix A: Event systems.
- 31.3 At level A events the results must be based on competitors' times for the whole course, no changes are permitted to these times on the basis of split times. If 31.2 applies, then the course or class must be voided. At level B, C or D events, results adjustments are permitted (eg removing leg times).
- 31.4 If a serious problem is identified but is not considered to have significantly affected the outcome of the competition, the results should be published without adjustment.
- 31.5 Participation in a 'mini mass start' at relays does not disqualify a team as the total aggregate time of the runners will decide the results of teams involved in 'mini mass starts'.

Appendix A: Event systems

This Appendix is to be read in conjunction with the British Orienteering Rules of Orienteering.

1 Embargoed areas

- 1.1 What is an embargoed area and when does this come into effect?
 - 1.1.1 The purpose of an embargoed area is to give notice to prospective competitors of an area which it is intended to use for a competition, in order that they can avoid accidentally putting themselves into the position of gaining a substantial advantage and therefore falling foul of the rules.
 - 1.1.2 An area should be considered 'embargoed' once it is known that it is to be used, either through publication in the fixture list, event advertisements, or an official announcement through British Orienteering e.g. publication on the embargoed areas section of the web site.
 - 1.1.3 Any activity on the area after this point would then be considered as attempting to gain an unfair advantage and the offender could be disqualified.
 - 1.1.4 The rules on embargoes only apply to level A and some level B events and not to level C or D events unless specifically stated otherwise in any local competition rules.
- 1.2 How should fairness be interpreted?
 - 1.2.1 The rules on fairness cover anyone intentionally trying to gain an unfair advantage. In other words, blatant cheating such as deliberately training on an area once it is known that it is to be used for a major event. Anyone behaving in such a manner will be disqualified.
 - 1.2.2 The reason for the time period limitation in Britain is so as not to penalise Mappers, Planners, Controllers, etc. who may otherwise not take on roles which would bar them from an area for an unspecified period. (For a World Ranking Event (WRE) the IOF Rules apply).
 - 1.2.3 It is the responsibility of the competitor to decide whether or not they should declare themselves non-competitive. If they are in doubt, then they can seek clarification prior to the competition from Event and Competitions Committee.
 - 1.2.4 Any competitor who believes that someone has not declared themselves non-competitive when they should have done can make a complaint to the Organiser.
- 1.3 When does acquaintance with the terrain give substantial advantage over others?
 - 1.3.1 Mappers, Planners and Controllers clearly gain a substantial advantage through working in the terrain so should declare themselves 'non-competitive' if the event that they were responsible for falls within the embargo period of the competition they wish to enter.
 - 1.3.2 The status of the Organiser of an event will depend on their involvement in the forest. Often the Organiser works only up to the start line and from the finish line and may see no more of the forest than the average competitor. As such they need not necessarily declare themselves 'non-competitive' at subsequent competitions on the area.
- 1.4 Competitors at previous events
 - 1.4.1 For level A events the 24 months of not being used since a previous competition means that anything related to previous events on the area should fall outside the 24-month eligibility rule.
 - 1.4.2 For level B events the period of use since a previous competition means that anything related to previous events on the area should fall outside the embargo period eligibility rule.
 - 1.4.3 It is the responsibility of the individual clubs not to organise any type of event, even a local event, within

the time limitations indicated. If they do so, then any of their members who take part in such an event should declare themselves non-competitive.

- 1.4.4 Sometimes events do take place within the timelines stated, with the approval of Event and Competitions Committee. It needs to be made clear at each event whether competitors taking part in the event will be ineligible at a later competition to be held on the same area.
- 1.4.5 Two open events in a multi-day event on the same area are deemed to give the same advantage for all competitors so do not present a problem.
- 1.5 Other uses of an area
 - 1.5.1 Areas used for regular running or training, using paths that criss-cross the area, living on the map. A competitor would have familiarity with the area which could be considered a substantial advantage.
 - 1.5.2 Competing in a cross country race/trail race on an area. If this follows a pre-determined and marked course through the area with no navigation, no route choice and no map then this would generally be deemed acceptable.
 - 1.5.3 Events such as the Cannock Chase Trig Point Race and the Surrey Hill Race with some navigation, some route choice and possibly a map are acceptable if the degree of navigation is minimal and the route is entirely along footpaths.
 - 1.5.4 Areas used for GCSE PE assessments - participants probably have no choice of venue/area chosen for their coaching exercises and examination assessment, and will be specifically restricted to the exercises that they are asked to do. This is acceptable.
 - 1.5.5 Areas used for national, regional or locally organised club orienteering coaching sessions - the club on whose area the coaching is taking place should be aware of the fixture plans for their areas and not allow an area to be used that places the participants in a situation that requires them to declare themselves 'non-competitive' at a future event.
 - 1.5.6 In summary, competitors should use their common sense and, particularly where important events such as selection races are involved, avoid putting themselves into the position where they could be judged to have gained an advantage. Furthermore, the responsibility for doing this lies with the competitor themselves.

2 Selection

- 2.1 The Controller's role

The Controller must review the systems used for selection, seeding, and start time allocation, and be satisfied that the criteria have been fully and consistently followed. Once this has been done, the Organiser's decision is final.
- 2.2 Definition
 - 2.2.1 Selection is the process of choosing which entrants are to run in a particular class.
- 2.3 Selection in general
 - 2.3.1 The number of places available in a class should be as large as possible, subject to the spread of start times and the nature of the terrain. However, the situation may arise where the number of entrants to a particular class is larger than the number of places available: this is when selection will occur. In practice, this occurs only for the Elite classes. The sections below only apply in extreme situations.
 - 2.3.2 Only the premier class in an age category is subject to selection. NB where there is an elite class, the E course is the premier; otherwise, it is the L or A class which is the premier class.
 - 2.3.3 When demand is such that all entrants cannot be accommodated in an A or L class, then two equivalent

courses may be provided. For example, if M45L is oversubscribed at the British Championships, then two M45L courses (M45L1 and M45L2) of similar length and technical difficulty would be provided. The selection criteria of 1.3.6 below would be applied to choose the runners for M45L1, and the British Champion would be the winner of that class.

- 2.3.4 Where demand on non-premier classes is such that all entrants cannot be accommodated on one course, then two equivalent courses may be provided with entrants allocated to the classes at random, e.g. the provision of M21L1 and M21L2 (in addition to M21E) at the JK.
- 2.3.5 In some cases, the need for selection may be avoided by using a longer start list
- 2.3.6 If selection for non-elite classes is necessary, then it is to be based on the British Orienteering ranking list, using the most recently published edition at the closing date for entries. This can be obtained from the rankings pages on the British Orienteering website.
- 2.3.7 Select the following entrants:
 - the highest-ranked entrants in the appropriate class;
 - deal with cases of 'special pleading' on their merits, on the basis of such information as is provided by the entrant.

3 Seeding

3.1 General principles

3.1.1 The principles described below apply to the following level A competitions:

- British Long distance Championships
- British Middle distance Championships
- British Sprint Championships
- British Night Championships
- JK Sprint Championships
- JK Individual Championships
- Area Championships

3.1.2 The purpose of seeding is to ensure as fair a competition as possible for the better competitors in a class. This is achieved by preventing good competitors on the same course from starting too close together. Note that these competitors may be in different classes when more than one class uses the same course.

3.1.3 Minimum separation times between seeded runners must be applied as follows:

- Sprint: 1 minute
- Middle Distance: 2 minutes
- Long Distance: 4 minutes

3.1.4 Only where the minimum start interval on a course is less than the minimum separation, is seeding necessary.

3.1.5 It may be possible to avoid seeding for a particular course by:

- extending the start list, so that the start interval equals or exceeds the minimum separation time;
- planning separate courses for separate classes.

3.2 Elite classes seeding

3.2.1 Under the 'seeded block' system, nominated competitors are allocated start times within one part of the start list. No other competitors start within that period.

- 3.2.2 In order to better simulate the conditions to be met in international competitions, this system be used for some, or all, of M/W18, 20, and 21 in selected level A events.
- 3.2.3 The list of those competitors to be allocated to the seeded block must be provided to the Organiser.
- 3.2.4 Competitors on this list who enter an event are to be started at specified times.
- 3.2.5 Where the “seeded block” system is not requested, Elite competitors must be seeded using the principles described below.
- 3.3 Elite seeding and creation of start lists using the seeded block method.
- 3.3.1 Seeding Process
- Competitors should be ranked in order of their latest ranking (as applicable) [early season competitions will use the final order from the previous year’s competition]. Competition information should specify in advance which year’s ranking will be used.
 - International competitors, including British Orienteering members based overseas, should be inserted at a point appropriate to their IOF ranking.
 - Any competitors supplying significant alternative information as to their competitive standard will be inserted at the discretion of the person doing the seeding.
 - For junior (18 & 20) elite classes, particularly in the case of 18s where no history is available, the views of the selectors will also be taken into account
 - Competitors in the completed list ranked beyond the course capacity will be seeded onto the next available course, appropriate for their age class as agreed with the competitor e.g. M/W21L, M/W35L
- 3.4 Process for allocating start times
- 3.4.1 The total start list (after the removal of “seeded out” competitors) should be split into five groups, i.e.
- Group 5 contains all competitors ranked $3n+1$ to $4n$ in the seeded list
 - Group 4 contains all competitors ranked $2n+1$ to $3n$ in the seeded list
 - Group 3 contains all competitors ranked $n+1$ to $2n$ in the seeded list
 - Group 2 contains all competitors ranked $(n/2 + 1)$ to n in the seeded list
 - Group 1 contains all competitors ranked 1 to $(n/2 + 1)$ in the seeded list, where $n = (\text{number of competitors in seeded list})/4$
- 3.4.2 The starting order within each group should then be drawn at random
- 3.4.3 Where possible two spare start times should be allocated at random within each group, and a spare start time is allocated between each group. These allow for errors, omissions and late entries. (This should only be done when spare start time capacity exists). The person doing the seeding should use their discretion to ensure that within in a group there are neither two blank start times in succession nor an athlete with a blank start time both before and after them.
- 3.4.4 Usually group 5 starts first; group 1 starts last, however if conditions around a particular race dictate otherwise then the group starting order can be changed at the discretion of the person doing the seeding.
- 3.4.5 An athlete may request a start time in a lower ranked group than that to which they are entitled (e.g. in order to allow for a split start time). They may not request one in a higher ranked group.
- 3.4.6 For each event the start times and start time intervals may be different, depending on the number of entries and type of race. However, for a WRE a consistent start interval should be used throughout the start list [IOF Rule 12.14 says that usually this should be 3 minutes for Long, 2 minutes for Middle and 1 minute for Sprint]
- 3.5 Special conditions

3.5.1 JK Middle and Long

- Unless otherwise agreed with the JK Organiser the start period for days 2 and 3 is to be 4 hours each day.
- The start interval on day 2 (Middle) must be 2 minutes.
- The start interval on day 3 (Long) must be 3 minutes.
- In the Middle distance race M/W 18E, 20E & 21E run the same course in a combined start list.
- The standard start interval allows for 121 places to be available in the Middle distance race and 81 places to be available in the Long race (day 3). In practice (given relative class sizes) this means that, unless the organisers extend the total start period, the maximum size of the M/W21E field is 81 and that there are 40 guaranteed places on M/W18E & M/W20E.
- For the Middle distance races, the seeded start groups will be ordered as follows:
 - Group 10: M/W18-20 Group 5
 - Group 9: M/W18-20 Group 4
 - Group 8: M/W21 Group 5
 - Group 7: M/W21 Group 4
 - Group 6: M/W18-20 Group 3
 - Group 5: M/W18-20 Group 2
 - Group 4: M/W18-20 Group 1
 - Group 3: M/W21 Group 3
 - Group 2: M/W21 Group 2
 - Group 1: M/W21 Group 1

Group 10 starts first and Group 1 last.

3.5.2 JK Elite – Middle Races

- This is the agreed solution to the problem where it is preferred to combine the 18/20/21 elites onto a single course for JK day 2 (which is a Middle race for elite), but entry numbers combined across the classes exceed the number of available start slots.
- The agreed approach is:
- Plan to offer a single elite course for men and for women across 18/20/21, and if necessary extend start interval wherever possible.
- However, be ready with (i.e. have planned) a separate parallel course for 18/20E age classes, and separate the 18/20 and 21 classes as needed for courses which become overfull during the entry period where no further extension to the start interval can be accommodated.
- If the event is a WRE then position this at entry stage as “the elite courses on day 2 will be a WRE and the 18/20 classes will also compete on the WRE course if overall numbers permit”. If the courses do need to be separated, this pre-empts complaints from any 18/20s re “I entered because it was a WRE”.
- The selectors will be aware that this is the approach and can take the possibility of the 18/20 and 21 courses being separated into account when deciding on selection races.
- A firm date for the decision re whether courses are being separated should be set. This will normally be the final entry closing date. There is no problem with refusing people late entry to a course after closing date on the grounds that the course is full.
- The classes should only be separated as numbers dictate i.e. it may well be appropriate to move to two courses for the men but remain with only one course for the women (or vice versa).
- For the Long races the start order will be the reverse order of the results from the Middle distance race i.e. the course leader starts last. Competitors who did not complete the Middle

distance race will start first with the following priority: DQ, DNF, DNS i.e. competitors who didn't start the Middle distance race will be the first starters.

3.5.3 JK Sprint

- The total start period is at the Organiser's direction.
- The start interval must be one minute.
- The 21Es and 18-20Es run the same course in a combined start list.
- The seeded start groups are to be ordered as follows:
 - Group 10: M/W18-20 Group 5
 - Group 9: M/W18-20 Group 4
 - Group 8: M/W21 Group 5
 - Group 7: M/W21 Group 4
 - Group 6: M/W18-20 Group 3
 - Group 5: M/W18-20 Group 2
 - Group 4: M/W18-20 Group 1
 - Group 3: M/W21 Group 3
 - Group 2: M/W21 Group 2
 - Group 1: M/W21 Group 1

Group 10 starts first and Group 1 last.

3.5.4 British Long distance Championships

- Unless otherwise agreed with the Organiser the total start period will be 4 hours.
- The start interval will be 3 minutes.
- Unless the Organiser extends the total start period, the maximum size of any Elite class is 81

3.5.5 British Middle distance Championships

- The start interval will be 2 minutes.
- For 18s to 21s the seeded start groups will be ordered as follows:
 - Group 10: M/W18-20 Group 5
 - Group 9: M/W18-20 Group 4
 - Group 8: M/W21 Group 5
 - Group 7: M/W21 Group 4
 - Group 6: M/W18-20 Group 3
 - Group 5: M/W18-20 Group 2
 - Group 4: M/W18-20 Group 1
 - Group 3: M/W21 Group 3
 - Group 2: M/W21 Group 2
 - Group 1: M/W21 Group 1

Group 10 starts first and Group 1 last.

- This competition may include older and younger age classes as well. Depending on the age group categories being applied by the Organiser, competitors must be grouped by those age categories. For example, Group 11 M35/M40, Group 12 M45/50, Group 13 M55+.

3.5.6 British Sprint Championships

- The British Sprint Championships will usually comprise a number of heats followed by a final. Qualification and start times for the final are based on the results in the heats. Seeding is therefore only required for the heats. As well as determining start times, seeding of the heats

is used to try to allocate entrants across the heats so that all heats are of approximately the same strength.

- For the Men Open and Women Open elite classes, all competitors are part of the same competition irrespective of age. As a result, the seeding of the start list should proceed as in 3.3.
- For all other seeding groups competitors must be randomly assigned to a heat such that there is an approximately even number of competitors from each group in each heat.

3.6 Additional information

3.6.1 Any additional information supplied by an athlete to support their Elite entry should meet the following criteria:

- It should be supplied in writing before the final closing date for the competition, information received after the final closing date will not be considered.
- The information should be objective and based on recent (i.e. within the last year) results in Elite competitions at National and International level or positions in non-UK ranking systems.
- Particularly for athletes returning from injury/illness results from non-recent Elite races may be supported by recent fitness indicators (e.g. 10K time).
- Subjective information e.g. “athlete x has trained hard over the winter” will be considered non-admissible and ignored.

The event entry details should make these criteria as clear as possible.

3.7 Notice to entrants

3.7.1 Where this guideline is to be applied, a clear statement should be included in entry information (both in paper and electronic format) and in any final details. This is particularly important where there is likelihood that competitors may be seeded onto other courses.

3.7.2 Note for Entry details (adapt as necessary):

3.7.3 “Entries for the Elite classes are restricted by the available start interval. In the event of the entry exceeding the number of available start times seeding based on UK O League, IOF and British Orienteering rankings will be applied. Athletes with doubts about their qualification should provide additional evidence of their eligibility to compete in the Elite races. Any additional evidence should be objective and based on results/non-UK ranking. Only information supplied in advance of the final closing date will be considered. Athletes seeded out of the Elite class will automatically be placed on next available course e.g. M21L.

3.7.4 Elite start times will be based on IOF and British Orienteering rankings, with top competitors starting last, competitors will not be able to request a later start time.”

3.7.5 Note for the Final details (adapt as necessary):

“Elite start times are based on seeded groups. Competitors have been grouped based on IOF and British Orienteering rankings, with the group containing the top competitors starting last. Start times within each group have been drawn at random.”

3.8 Seeding for premier classes

3.8.1 A “premier” class is defined as where there is an elite class, the E course is the premier; otherwise, it is the L or A class which is the premier class.

3.8.2 The best ranked 20 premier class competitors on a course, irrespective of class, are to be seeded (when 3.1.4 applies). These rankings are to be as at the most recently published edition at the closing date for entries.

Example: course 8 (M45L/M50L) at an Area Long distance Championships has sufficient entries that

the start interval is between 1 and 2 minutes. Thus, by 3.1.4 the entrants have to be seeded. All the entrants are then ranked in order, according to the relevant British Orienteering rankings, and the best 20 are then seeded so that they are kept at least 4 minutes apart in the start list. Other runners may, of course, occupy the start positions between the seeded runners (2.5.4).

- 3.8.3 A copy of the full rankings list may be obtained from British Orienteering. It is suggested that this list is used as a data source from which rankings points can be matched to competitors' names on each course, thereby considerably simplifying the task of identifying the best 20 ranked runners on the course.
- 3.9 Seeding for junior classes
- 3.9.1 The best junior competitors (M/W14 to M/W20) must be seeded.
- 3.9.2 A list of those competitors who are to be separated in the start list must be provided to the Organiser.
- 3.10 Seeded start times
- 3.10.1 The allocation of start times for seeded competitors is subject to the following constraints:
- (i) competitors identified are to be kept at least the minimum separation time apart in the start list;
 - (ii) competitors should also be allocated to their preference of early/middle/late start bands, as with all other competitors.
- 3.10.2 Subject to the constraints above, seeded competitors should be allocated start times that spread competitors as evenly apart as possible.
- 3.10.3 Competitors should be evenly separated as much as possible to avoid congested sections within start blocks. A competitor is more likely to gain an unfair advantage or be distracted by another competitor in a congested section whereas this is less likely in an un-congested section.
- 3.10.4 If a seeded block is not being applied, un-seeded competitors may be allocated start times between seeded competitors.
- 3.11 Preferred start times
- 3.11.1 Entrants should be allowed a choice of early/middle/late start times (for the JK this should apply to each day separately, e.g. an entrant may choose late starts on both days). Each entrant should then be allocated a start time at random within the appropriate band, except for seeded competitors who should be dealt with as above.
- 3.11.2 Note that the size of the bands need not be equal. If, for example, 75% of the entrants choose the late band of a four-hour start list, then the late band can occupy the last three hours.
- For large events it is sensible to spread start times over at least four hours, as this:
 - reduces the number of competitors on the area at any one time;
 - reduces the number of courses for which seeding is required;
 - reduces the peak flow rate of competitors through the finish;
 - makes it easier to use a shift system for helpers.
- 3.11.3 Consider not using the last half hour or hour of the start list for the youngest competitors (up to M/W12A and M/W14B), to avoid the slowest of them getting lost in an emptying forest.
- 3.11.4 Also, not using the first half hour for them can avoid the earliest youngsters not having a flow of competitors to follow through the finish itself.
- 3.11.5 Consider not using the last half hour or hour of the start list for the oldest competitors (e.g. M/W75+) also.
- 3.11.6 Un-seeded junior competitors should be separated by a minimum of 2 minutes on Long distance courses.
- 3.11.7 It is advisable to try to give competitors in the smaller classes a reasonably even spread through the start

list. Situations to avoid include:

- starting all ten entrants at two minute intervals in one block (making it difficult for them to get away from each other)
- starting most of the entrants at five minute intervals at one end of the start list, a few others (who requested split starts) at the other end, with a couple of hours unused between the two sets.

3.11.8 When two different map scales are being used, beware the problem of two classes actually running the same course but at different scales -they need to be treated as one when allocating start times.

3.11.9 When two (or more) courses share the same first leg, consider allocating them to different minutes in the start list. This applies particularly when the leg is a relatively short one, and the competitors are of similar speeds. e.g. if course 15 (with M55L) and course 16 (with M60L) share the same first leg or two, course 15 could use the odd-numbered minutes and course 16 the even ones (provided, of course, the entry is small enough for this to be done).

3.11.10 When seeding is used for a particular course, note that it is only the seeded competitors who need to be at least four minutes apart; the three minutes between seeds can still be used for un-seeded competitors. (This does not apply when a seeded block is in use.)

3.12 Seeding advice

3.12.1 When drawing up a start list for a course, it is helpful to keep blank “slots” at intervals of 4 minutes (or 2 minutes if a Middle distance competition) and reserve these for seeded runners only. Only where there are no other alternatives should these “slots” be filled with un-seeded runners.

3.12.2 Where an event has a policy of allowing late entries, this must allow competitors who enter late and who should be seeded to be kept the minimum separation time from other seeded starters.

3.12.3 Where seeded juniors share the same course as seeded seniors, treat all seeded runners in the same way keep all the minimum separation time apart.

4 Juries, protests and appeals

4.1 Composition of a jury

4.1.1 The jury for a level A event must consist of three grade A Controllers. If possible they should not be members of the Constituent Association in whose area the competition takes place. They must not be members of the organising club.

4.1.2 At level B events the jury must consist of three experienced Controllers. They should usually be grade A or grade B. If any grade C Controllers are appointed, they should usually have at least 2 years’ experience. They should not be members of the organising club.

4.1.3 At level C events the jury must consist of three Controllers of any grade. They should not be members of the organising club.

4.1.4 No jury need be appointed for level D events.

4.1.5 The IOF may opt to appoint the jury for IOF events. Where this does not happen then the jury will be as defined above.

4.1.6 One of the jury members will chair the jury.

4.2 Appointment of the jury

4.2.1 The Organiser is responsible for the appointment of the jury for all events.

4.2.2 Lists of current Controllers at each grade can be obtained from the British Orienteering Office.

- 4.2.3 For any level A event the jury must be appointed at least seven days before the competition. If any member of the jury is unable to serve, then the jury must appoint another suitably qualified member.
- 4.2.4 For level B events the jury should be appointed as soon as possible after the closing date for entries. Start times of those appointed should be adjusted if necessary. Appointment on the day may be unavoidable in some situations, and in this case the appointments are best done at registration.
- 4.2.5 For level C events the Jury need only be appointed if and when a protest is made.
- 4.2.6 For Level D events no jury need be appointed. Any protest should be resolved by a Controller (ideally grade A or B) from the organising club and who is not directly involved in the organisation of that event.
- 4.2.7 It may be prudent to appoint a fourth juror to act as a reserve, particularly for juries appointed before the day of the event,

5 Jury responsibilities

5.1 Meeting procedure

- 5.1.1 Jurors should be asked to meet at a specific time and place.
- 5.1.2 Jurors should have a copy of the Rules with them. If the jury is appointed on the day, the Organiser should ensure that spare copies of the Rules are available.
- 5.1.3 The Jury should appoint a chairman who is responsible for keeping a record of all relevant information.
- 5.1.4 If it is not possible for the jury to consider the protest on the day, then alternative arrangements should be made to meet later. Alternatively, the chairman may feel that the protest can be adequately considered by written reports and phone calls.
- 5.1.5 Whilst a unanimous verdict is preferred, if this cannot be achieved then a majority verdict from the jury is acceptable.
- 5.1.6 The chairman should prepare a written report, a copy of which should be sent to the Organiser, with further copies to the Association Committee and Event and Competitions Committee.
- 5.1.7 Expenses incurred by jurors must be reimbursed by the Organiser.

5.2 Consideration of problems and protests

- 5.2.1 It is essential that a written copy of the protest is available. This ensures that the jury is clear as to what the issues are. It is also important if there is an appeal against any decision.
- 5.2.2 Single protest – a single protest should be given as much consideration as if all the affected competitors had made a protest.
- 5.2.3 Precedence – no precedence should be given to previous recommendations made by any jury.
- 5.2.4 General/individual problem – the jury has to decide at an early stage whether a problem is a general one, or one which is specific to an individual (or a small group of individuals).
- 5.2.5 General problem – the jury has to decide whether there has been a problem that has significantly affected the race. If they agree then a recommendation that the course be voided or the results adjusted should be considered. See below for more guidance on when to void a course or adjust the results.
- 5.2.6 Individual problem – the jury has to decide whether there has been a problem that has affected an individual but not the overall race. If they agree then they have to make a recommendation for that individual eg disqualify, reinstate. Estimated time adjustments should not be made.

5.3 Electronic punching

- 5.3.1 Electronic punching offers what at first sight appears to be unlimited opportunities for adjusting results to

overcome problems at an event. Details of all the issues to be considered are in this Appendix.

5.4 Voiding courses

5.4.1 General principle – for a course to be voided it is necessary for the race to have been significantly affected; whether by an organisational or planning error; or by a factor or factors outside the powers of the Organiser to control. Criteria to define “significantly affected” can be found in this Appendix.

5.4.2 If a course is not voided then the results will be allowed to stand, and may be used for other purposes (ranking etc) in the normal way. If an individual competitor has been disadvantaged, then an explanatory comment and/or apology should be made in the results.

5.4.3 If a course has been voided the Organiser should list the competitors who successfully completed the course. Their times should also be given.

5.5 Report of protests in event results

5.5.1 A statement should be made in the results that a protest has been made. This should include details of the decision(s) made by the jury.

5.5.2 Exceptions to the above may occur if:

(i) the protest has been withdrawn

(ii) the Organiser and/or the organising body considers that for future access to the area and/or good relations with the landowners etc. such publicity could cause harm.

6 Appeals

6.1 Appeals process

6.1.1 The Appeals process is outlined in the British Orienteering Rules of Orienteering.

6.1.2 Appeals must be made in writing giving full details. Verbal notice of appeal could usefully precede this.

6.1.3 For level A and B events the appeal will usually be held at the next scheduled meeting of Event and Competitions Committee.

6.1.4 For level C events the Executive Committee of the Constituent Association may appoint a sub-committee to deal with appeals. This should be chaired by the Association Controller of Controllers. This sub-committee should be empowered to make the final decision with no further appeal to the full Association Committee.

6.1.5 For level D events the Executive Committee of the club organising the event must deal with any appeal.

7 Electronic punching

This section presents a general overview of the use of electronic punching systems (EPS). In particular, it addresses issues associated with the overall fairness of an event from a competitor viewpoint. It is not intended to be a guide to a particular system and cannot replace the more detailed information that exists for each specific system. EPS provides many benefits, but at the possible expense of problems with an event if things go wrong. It is particularly important that all officials are familiar with the equipment to be used and the procedures to be followed.

7.1 Approved systems

7.1.1 Two systems are currently approved for use. These are:

- Emit
- SportIdent.

7.1.2 Other systems may be used if they are approved by the IOF, or on application to Event and Competitions

Committee.

7.2 To use or not to use

7.2.1 The Organiser of an event should be responsible for deciding to use an electronic punching system. This should include consultation with the Planner and Controller. The use of any EPS at an event should be publicised in advance.

7.2.2 Experience of vandalism to date is that this is not as big an issue as was anticipated. Patrolling of controls is recommended in certain areas (e.g. city parks) to deter vandals. Options also exist to secure units more securely to objects such as fences using cable ties or even padlocks.

7.3 Organising and planning considerations

7.3.1 Competitors who own their own e-card should be allowed to use them. The Organiser should also ensure that a stock of spare e-cards is available for hire on the day. Should the specific requirements of an event require a particular version of an e-card, for example because of touch free controls or a large number of controls on a particular course, then sufficient numbers of this version should be made available.

7.4 The start

7.4.1 Special actions may be required at or before the start, such as the clearing of an e-card. Competitors' cards should be checked before the start to ensure that they are clear and functioning correctly. The latter is particularly important for e-cards that contain their own batteries, a competitor should be reassured that their e-card is functioning normally before starting. Careful thought is required about where to locate clear, check and download units to ensure that competitors do things in the correct order. Beware in particular any possibility of a competitor finding a clear unit between the finish and the download point.

7.4.2 The traditional timed start system may be used, with competitors starting at pre-allocated start times. In this case there is no need for them to punch at the start, although it is prudent to have a start unit available for those who, for perfectly valid reasons, are not able to start at their allocated time.

7.4.3 A punching start can allow competitors to start almost whenever they are ready and no pre-allocated start times are necessary. For events with low numbers of competitors this works well but with larger entries queues can form for the more popular courses. Competitors should not be started within a minute of each other and so it is not unusual for queues of over 15 minutes to form. This may not be popular in an exposed setting.

7.4.4 A hybrid system can be used, whereby competitors are issued a start time and (if they turn up for it) they are guaranteed that they can start at that time. However, a punching start is still used and competitors can have the possibility of starting earlier or later than their allocated start time if there is a vacant slot on their course.

7.5 Control sites

7.5.1 Because of the expense of the electronic equipment clubs may be wary of putting out the control units too far in advance. For low key events in areas (such as high fells) where access is difficult, it has been found that the competitors are quite happy to punch an SI unit which has been simply placed on the ground next to the flag.

7.5.2 Some EPS systems have a low power consumption standby mode that can be activated into the full functioning mode by the insertion of a normal e-card. This 'activation' punch will still record the correct information on the e-card but the process will take considerably longer. Ideally EPS units should not be in this standby mode during a race since it is unfair for those competitors that have to spend time activating them. This problem can be addressed by activating all the units before the start of the race and programming them in a way that they are unlikely to revert to standby mode during the race.

7.5.3 The Planner has the advantage that competitors are no longer able to take controls out of order. This

removes the need for manned controls. It also introduces the possibility of convoluted courses with many cross-overs. However, care should be taken not to confuse the competitor by overuse of this capability.

- 7.5.4 It may still be necessary to provide a second map to ensure that a course is legible, rather than to prevent cheating. This can be done by providing two overprinted maps back to back, or by having two sets of master maps both at the start. Care should be taken to ensure that competitors understand what has been done.
- 7.5.5 It is likely that only one control unit will be required at most control sites. A control loading of over 500 competitors per hour per control unit is easily supported for normal events. Relay and score competitions may need a greater number of control units at certain controls, particularly early in the course.
- 7.5.6 Control sites should be marked with a standard control banner. Care should be taken when siting control units that stakes are inserted firmly into the ground, and that the control layout does not cause unnecessary inconvenience to competitors. For level A and B events stakes must carry a backup punch to allow for loss of function of the unit.
- 7.6 The finish
 - 7.6.1 It is important to ensure that the finish is easily located. As a minimum the finish should consist of a punch unit and control flag, preferably with a prominent finish banner.
 - 7.6.2 When a punching finish is used then at least two punch units, properly synchronized, should be available at the finish (even if one is kept in reserve, e.g. at the base of the stake, until needed), to allow for equipment failure. The arrangement of the finish area needs careful consideration to allow fast-finishing competitors to stop and punch safely, and then move out of the way of other competitors.
 - 7.6.3 Relay results are based on the order in which a team crosses the finishing line, and this element is not to be compromised by EPS. A finish official should be present to adjudicate if necessary. Competitors should then be kept in order after the finish line and punch at a finish unit. This provides the correct finish order, and also gives times to a sufficient accuracy.
 - 7.6.4 If possible the finish should be designed to allow competitors to pass the download point as soon as possible, this ensures that no competitor forgets to download and may then be considered to still be in the terrain.
 - 7.6.5 One of the great benefits of EPS is the ability to provide results, including split times, almost immediately after a competitor has finished. This is a very popular feature with competitors, and should be done whenever possible. Competitors are usually given their own slip of paper, and sheets containing all results should be put on display at regular intervals. The provision of individual splits does not remove the need to display results on the day.
 - 7.6.6 The Organiser should work out in advance how missing competitors are to be identified towards the end of the competition. At an event where entries are entirely on the day, the missing competitors are likely to be those who have entered but have not downloaded. At an event with pre-entries, it is necessary to identify those who actually started. Ideally, this can be done electronically by downloading the memory of the start or check units. It is important to make sure that those units have sufficient memory to store the expected number of competitors.
- 7.7 Equipment failure
 - 7.7.1 A major concern with the increased use of electronics and computers is the possibility of equipment failure. Event officials need to be aware of the various failures that can occur, and of what can be done. This information should be included in the specific user instructions built up for each system.
 - 7.7.2 The organising club should ensure that equipment failure does not significantly affect the fairness of the race. For level A and B events a backup punching system must be provided to allow competitors to prove that they have visited a control site at which the unit has failed.

- 7.7.3 Should it become known that a control unit has failed, or been vandalised, the Planner should endeavour to replace the unit as soon as possible.
- 7.8 Punch checking and disqualification
- 7.8.1 Punch checking should be done as soon as possible after a competitor has finished. This provides the opportunity to investigate any problem with punching immediately. In cases where punches are missing through no fault of the competitor (such as failed or stolen control units) the competitor should be reinstated.
- 7.8.2 Most competitors when confronted with the evidence that they have missed a control will accept that this is the case. Electronic punching offers the capability to show a competitor which control they went to in the case of a mistake, and it is useful to have an "all controls" map available for this.
- 7.8.3 Missing punches have proved to be the most controversial problem to address. In some cases, it is possible for a competitor to visit a control and believe they have punched, but for there to be no record in the e-card. This may simply be a mistake (such as forgetting to punch at a road crossing or the last control) but more often the competitor believes they have punched correctly. The normal explanation is that they have not punched correctly, e.g. having punched too quickly for SportIdent, or not fully inserted the e-card for Emit. In these cases, the competitor must be disqualified, even if there is evidence (from spectators or electronically in the control box) that the competitor was at the control.
- 7.8.4 If a competitor loses, or breaks, their e-card during a race then they are unlikely to be able to demonstrate that they have completed the course correctly and should be disqualified. Even if the competitor has used pin punches to complete the course they will be unable to demonstrate that these controls were taken in the correct order.
- 7.8.5 The Organiser may consider disqualification to be harsh in cases where the competitor clearly believes they have visited the control, particularly at low key events or for junior competitors. For consistency it is preferable to enforce disqualification at all events. It must certainly be adopted for level A events. The underlying principle is that if competitors use the system in the approved manner then it works correctly. If competitors were allowed to get away with not punching properly, it could easily become the norm (and an organisational nightmare) to punch sloppily, or not punch at all at a spectator control such as the last control in a relay.
- 7.9 Results adjustment
- 7.9.1 Electronic punching offers what at first sight appears to be unlimited opportunities for adjusting results to overcome problems at an event. These include removing splits either side of a missing or mis-placed control or by redefining the control at which the race starts or finishes. It should be recognised that making such adjustments can affect the outcome of the race in many ways and should not be viewed as a simple means of converting an unfair race into a fair race.
- 7.9.2 Whilst it is always undesirable to void a race there will be circumstances, particularly in a major race, in which no other outcome is appropriate. Whilst removing splits may seem a fair solution, doing this does not turn an unfair race into a fair race and therefore this action should not be taken without giving serious consideration as to its fairness. An alternative to voiding is to let the results stand, and this is the recommended approach if any problem with a course is not believed to have significantly affected the outcome of the race.
- 7.10 Voiding courses and adjusting results
- 7.10.1 If a complaint has been made about the fairness of a course then a decision must be made by the Organiser as to whether to let the race results stand, adjust the results or void the course. Which action to take should depend on the seriousness of the problem that prompted the complaint, the effect that the problem would have on the race and the nature of the event. The following guidelines should be used by

event officials and juries in deciding what action to take or recommend.

- 7.10.2 Any breach of the rules could potentially lead to a competitor complaint. However, it is hoped that complaints will not be made against trivial infringements that are unlikely to significantly affect the outcome of a race. A serious infringement is more likely to affect a race and could include a control which is either missing or misplaced to such an extent that it cannot be found close to, and clearly visible from, the correct location. Placement of a control in an area so badly mapped as to make navigating to the control unfairly difficult or the hiding of a control in thick vegetation could also be defined as a serious problem. Identification of a serious problem would not necessarily be grounds for taking action without considering the effect that it has had on the outcome of the race. If the problem has a minimal effect on the race, then no action should be taken. Defining minimal effect is rather subjective but the criterion outlined below is recommended.
- 7.10.3 The primary purpose of an orienteering race is to determine the best orienteers on the day. If it can be established that a serious problem is unlikely to have affected the top runners in a race, then no action should be taken since the winners of the race will be determined by who completed the designated race in the quickest time. How many runners should be considered the top runners depends on the nature of the event and the total number of competitors in that race. It could vary from one to six. Whether or not one or more of the top runners was affected by the problem can be ascertained by comparing race times before and after removal of splits either side of the problem. If a top competitor's position in the race is lower in the unadjusted results than in the adjusted results list, then the race could be considered to have been seriously affected. Of course it would need to be determined that the serious problem existed when that top competitor was in the relevant area, i.e. that the difference in position was not due to competitor error at a control that may have been absent or misplaced at some time but had been correct at the time that that competitor reached it. Even if the problem has affected the top runners it should be recognised that there is likely to be a certain amount of "noise" in an orienteering race i.e. small time losses by individual runners due to uncontrollable events during a race (e.g. a fallen tree on one particular route choice). Therefore, if the effect of the error is to change the order of the top runners, but only as a result of a few seconds adjustment, then the Organiser might feel that it would be best not to void the race or adjust the results.
- 7.10.4 Whilst the above criterion should be used to determine whether or not a major event has been significantly affected it could be broadened for events at a lower level. Whilst determining the fair winners of these races remains important, more importance should be placed on the effect that a serious problem could have on other competitors. For local league events for example a problem that affects just a few competitors could be considered significant.
- 7.10.5 If a serious problem has been identified, then a decision needs to be made as to what action to take. For level A events the following is recommended:
- If a problem is found to have affected the outcome of a race according to the above criterion, then the recommended solution is to void the course. In line with IOF policy, splits removal must not be considered as an option.
 - If a serious problem is identified, but by using the criterion defined above, is not considered to have significantly affected the outcome of the race, then the results should be published without adjustment, other than to re-instate any competitor who failed to punch at a control that was missing or misplaced when they reached it.
- 7.10.6 For events at a lower level then the option to remove splits either side of a problem control, or to start or finish the race at an alternative point, can be considered as a possible solution to an affected race. The decision whether or not to adjust the results however is still not one that should be taken lightly. Removing splits can have dramatic effects on the outcome of the race and may not be justified if only a few competitors are affected.

7.10.7 It is important that decisions made by the Organiser are clearly explained to the competitor in the published results. Even if a problem is deemed not to have affected the outcome of a race significantly enough to warrant voiding, or results adjustment, the problem should still be acknowledged. In such cases where a problem is acknowledged then consideration should be given as to whether to offer refunds to affected competitors. If a course has to be voided, then split times should still be published since these can still be of interest to competitors and potentially also selectors.

7.11 Conclusions

7.11.1 There are no simple rules that can be defined as to what action to take when a problem arises since different outcomes are warranted depending on the exact circumstances. Decisions will need to be subjective at times but this appendix should help guide officials towards an appropriate course of action. What needs to be made clear is what action should be taken during the race should a problem arise. This guideline encourages the following courses of action:

- If a problem is discovered, the Organiser should attempt to correct it as soon as possible.
- If a competitor encounters a problem with a control they should, however hard it may seem, endeavour to continue the race without pre-judging the outcome of any protest or ruling on the problem.

7.12 Controlling considerations

7.12.1 In general, the role of the Controller is as for any event. There are certain areas where extra care should be taken when using EPS, and where the Controller may want to ask specific questions:

- Are all event officials familiar with the system in use?
- Have the preparation of controls and the control hanging process been carefully planned, and are sufficient resources and time available?
- Will all the controls be checked on the morning allowing sufficient time to replace any defective units?
- How will the start be run?
- How will the finish be run?
- What contingency plans are in place to handle equipment failure (particularly of computers)?
- What back-up timing facilities are available?

8 Start times for night events

8.1 End of evening nautical twilight

8.1.1 The end of evening nautical twilight is defined at the time at which the centre of the sun passes below 12 below the horizon. In practical terms, it is the point at which the remaining traces of daylight are no longer discernible to the naked eye, and at which a distant horizon becomes indistinct in the absence of artificial illumination.

8.1.2 To ensure all competitors are faced with similar light conditions, consideration should be given to setting the earliest start time for a night event no earlier than the end of evening nautical twilight for the date and location of the event. This is a requirement for the British Night Orienteering Championships.

8.1.3 The end of evening nautical twilight for a given date and location can be calculated online by entering the longitude and latitude of the location into “Form B” at http://aa.usno.navy.mil/data/docs/RS_OneYear.php#formb, ensuring that the correct year is entered and that “nautical twilight” is selected as the “type of table”. Note that the times returned by this procedure are in Greenwich Mean Time, and one hour should be added if it is necessary to convert them to British Summer Time.

8.1.4 End of evening nautical twilight for recent/future British Night Orienteering Championships

Year	Date	Venue	End of evening nautical twilight
2008	23 February	New Beechenhurst	18:51
2009	24 January	Mytchett	17:57
2010	06 March	Pentland Hills	19:18
2011	05 February	Bentley Woods	18:17
2012	25 February	Hamptworth Estate	18:51
2013	09 February	Tankersley	18:23
2014	22 February	Ashdown Forest	18:40
2015	28 February	Middleton Park	18:57
2016	27 February	Cademan & Thringstone Woods	18:54

Appendix B: Course planning

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This Appendix is to be read in conjunction with the British Orienteering Rules of Orienteering.

1 Introduction

1.1 Purpose

- 1.1.1 This Appendix provides guidance to Planners, advice on best practice and defines the levels of Technical Difficulty which are used to specify course standards.
- 1.1.2 The key planning objectives are to produce safe, fair and enjoyable courses that meet the defined requirements for a given event.
- 1.1.3 This Appendix cannot replace training and previous experience. All Planners are encouraged to read relevant literature and to attend training courses.

1.2 Support

- 1.2.1 The British Orienteering website contains a large volume of support material aimed at Planners; see the Mapping and Planning section of the Event Officials Handbook and the Planners section under Officials.
- 1.2.2 Of particular interest are the British Orienteering Course Planning Guide by Graham Nilsen as well as other online individual documents on how to plan colour coded courses, e.g. Advice on planning orange courses

2 General

2.1 Formats

- 2.1.1 Whilst the fundamentals of course planning are common to all types of event different styles are required for the different formats of the sport:
 - Long distance (Classic) Orienteering usually takes place in forest terrain. The emphasis is on route choice to test a competitor's ability to use a variety of navigational techniques in physically challenging terrain over an extended period of time.
 - Middle distance Orienteering usually takes place in forest terrain. The emphasis is on continuous

map reading in the terrain, Technical Difficulty, a relatively high density of controls, changes in direction and micro rather than macro route choices. Runnable terrain of Technical Difficulty 4-5 is most suitable, the more technical the better.

- Sprint Orienteering usually takes place in urban or semi urban areas and parkland, the technical standard is enhanced by the need interpret the map and make decisions at high speed. The emphasis is on continuous decision making, map reading and interpretation, and route choice rather than finding controls. A clear and very accurate map and clear control descriptions and placements are essential. Safety is a key consideration where traffic may be encountered. A more detailed mapping standard is used in comparison to Long or Middle formats.
- Ultra-long distance Orienteering takes place over long distances with mostly long legs and complex route choices. There will be a low density of controls, and those that require high technical skills to find are less likely to be included since this discipline aims to test stamina more than technical skills.
- Urban events (City Races) usually take place in urban terrain, predominantly towns or city centres, using public open spaces, pedestrian and trafficked streets as well as parks. The same mapping standard is used as for Sprint Orienteering but the courses are longer and with more emphasis on macro route choice.
- Night Orienteering has an emphasis on route choice and successful navigation to controls. The Technical Difficulty of a course is enhanced by darkness and this needs to be considered when planning. Legs and control placements that are fair during the day may be less so at night.
- Relay Orienteering provides head to head racing between teams whilst maintaining sufficient uncertainty that competitors need to continually map read. Parallel or gaffled courses are planned. All the teams in a particular race need to cover exactly the same legs in total, but not in the same order.
- Score Orienteering has an emphasis on choice of routes, selecting which controls to visit within a set time period. The challenge is enhanced if most of the competitors cannot visit all of the controls. The controls can be visited in any order and need not all be visited.
- String Orienteering is designed for children who are not yet able to undertake an orienteering course. A continuous string joins controls on distinctive features. The map is large scale and may have been simplified. The terrain may be either forest or semi urban but there will be an absence of traffic.

2.2 Technical Difficulty

2.2.1 The Technical Difficulty of a course is based on the skills needed to successfully complete it. The aim of the Planner should be that the courses at an event show a progression of Technical Difficulty, with each course providing the appropriate level of technical and physical challenge. The specification of each level of Technical Difficulty is included in the table below.

2.2.2 The Technical Difficulty of a course is that of its hardest component. For example, a course is of Technical Difficulty 3 if it has just one element at that difficulty, even though the rest may be easier. However, a well-designed course of Technical Difficulty 3 will have most, if not all, of its elements at that difficulty.

2.2.3 It is recognised that many orienteering areas in Great Britain do not allow courses of the higher technical difficulties to be planned on them. In order to allow events to take place whilst still adhering to the guidelines a compromise has therefore to be accepted. In such areas Planners will plan at the correct level as far as the terrain allows. For example, if the area only allows courses with a Technical Difficulty up to 4 to be planned, then those courses requiring Technical Difficulty 1, 2, 3 and 4 can be planned exactly to the guidelines. Those courses specified as requiring Technical Difficulty 5 should then be planned at Technical Difficulty 4, accepting the fact that they will be less than ideal but the best that the terrain will allow.

2.3 Definitions of terms:

2.3.1 Route choice: The option of taking more than one (sensible) route between two controls. This may, for

example, be a choice of two different path routes, or one of a long path route versus a direct cross-country route.

- 2.3.2 Decision point: A point at which you can no longer continue along the same path or other line feature, for example being required to turn right at a path junction. A decision point on a leg does not imply a route choice. There may only be one obvious route between controls, but this could require the ability to navigate at a number of decision points.
- 2.3.3 Collecting feature: A large feature beyond a control which, when reached, confirms to the competitor that they have completely passed through an area of ground. A collecting feature is usually a line feature.
- 2.3.4 Relocating feature: A distinct feature that may be used by a competitor to relocate their position on the map.
- 2.3.5 The table which follows defines the planning requirements for each level of Technical Difficulty (TD), together with the orienteering skills which are to be tested.

TD	Routes and route choice	Numbers of controls	Control sites	Relocation and cost of errors	Skills required (letters refer to the 'Step by Step' skill categories)
1	Route all along tracks and paths. No route choice, including at the start banner.	Controls reasonably close together (200m maximum). A control at every Decision Point.	Paths, tracks – junctions, crossings and bends. Features on paths e.g. bridges, gates, to give variety to the control descriptions. The banner and punches at a control should be sited in the direction of the next control.	Should not be required.	Understand map colours and commonly used symbols. (A) Orient the map using compass and terrain. (A) Orienteer along tracks and paths. (B) Make decisions at 'Decision Points' identified by a control site. (B)
2	Route all along obvious line features such as tracks, paths, fences, walls, rivers, large ditches and very distinct vegetation boundaries. No route choice, including at the start banner.	Controls fairly close together (350m maximum). Leg lengths should not vary greatly. A control is not needed at every Decision Point, but there should be at most two Decision Points per leg.	On the line feature along which the competitor is travelling. Obvious other features close to, with the banner clearly visible from, the line feature, e.g. knolls, boulders.	Generally should not be needed, but can be done by re-tracing the route along line features.	Orienteer along obvious line features (handrails). (C) Make decisions at a 'Decision Point' without the assistance of a control to identify it as such. (C) Leave a line feature to go to a visible control site near to it, then return to that line feature. (D)

TD	Routes and route choice	Numbers of controls	Control sites	Relocation and cost of errors	Skills required (letters refer to the 'Step by Step' skill categories)
3	For controls not on a line feature then a route along line features to an obvious attack point should be possible. Simple route choices.	Relatively frequent controls on short courses, less so on longer ones. Legs of different lengths.	Any line feature. Prominent point or contour features, but these should be easily found from an attack point on a line feature.	There should be a collecting feature close behind all controls that are not on a line feature.	Corner cutting. (E) Basic use of compass to allow short cuts through the terrain between two line features. (F) Navigate a short leg on a rough compass bearing to a control on or in front of a collecting feature. (F) Simplification of legs with several Decision Points. (G) Make simple route choice decisions. (H)
4	Significant route choices.	As few as necessary for good planning based on the length of the course. Legs of different lengths.	Any feature which does not require map reading through complex contour detail.	Collecting features behind all controls. Errors should not be expensive in terms of time lost.	Navigate long legs on a rough compass bearing to a collecting feature. (I) Fine orienteering on short legs using an accurate compass bearing. (J) Navigate for short distances using simple contour features – hills, ridges, large re-entrants and spurs. (K)
5	Significant route choices. Course should force regular changes in technique, e.g. long route choice followed by short intricate legs.	As above.	Any feature, particularly those demanding careful map-reading to locate – but the banner must not be hidden, nor the control excessively isolated (no Bingo controls).	Control sites far from obvious relocating features. Errors can result in a large time loss.	Navigate for long distances using only major contour features – hills, ridges, large re-entrants and spurs. (L) Read and interpret complex contours. (M) Concentration over long distances. (O) Recognition of indistinct features. (O) Use all the different skills and adapt speed and technique to changes in the terrain and orienteering difficulty.

2.4 Physical difficulty

2.4.1 The nature of the terrain over which the competitors will be running should be considered for all age groups. Areas of dense undergrowth (e.g. rhododendrons) or which are difficult underfoot (e.g. boulder fields), do not test the orienteering skill of 'running navigation' and so should be avoided. Steep descents, whilst acceptable for M/W21, should be kept to a minimum for younger juniors and older veterans. Features such as fences which may provide significant obstacles for younger competitors, or less agile age groups, should be taken into account.

2.4.2 All courses should avoid offering route choices that may tempt competitors into physical danger.

2.5 Planning for juniors

2.5.1 Competitors in the younger junior age categories need every encouragement to enjoy the sport, and the feeling of failure engendered by a lengthy spell lost in the forest is a major disincentive to younger competitors. Children are attempting a sport that provides a considerable mental challenge, and the need for courses to match their abilities cannot be over-stressed. Even at large events, designed to find a true champion as the winner, it has to be remembered that junior competitors are far more erratic in their performance than seniors. Simple and short courses planned to the correct technical standards and recommended lengths are the only way to produce an evenly grouped results list whilst still finding the true champion.

2.5.2 Planning the junior courses is the most difficult task in terms of providing courses of just the right technical and physical level. If conflict between length and technical standard occurs the course must be to the correct technical standard. The junior courses should always be taken into account when locating the start and finish of the event to ensure that these courses are not too long and can be taken through suitable terrain.

2.5.3 White standard courses: In some areas (particularly open areas) because of the absence of paths it may still be possible to plan a white course of suitable standard by substituting prominent line features. If competitors are required to cross open ground a taped route must be used. This must start and finish at controls. See also *Advice on planning white courses* on the British Orienteering website for further guidance.

2.6 Planning for seniors

2.6.1 Older orienteers are technically just as capable as the M/W21 competitors. It is therefore totally inappropriate to combine their courses with the technically easier junior courses just because the recommended course lengths are similar, unless the terrain prevents courses of high Technical Difficulty being set.

2.6.2 Any restriction on their physical ability relates largely to speed over the ground. One result of this is in the interpretation of the phrase 'control sites far from obvious re-locating features'. A control that may not be considered far from an attack point or obvious relocating feature by an M21 competitor may impose a significant time penalty for a W65 who has to return to the attack point and make a second approach.

2.7 Course lengths

2.7.1 For certain events and competitions, the required lengths of courses are defined in terms of course length ratios relative to a base course. In general, the most reliable method of approach is:

- i. decide on an appropriate length for one base course (usually M21E or Black) with reference to the expected winning time of that course.
- ii. use the course length ratios and recommended class combinations given in tables found later in this Appendix, or in the appropriate Competition Rule, to calculate the required lengths of all the other courses. The course length ratios have been calculated from the results of a large number of events over several years.

2.7.2 Various methods for deciding on the length of the base course are available; all however have their pitfalls. The main methods are:

- Comparison with previous events. Often the most reliable method - most British areas have already been used for orienteering; even new areas usually have similar terrain locally with which they can be compared.
- Points to note:
 - was the entry representative, or were all the good runners elsewhere?
 - 'runnability' changes as vegetation matures
 - undergrowth has more effect in the summer/autumn
 - was the planning for the previous event unusual in e.g. the amount of climb or track running required? If the problem is climb, calculate a 'corrected' (i.e. flat equivalent) length by adding 1 km to the length for every 100 m of climb – and remember to take it back off again when you plan your own courses.
 - ii) Test running – planning a course and then running it. This is often difficult to interpret, as:
 - navigating to a feature is generally much easier in an event, when there is a flag on it
 - running solo tends to be slower than running competitively
 - extrapolating the speed of a top runner from that of the test runner is not always straightforward.

2.7.3 Applying the course length ratios – points to watch out for:

- M21 (or Black) probably uses the whole area. The shorter courses use only part of it, and this might be more or less runnable, or steeper/flatter, than the average
- rough terrain has a greater effect on the running speed of younger and older competitors than of M21s
- older competitors are significantly affected by steep terrain, particularly downhill
- older competitors find dense tree growth more of an obstacle – suppleness decreases with age
- There is no magic formula for allowing for these variables.

2.7.4 Do not try to adjust the course length to cater for the expected quality of the competitors, e.g. by making a particular course longer because you know that some top orienteers will be entering. Similarly, if the running times on a particular course turn out to be longer than intended simply because the quality of the entry was low, this does not mean that the course was planned too long!

2.7.5 For other events, the required lengths of courses are as given in the sections to follow or the relevant Competition Rule. Whilst it is possible to go through the above exercise for choosing course lengths based on M21L, it is usually sufficient simply to plan within the range of normal lengths given in the guidelines.

2.8 Control descriptions

2.8.1 Control descriptions need to be prepared for all courses in accordance with the “International Specification for Control Descriptions” (2004 edition) available from the Document Library section of the IOF website (www.orienteering.org) and also from the British Orienteering website.

2.8.2 Note: particular care needs to be taken with Sprint/Urban control descriptions where inaccuracy e.g. on which side of a wall, can have a very significant effect on a race.

2.9 Electronic punching

2.9.1 A computer file, which exactly matches the course file, needs to be prepared for input into the electronic punching system software. The Planner will need to liaise with the results team about the way in which electronic course data is to be transferred to the event software.

2.10 Safety, risk assessment and mitigation

- 2.10.1 Planners should read British Orienteering Rules of Orienteering and Appendix E: Event safety. In particular, the dangers of a particular type of terrain will generally be known to local inhabitants and to local orienteers so check with them, e.g. for old mine shafts etc. Don't assume that all orienteers will follow the best route between controls; even hazards well away from the expected routes should be thought about.
- 2.10.2 The Planner must take into consideration all hazards that competitors may encounter. Dangerous features must be 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 grounds as dangerous.
- 2.10.3 The Organiser and Planner will need to pay particular attention to competitors under 16 years of age. In the eyes of the law, the Organiser is acting in loco parentis for children under the age of 16 and must be seen to take precautions over and above what a careful parent would take for the safety of their children.
- 2.10.4 Juniors aged under 16 on the day of the competition are not permitted to compete on courses where there are possible routes that require competitors to cross roads with significant traffic unless appropriate traffic management arrangements have been put in place. A disclaimer signed by a parent or guardian does not circumvent this rule.
- 2.10.5 Appropriate traffic management arrangements may include: mandatory safe routes, crossings controlled by lights/marshals, the use of under-passes/bridges, timed out legs etc.
- 2.10.6 Roads with traffic management that induce low speeds (eg 15mph as on many campuses) are acceptable for under 16s as are minor roads with good visibility, but busy public roads are not.
- 2.10.7 The Planner's input into the risk assessment form should be completed at an early stage, e.g. at the draft planning stage.

3 Planning and the map

3.1 Course drawing

- 3.1.1 Courses may be prepared by computer using a variety of course drawing software packages. Whilst the detail of operation of them may be different the principles remain the same
- 3.1.2 The courses file is likely to go through several versions in the lead up to the event and the Planner and Controller should agree on a version control procedure to prevent old versions being mistaken for the current one.
- 3.1.3 All data, courses for printing, loose control descriptions, maps for control hanging and checking etc. should be generated from the same version of the same file
- 3.1.4 Representative courses should be checked independently to ensure that the length generated by the system is correct
- 3.1.5 Late changes should be avoided. If these are necessary additional checks should be included
- 3.1.6 Care needs to be taken that map detail that is clear on the computer (e.g. at x8 magnification) is clear on the printed map
- 3.1.7 Physical checks of maps are still necessary (e.g. overlapping block colours) and the Controller may ask to see proof copies of the map before printing is approved.
- 3.1.8 Course markings on the map are to be as laid down in the 'International Specification for Orienteering Maps 2000', (booklet available from British Orienteering Office or its website) or to download from the IOF website at <http://www.orienteering.org>.
- 3.1.9 Sprint maps must be drawn to the "International Specification for Sprint Orienteering Maps" (ISSOM – latest edition is 2007); download from the IOF website at <http://www.orienteering.org>; also available from the British Orienteering website.

- 3.1.10 The courses and map corrections must be printed in purple (red/violet) colour. All line thicknesses should be 0.35mm at 1:15,000 scale. The course drawing software should do this automatically but this should be confirmed nevertheless. Ditto for 3.1.11/12/13 which follow.
- 3.1.11 The starting point of the course must be marked by an equilateral triangle of side 7mm which points towards the first control. The centre of the triangle shows the precise position of the start point.
- 3.1.12 The site of each control must be shown as the centre of a circle of 6mm diameter. The circle should be broken to avoid obscuring important detail. If the control feature is shown on the map symbolically rather than to scale, the circle should be drawn so that the symbol lies exactly at the centre. For example, if you use the east side of a dot knoll as a control site then the circle should be drawn around the middle of the symbol, not the east side of it. However, if a feature such as a knoll shown by a ring contour (i.e. hill) is drawn to scale the centre of the circle must be drawn where the control site is (e.g. N side), rather than at the centre of the ring contour.
- 3.1.13 The position of the finish must be shown as the centre of two concentric circles of diameter 5mm and 7mm. Where a course uses two or more maps with map exchanges then the finish should be shown on all maps.
- 3.1.14 If the controls are to be visited in a prescribed order they must be numbered in that sequence. The numbers must be printed on a north-south axis, with the top north, and should be positioned so that they do not obscure any important detail.
- 3.1.15 Control numbers should be positioned so as to obscure as little map detail as possible but close enough to the circle as to avoid ambiguity. Particular care should be taken when controls are close together e.g. crossovers and there is possibility for confusion e.g. control numbers 6 and 9 are close.
- 3.1.16 If the controls are to be visited in a prescribed order they must be joined by straight lines. These lines should be broken to avoid obscuring important detail, diverted to meet up with compulsory routes, broken or diverted to indicate compulsory crossing points, and broken or diverted to avoid lakes, 'out of bounds', or other areas that cannot be crossed by competitors. If necessary lines joining controls along tracks should be offset to avoid obscuring the track on the map.
- 3.1.17 Where lines joining two pairs of controls cross one another, it is conventional to break the line which joins the controls to be visited later in the course where it crosses the "earlier" line.
- 3.1.18 The convention for Sprint/Urban maps (ISSOM drawn) is that the lines drawn between control circles are not broken or diverted around impassable objects but go straight across them instead, the exception being where they are diverted to pass through a compulsory crossing point.
- 3.1.19 Any part of the course where the competitor is obliged to follow a compulsory route must be clearly and precisely indicated on the map by a dashed line.
- 3.1.20 Forbidden routes (e.g. busy roads, railways) must be shown by a chain of purple crosses.
- 3.1.21 A boundary which is forbidden for competitors to cross and which affects the courses must be marked as "forbidden to cross" on the competition map. This is indicated by overprinting the mapped feature with a solid purple line, except on Sprint/Urban maps where solid overprinted lines are only used where a boundary has changed from being passable to impassable and the map does not show this. Crossing points must be indicated by curved brackets.
- Whether crossing points are mandatory or not needs to be unambiguous both in the event details and on the map
 - Where there is only one valid option for crossing an "un-crossable" boundary, the line between controls should be bent to this point. In this instance there should be no advantage to be gained by not using the crossing point and it is unlikely that the previous control will be more than 100m

before the boundary. If in doubt, consider placing a control at the crossing point.

- Where there is more than one option for crossing the “un-crossable” boundary, the line between controls should be broken either side of the boundary. Sufficient crossing points should be provided such that there is an option on all likely route choices and no competitor will gain an advantage by not using a crossing point.

3.1.22 The dimensions of the course overprint symbols on 1:10,000 (or larger scale) maps should be as defined in 3.1.10 to 3.1.13 above. However, for competitions in which both 1:10 000 and 1:15 000 maps are used, the size of the overprint symbols on the 1:10 000 maps may be 150% greater than on the 1:15 000 maps. Factors to consider:

- Overprint symbol enlargement allows the control descriptions to be the same on the 1:15,000 and 1:10,000 maps if both are used at the same event.
- Some courses, such as White, and some types of event, such as Sprint races, may have controls relatively close together. Enlarged circles might overlap to an unacceptable degree.

3.1.23 Editing, which will also include the breaking of control circles and connection lines, should be an important part of the process of preparing the master course overprint file. Time should be allowed for this in the planning timetable.

3.1.24 Maps should be clearly identified by course number and/or title so that competitors can identify their courses.

3.1.25 If maps are not printed on waterproof material, they should be protected by a sealed plastic covering of at least 250 gauge (or a heavier gauge if the map unit size exceeds A4) prior to issue to competitors.

3.2 Measurement of distance and height climb

3.2.1 Course length measurements are defined in the rules and quoted to ± 0.1 km (e.g. 5.5km, not 5.50km). This is the shortest route which a competitor could reasonably possibly take, irrespective of whether or not the competitor would be sensible to do so.

3.2.2 Height climb measurements are defined in the rules and quoted to ± 5 m. That is, it is measured "along the shortest sensible route", which may well be longer than the route used for measuring the course length. This is not necessarily the "optimum route", nor is it necessarily the route which the Planner would take: it is simply the course length route extended to avoid those hills/valleys etc which all competitors will also avoid. The intention is to give a figure which is representative of the climb which a competitor could actually undertake. As a rule of thumb, if a competitor will go over it, count it in; if you're not sure whether they'll go over it, count it in – only discount it if you are certain that all the competitors will go around it.

3.3 Map corrections

3.3.1 If corrections have to be made to the map subsequent to map printing, and it is not possible to manually alter the printed map, copies of the map showing no information other than any map corrections essential to the competition should be displayed and available for study before the start line. An adequate number of maps detailing the map corrections are to be made available.

4 The start

4.1.1 The position of the centre of the start triangle shown on the map must be on a mapped feature and identified on the ground by a control banner. For TD1 and 2 courses this feature will need to be a path or similar feature; also it should not be at a junction or intersection, as this would require the beginners to decide which way to go without knowing where they have just come from.

4.1.2 Where a map exchange is used the position of the start of the next section of the course must be marked on the ground by a control banner if it is a significant distance away from the previous control site.

- 4.1.3 The position of the start kite or master maps should be such that competitors waiting to start cannot see, or have minimum visibility, of the route taken by competitors who have started. The map issue point should be such that all competitors will visit the start kite.
- 4.1.4 The courses should be designed so that competitors are unlikely to return past the start on their way to the first control site.
- 4.1.5 For larger events, or with chasing starts the pre-start and start needs to be of sufficient size to accommodate the number of competitors.

5 The finish

- 5.1.1 The precise location of the finishing line must be clear to all competitors approaching it.
- 5.1.2 It is important to ensure that the finish is easily located. A common last control with taped route to the finish will ensure this. This will also ensure that competitors all approach the finish from the same direction and improve the flow of competitors through the finish system.
- 5.1.3 As a minimum the finish should consist of a punch unit and control flag, preferably with a prominent finish banner. There should be no possibility of a competitor being unable to find the finish. Sufficient punching units should be used to cope with the likely frequency at which competitors will finish.
- 5.1.4 The finish should be manned as it may often be the first place where a competitor can report that an injured competitor needs urgent assistance or a problem with the course.

6 Control site layout

- 6.1 General site layout
 - 6.1.1 The control banner should be visible from all directions of approach unless the control description indicates otherwise.
 - 6.1.2 Punching stations should be clearly visible and easily accessible from the control banner.
 - 6.1.3 A back up system should be provided should the electronic system fail. For SI this is usually a pin punch and for EMIT a paper card in the brick. However, this is optional for level C/D events.
 - 6.1.4 At competitions of level B and above, the layout of the control banner, control code and marking devices should be the same for all controls. For major races a model control should be displayed at the pre-start.
- 6.2 Proximity of controls
 - 6.2.1 The British Orienteering Rules of Orienteering allow some flexibility in how close together controls can be sited. This should be used with caution (and not at all in World Ranking Events: IOF rules have "shall" not "should"): it should always be possible for a competitor to decide from the map which control to go to without needing to rely on the control code, and to do so quickly. If you are going to infringe either limit, you will need a good reason which you are able to justify to competitors. Remember also that it may be necessary to allow for a little drift in the positioning of the circle on the overprint, and that in a detailed part of the map there may be some distortion in order to fit the symbols into the space available – if in doubt, measure the distance on the ground.
 - 6.2.2 There is usually little point in putting controls closer than 30m apart – competitors are, in effect, navigating to the same point. An exception might be e.g. when one control is on a point feature, used by a technical course, the other on a path junction on a yellow course or for a road crossing.
 - 6.2.3 The 60m limit may also be breached for younger junior courses e.g. when two successive decision points come close together on a white course (but this will require the circles to overlap even at 1:10 000, so consider taking the course elsewhere) particularly if the course is not being overprinted).
 - 6.2.4 Be pessimistic when interpreting 'features which appear similar in the terrain', e.g. paths and rides are

obvious ones not to mix, but some vegetation boundaries have faint paths along them (or develop them as an event takes place). 'Similar features' does not just mean those mapped with the same symbol: it is not fair, for instance, to use both a fence and a ruined fence. Neither is it acceptable to claim that e.g. boulder (2 m) NE side and boulder (1 m) SW side are different: they are both boulders.

6.2.5 Note that the situation is different for courses on larger scale maps, e.g. Sprint/Urban using ISSOM maps, where minimum separations are smaller.

6.2.6 Other combinations to avoid include

- stream/ditch/linear marsh
- depression/pit/shallow re-entrant
- knoll/spur
- re-entrant/side of a spur
- re-entrant/a feature (e.g. a marsh) in a re-entrant
- essentially, do not use any close combination of controls which could be confused by competitors.

6.3 Control site selection

6.3.1 Consideration should be given to the fairness of control sites

- The control feature should be visible from within 10m or 10% of the distance from the nearest attack point. E.g. a lone pit in the middle of a large block of flat forest is unlikely to be fair but if related to the shape of the ground would be.
- On no account should the control flag be hidden. Thus control flags should usually be placed at the side of pits or small depressions, and not “hidden” at the bottom.
- Particular care should be taken over the fairness of controls in low visibility/ “green” forest
- Spectator controls need to be chosen to give ready visibility to the maximum audience. A return to the assembly area works well but care needs to be taken that competitors can enter and leave without confusion
- Note: drinks points and road crossings need to be established early in the planning cycle in conjunction with the Organiser

7 Running speed ratios

7.1.1 In order to obtain appropriate course lengths, the running speed ratios for the different age classes need to be known. The table below shows the figures used in calculating the course length ratios and are based on data from long distance races.

Age Class	Speed ratio	Age Class	Speed ratio	Age Class	Speed ratio	Age Class	Speed ratio
M10	0.74	W10	0.73	M45	0.86	W45	0.67
M12	0.70	W12	0.62	M50	0.82	W50	0.63
M14	0.80	W14	0.65	M55	0.77	W55	0.58
M16	0.84	W16	0.67	M60	0.70	W60	0.53
M18	0.90	W18	0.70	M65	0.64	W65	0.48

M20	0.92	W20	0.71	M70	0.57	W70	0.42
M21	1.00	W21	0.82	M75	0.50	W75	0.35
M35	0.92	W35	0.71	M80	0.41	W80	0.28
M40	0.89	W40	0.69	M85	0.32	W85	0.19

7.1.2 Note that M/W10 ratios are for TD2 courses and M/W12 ratios are for TD3 courses.

7.1.3 Speed ratios for older competitors in Sprint/Urban races tend to be slightly higher due to the less physical nature of the courses.

8 Long distance course planning

8.1 Terrain

8.1.1 The terrain should be appropriate for the level of competition and the courses planned.

8.2 Map

8.2.1 The map should be produced to the latest version of the International Specification for Orienteering Maps (ISOM). The map scale should be 1:15,000 or 1:10,000. See also Appendix D: Mapping. Subject to the provisions in Schedule 1, Appendix D Mapping 2014.

8.3 Planning philosophy

8.3.1 The Long distance profile is physical endurance. It takes place in a non-urban (mostly forested) environment, and aims at testing the athletes' ability to make efficient route choices, to read and interpret the map and plan the race for endurance during a long and physically demanding exercise [IOF Competition Rules].

8.3.2 The format emphasises route choices and navigation in rough, demanding terrain, preferably hilly. The control is the end-point of a long leg with demanding route choice, and is not necessarily in itself difficult to find [IOF Competition Rules].

8.3.3 The Long distance may in parts include elements characteristic of the Middle distance with the course suddenly breaking the pattern of route choice orienteering to introduce a section with more technically demanding legs [IOF Competition Rules].

8.4 Colour-coding

8.4.1 Courses are designated by colour, where each colour represents a course of a certain length and level of Technical Difficulty (generally the darker the colour the longer or harder the course).

8.4.2 The colours denote relative lengths and not absolute ones. Thus a Blue course might be 6.5 km long at a Long distance event, but just over 4 km at a Middle distance event on the same area.

8.4.3 This ensures a consistency of course standards between events so that someone entering a Blue course at a Long distance event one weekend is encouraged to enter the Blue course at a Middle distance event the following weekend in order to be running the 'right' course, i.e. the one which will produce the appropriate winning time for the competitors on the course.

8.4.4 A junior novice would be expected to start on either the White or Yellow course, whilst an adult novice would begin with either the Yellow or Orange course depending on their confidence, with progression either towards longer courses with the navigation remaining relatively simple, or on to technically difficult courses up to the appropriate length for their fitness.

8.5 Courses

- 8.5.1 The organising club will decide which courses are to be provided unless specified in any Competition Rule. Whilst the colour-coded scheme is not intended to restrict a Planner's options, it is essential that if a course is designated as a particular colour then it is of the appropriate length and Technical Difficulty.
- 8.5.2 In those areas which only provide orienteering of a lower than ideal Technical Difficulty for the Green courses and above, courses up to Light Green are to be planned to the correct absolute standard.
- 8.5.3 The range of courses offered will depend on the size of the area, terrain, expected number of competitors, etc. clubs should try to provide a range suitable for most abilities.
- 8.5.4 At larger events it may be necessary to plan parallel courses. For example, if the Blue course is oversubscribed, introduce courses called Blue1 and Blue2. These will be of a similar length and may have a number of common controls
- 8.5.5 It may not be possible to provide certain colour courses on some areas. For example, a technically difficult area with few or no paths may not allow a White course. Similarly, it is difficult to plan a course of Brown or Black length on a relatively small area without undue repetition. However, such an area may be eminently suitable for a Middle distance race provided it meets the Technical Difficulty criteria.
- 8.5.6 The Black course, if planned, will have an expected elite winning time of 67 minutes.
- 8.5.7 All other course lengths should be scaled to the length required for this course, which has been allocated a course length ratio of 1.00.
- 8.5.8 Where no Black course is planned, it is still necessary to determine the length of a nominal Black course with an elite winning time of 67 minutes in order to use the ratios for the other courses. In this instance the winning time on the Brown course by a top standard elite competitor should be 57 minutes.
- 8.5.9 Course length ratios refer to course lengths which are "corrected" for height climb (by adding 0.1 km for every 10m of climb).
- 8.5.10 For the courses of Technical Difficulty 1, 2 and 3 it is more important that the course is of the correct TD than of the correct length. It will often be the case that the nature of the terrain forces the course length away from the precise course length ratios given above.
- 8.5.11 The lengths shown in the table below are intended as a guide. For easy areas the course lengths will be towards the top end of the range. For difficult or more physical areas the course lengths will be towards the bottom end of the range.

8.6 Table showing suggested courses and classes for a Long distance event

Colour	Course length ratio M21=1.00	Min/Max length	TD	Men's classes	Women's classes	Men's short and B classes	Women's Short and B classes
Black	1.00	10.0-14.0	5	M21			
Brown	0.85	8.5-12.0	5	M35 M40			
Short Brown	0.69	7.0-10.0	5	M18 M20 M45 M50	W21	M21S	
Blue	0.56	5.5-7.5	5	M16 M55 M60	W35 W40	M35S M40S	
Short Blue	0.45	4.5-6.5	5	M65	W18 W20 W45 W50	M50S M20S M45S M50S	W21S
Green	0.39	3.5-5.0	5	M70	W16 W55 W60	M55S M60S	W35S W40S
Short Green	0.33	3.0-4.0	5	M75 M80 M85 M90	W65 W70	M65S	W18S W20S W45S W50S
Very Short Green	0.28	2.5-3.5	5		W75 W80 W85 W90	M70S M75S M80S M85S	W55S W60S W65S W70S
Light Green	0.30	3.0-4.0	4	M14	W14	M16B	W16B
Long Orange	0.5	5.0-7.0	3			M21N	
Orange	0.25	2.5-3.5	3	M12	W12	M14B	W14B W21N
Yellow	0.22	2.0-2.9	2	M10	W10	M12B	W12B
White	0.14	1.0-1.9	1			M10B	W10B

9 Middle distance course planning

9.1 Terrain

9.1.1 The terrain should be appropriate for the level of competition and the courses planned. It is possible to use smaller areas for Middle distance races since the longest course is to be planned such that a top elite-standard competitor would win it in 30-35 minutes.

9.1.2 However, areas should ideally be chosen which offer more technical interest than needed for standard events with Long distance courses.

9.2 Planning philosophy

9.2.1 The Middle distance profile is technical. It takes place in a non-urban (mostly forested) environment with an emphasis on detailed navigation and where finding the controls constitute a challenge. It requires constant concentration on map reading with shifts in running direction out from controls [IOF Competition Rules].

9.2.2 The element of route choice is essential but should not be at the expense of technically demanding orienteering. Very long legs should be avoided but small and medium scale route choice is encouraged. The emphasis should be on high speed running where competitors need to adjust their speed for the complexity of the terrain. There will be a higher density of controls than for an equivalent Long distance race.

9.2.3 The course require speed-shifts e.g. with legs through different types of vegetation [IOF Competition Rules].

9.2.4 TD5 courses should be planned to be as consistently technically difficult as possible.

9.3 Colour-coding

9.3.1 Courses are designated by colour, where each colour represents a course of a certain length and level of Technical Difficulty (generally the darker the colour the longer or harder the course).

9.3.2 The colours denote the relative lengths and not absolute ones. Thus a Blue course might be 6.5 km long at a Long distance event, but just over 4 km at a Middle distance event on the same area.

9.3.3 This ensures a consistency of course standards between events so that someone entering a Blue course at a Long distance event one weekend is encouraged to enter the Blue course at a Middle distance event the following weekend in order to be running the 'right' course, i.e. the one which will produce the appropriate winning time for the competitors on the course.

9.3.4 A junior novice would be expected to start on either the White or Yellow course, whilst an adult novice would begin with either the Yellow or Orange course depending on their confidence with progression either towards longer courses with the navigation remaining relatively simple, or on to technically difficult courses up to the appropriate length for their fitness.

9.4 Courses

9.4.1 The organising club decides which courses are to be provided unless specified in any Competition Rules. Whilst the colour-coded scheme is not intended to restrict a Planner's options, it is essential that if a course is designated as a particular colour then it has to be of the appropriate length and Technical Difficulty.

9.4.2 In those areas which only provide orienteering of a lower than ideal Technical Difficulty for the Green courses and above, courses up to Light Green are to be planned to the correct absolute standard.

9.4.3 The range of courses offered will depend on the size of the area, terrain, expected number of competitors, etc. clubs should try to provide a range suitable for most abilities.

9.4.4 At larger events it may be necessary to plan parallel courses. For example, if the Blue course is

oversubscribed, introduce courses called Blue1 and Blue2. These will be of the same length and may have a number of common legs.

- 9.4.5 It may not be possible to provide certain colour courses on some areas. For example, a technically difficult area with few or no paths may not allow a White course.
- 9.5 Course length ratios
- 9.5.1 The Black course equates to the M21E course at the British Middle distance Championships with an expected elite winning time of 30-35 minutes.
- 9.5.2 All other course lengths should be scaled to the length required for this course, which has been allocated a course length ratio of 1.00. Winning times for all the courses of Technical Difficulty 5 should then be within the same range of 30-35 minutes.
- 9.5.3 Course length ratios refer to course lengths which are “corrected” for height climb (by adding 0.1 km for every 10m of climb).
- 9.5.4 For the courses of Technical Difficulty 1, 2 and 3 it is more important that the course is of the correct TD than of the correct length. It will often be the case that the nature of the terrain forces the course length away from the precise course length ratio given above.
- 9.5.5 The lengths shown in the table below are intended as a guide. For easy areas the course lengths will be towards the top end of the range. For difficult or more physical areas the course lengths will be towards the bottom end of the range

Table showing suggested courses and classes for a Middle distance event

Colour	Course Length Ratio Black=1.0	Min-Max Length (km)	Technical Difficulty	Men's Classes	Women's Classes
Black	1.00	5.0 -7.0	5	M21 M35 M40 M18 M20	
Brown	0.83	4.1-5.8	5	M45 M50	W21 W18 W20
Blue	0.75	3.7-5.4	5	M55 M60 M16	W35 W40
Green	0.60	3.0-4.2	5	M65 M70	W16 W45 W50
Short Green	0.50	2.5-3.5	5	M75 M80 M85	W55 W60 W65
Very Short Green	0.40	2.0-2.8	5		W70 W75 W80 W85
Light Green	0.45	2.2-3.1	4	M14	W14
Orange	0.30	1.5-2.1	3	M12	W12
Yellow	0.30	1.5-2.1	2	M10	W10
White	0.20	1.0-1.5	1		

10 Sprint course planning

10.1 Terrain

10.1.1 The terrain should be appropriate for the level of competition and the courses planned. Sprint races are usually staged in very runnable park or urban (streets/buildings) terrain. Occasionally, some fast runnable forest may be included.

10.1.2 One key aspect of the philosophy of Sprint Orienteering is that it is to be clearly different in nature from the Middle and Long disciplines. Thus it is not merely a very short version of them, so terrain which is densely forested should not be used for Sprint competitions.

10.1.3 Suitable terrain is often provided by University campuses, ornamental public parks, old town/city centres,

modern high density housing estates, etc. Note that where the terrain involves significant traffic, it may not be possible to provide courses for the youngest competitors.

10.1.4 The area need not be particularly large and terrains occupying as little as 0.33 km² have been successfully used for major Sprint races.

10.1.5 In addition, the terrain should not be so steep that it prevents high speed running.

10.1.6 Areas so complex that it is doubtful whether a competitor can interpret the map at high speed should be avoided (e.g. when there are complex three-dimensional structures).

10.2 Map

10.2.1 The map should be produced to the latest version of the International Specification for Sprint Orienteering Maps (ISSOM). The map scale should be 1:4000 or 1:5000. See also Appendix D: Mapping. It is crucial that the map is correct and possible to interpret at high speed, and that the mapping of features that affect route choice and speed are accurate.

10.2.2 In addition, it has become traditional at the largest events to give older competitors a map at a larger scale and with enlarged symbols sizes too. Although not an IOF standard, maps at 1:3000 have been used with success.

10.2.3 In non-urban areas, the correct mapping of conditions reducing running speed, both to degree and extent, is important. In urban areas, barriers hindering the passage must be correctly represented and drawn to size [IOF Competition Rules].

10.2.4 Many orienteers are not yet as familiar with ISSOM (International Specification for Sprint Orienteering Maps – available for download from the IOF website) symbols as they are for the more usual ISOM ones. In particular, it is crucial that competitors are familiar with the symbols used for impassable features, including impassable walls, fences and vegetation. This could be achieved by printing these in any pre-event details.

10.2.5 Planners and Controllers should note that it is conventional to join control circles with straight lines on the course overprint, even where the lines go through buildings or across lakes, etc. This avoids having a confusing spaghetti of otherwise bent lines covering the map. The exception is where there are mandatory crossing points where the usual rules apply, and lines must be broken or bent to go through them.

10.2.6 It is also more important than usual to break control circles on the overprint where they obscure important details. For example, the best way into a control may be via a narrow passageway, but if its existence is obscured by the overprinted circle, then many will not see the route.

10.3 Planning philosophy

10.3.1 The Sprint profile is high speed. It tests the athletes' ability to read and translate the map and to plan and carry out route choices running at high speed. The course is to be planned so that the element of speed is maintained throughout the race. The course may require climbing but steepness forcing the competitors to walk should be avoided [IOF Competition Rules].

10.3.2 Finding the controls should not be the challenge; rather the ability to choose and complete the best route to them. For example, the most obvious way out from a control should not necessarily be the most favourable one. The course should be set to require the athletes' full concentration throughout the race. An environment that cannot provide this challenge is not appropriate for a Sprint race [IOF Competition Rules].

10.3.3 In order to achieve the aims set out above:

- Average leg lengths will be short, 120m to 180m being typical.
- Have frequent changes of direction (small crossover loops are good).

- Long legs may be set, as long as their execution involves a high rate of decision making along the way.
- Dog legs can provide good challenges too; but avoid the possibility that they may cause clashes between incoming and outgoing runners if space is restricted.
- Aim to make every leg pose a route choice challenge, especially in urban terrain. Control sites will often have to be positioned with great care in order to achieve this.

10.3.4 The higher density of controls sites needed for a Sprint race sometimes means that controls are closer together than they are in Middle/Long races. The minimum separation of controls is correspondingly less than for Middle/Long races and is 15m (or 30m if the control sites are on similar features). These separations are measured around impassable objects rather than being straight line distances.

10.4 Technical Difficulty

10.4.1 The definitions of the levels of Technical Difficulty are defined with forest based orienteering in mind and so do not easily equate to Sprint races. The nature of the terrain often limits the maximum Technical Difficulty to TD3 since control sites are rarely far from line features. Senior courses should be planned to be as technically difficult as possible, however the perceived Technical Difficulty is often higher than this because of the high decision making rate needed to execute a Sprint course satisfactorily.

10.4.2 This also means that the provision of courses which are perceived to be TD1 may not be possible.

10.5 Courses

10.5.1 The winning time for Sprint races should be between 12 and 15 minutes, and this is one of the defining characteristics of the Sprint discipline.

10.5.2 Where an age-class competition is held, the winning time for each age class should be 12 – 15 minutes. This can be achieved by designing a set of courses of differing lengths such that groups of age classes of similar ability run the same courses

10.5.3 Course lengths are given as straight line distances, but due to the nature of Sprint orienteering the actual distances run by competitors will usually be greater. In a typical urban/campus environment actual distances may be 30-40% more than the straight line distance. The table below gives suggested courses for a typical urban sprint. Note that if a technical (eg complex forest) area is used then separate TD3/4 courses should be provided for the M/W12/14 competitors.

10.6 Table showing suggested courses and classes for a Sprint event

Course	Course Length Ratio Course1=1	Min-Max Length (km)	Technical Difficulty	Men's Classes	Women's Classes
1	1.00	2.5-2.9	3-5	M21 M16 M18 M20 M35 M40	
2	0.85	2.1-2.5	3-5	M45 M50	W16 W18 W20 W21

					W35
3	0.75	1.8-2.2	3-5	M14 M55 M60	W40 W45 W50
4	0.60	1.5-1.8	3-5	M12 M65 M70	W14 W55 W60 W65
5	0.50	1.2-1.5	3-5	M75 M80 M85	W70 W75 W80 W85
6	0.40	1-1.2	2	M10	W10

10.7 Practical planning considerations

- 10.7.1 Controls may need to be manned to avoid vandalism, especially if the terrain is public and/or spectators are allowed on the course.
- 10.7.2 Alternatively, controls may need to be securely fixed to permanent objects such as street furniture. Where this is done using ties through the hole in SI boxes, care needs to be taken to ensure it is still possible to punch easily.
- 10.7.3 It may be necessary to use marshals at road crossings and at exits from narrow passageways, alerting spectators of approaching competitors and making sure that competitors are not hindered.
- 10.7.4 Take care to ensure that the gates etc which are marked as open on the map are actually open on the day of the race.
- 10.7.5 Courses must be planned to avoid tempting competitors to take shortcuts through private property and other out-of-bound areas.
- 10.7.6 Where there are impassable walls/fences/hedges, there is a high risk that some competitors may try to cross them. Provision of warning tapes and marshals should minimise this.
- 10.7.7 Controls on impassable features (walls, fences, etc) may tempt competitors to cross, lean over or reach through the impassable feature. Such control sites are best avoided but, if this is not possible, great care is needed with control (and punch) placement to avoid the possibility of competitors gaining an unfair advantage. At events using maps produced to the ISSOM specification, impassable features (as defined in ISSOM) must not be crossed by any part of a competitor's body. Hence it is NOT permitted to reach through or lean over such a feature to punch at a control site.
- 10.7.8 Where a busy road has to be crossed it is preferable to plan a long leg crossing the road diagonally in order to give competitors more opportunities to cross safely.
- 10.7.9 Where possible road crossings should be avoided towards the latter stages of a course when competitors are becoming fatigued.
- 10.7.10 Consider requiring competitors to wear numbered bibs as a way of aiding identification by marshals in the competition area.

10.7.11 Having the start and finish in the same arena makes for a good atmosphere.

10.8 Control descriptions

10.8.1 Control descriptions are often more important than at forest-based events. Many control sites have a number of possible descriptions. The Planner should try to use the most obvious description; the challenge of Sprint orienteering is to navigate (and chose routes) between controls rather than decipher complicated control descriptions.

10.8.2 Loose control description sheets should be available to competitors.

10.9 Safety when sprint in urban terrain

10.9.1 Urban terrain brings additional potential risks to the event and it is essential that a proper risk assessment is carried out before the event is sanctioned.

10.9.2 Urban races present a number of potential hazards not usually present at forest based events.

10.9.3 The most significant of these is the presence of public roads and moving vehicles. These hazards are to be carefully assessed as part of a comprehensive risk assessment early in the organising process. Risks can usually be reduced by holding the event on a Sunday morning.

10.9.4 Where appropriate, busy roads may need controlled crossings with marshals and/or timed-out controls.

10.9.5 Particular attention needs to be given to courses planned for competitors under 16 years of age. In the eyes of the law, the Organiser is acting in loco parentis for children under the age of 16 and must be seen to take precautions over and above what a careful parent would take for the safety of their children.

10.9.6 This means that courses for juniors under the age of 16 must not have any routes that require competitors to cross roads with significant traffic unless appropriate traffic management arrangements have been put in place. A disclaimer signed by a parent or guardian does not circumvent this rule.

10.9.7 M/W16s will only be permitted to “run up” if they are 16 or over on the day of the race.

10.9.8 Competitors should be reminded of their responsibility towards their personal safety and the safety of others at the start of the course.

11 Urban

11.1 Terrain

11.1.1 Urban races are usually staged in town and city centres, utilising public open spaces, pedestrianised and trafficked streets and parks.

11.1.2 The terrain is similar to that which might be used for Sprint races but the nature of the race is different in that courses will be longer than for a Sprint, with many longer legs incorporating multiple route choices.

11.1.3 The terrain should be appropriate for the level of competition and the courses planned. Any area of the ‘built environment’ may be suitable for urban events. The best areas tend to be the older areas of towns and cities which have developed haphazardly over many years.

11.1.4 Areas with a regular grid type pattern of streets are less suitable. Consideration should always be given to the issue of traffic.

11.1.5 Both vehicular and pedestrian traffic can be a major issue and careful consideration (via the use of a risk assessment) needs to be undertaken before selecting an area for an urban race.

11.2 Map

11.2.1 The map should be produced to the latest version of the International Specification for Sprint Orienteering Maps. The map scale should usually be 1:5000 or 1:4000. See also Appendix D: Mapping. It is crucial that the map is correct and possible to interpret at high speed, and that the mapping of features that affect

route choice and speed are accurate.

- 11.2.2 In non-urban areas, the correct mapping of conditions reducing running speed, both to degree and extent, is important. In urban areas, barriers hindering the passage must be correctly represented and drawn to size [IOF Competition Rules].
- 11.2.3 Many orienteers are not yet as familiar with ISSOM (International Specification for Sprint Orienteering Maps – available for download from the IOF website) symbols as they are for the more usual ISOM ones. In particular, it is crucial that competitors are familiar with the symbols used for impassable features, including impassable walls, fences and vegetation. This could be achieved by printing these in any pre-event details.
- 11.2.4 Planners and Controllers should note that it is conventional to join control circles with straight lines on the course overprint, even where the lines go through buildings or across lakes, etc. This avoids having a confusing spaghetti of otherwise bent lines covering the map. The exception is where there are mandatory crossing points where the usual rules apply, and lines must be broken or bent to go through them.
- 11.2.5 It is also more important than usual to break control circles on the overprint where they obscure important details. For example, the best way into a control may be via a narrow passageway, but if its existence is obscured by the overprinted circle, then many will not see the route.
- 11.3 Planning philosophy
 - 11.3.1 Urban racing doesn't fit exactly any of the IOF recognised formats, but is most closely associated with the Sprint discipline.
 - 11.3.2 Sprint Orienteering tests the athlete's ability to read and translate the map in complex environments, and to plan and carry out route choices whilst running at high speed [IOF Competition Rules].
 - 11.3.3 Urban racing should test athletes in the same way as much as possible but, with a lower control density, will also inevitably test running speed over longer distances. Longer legs should, wherever possible, include an element of route choice and require competitors to continuously navigate during the leg, so punishing anyone who 'switches off', even for a short while. Longer legs should ideally be interspersed with a series of shorter legs.
- 11.4 Technical Difficulty
 - 11.4.1 The definitions of the levels of Technical Difficulty, as used in the following table, are explained in Section 14. These were defined with forest based orienteering in mind and so do not easily equate to Urban races.
 - 11.4.2 The nature of the terrain usually limits the maximum Technical Difficulty to TD3 since control sites are rarely far from line features. Senior courses should be planned to be as technically difficult as possible, which will generally mean TD3.
- 11.5 Courses
 - 11.5.1 The organising club decides which courses are to be provided unless specified in any Competition Rule. The suggested range of courses indicated in the table below should be sufficient for most Urban events.
 - 11.5.2 Courses for those under 16 should only be provided if there is a suitable area of traffic-free (or virtually traffic-free) terrain. It is vital that it is advertised in the pre-event publicity which courses are offered and which age classes are recommended to run which course.
 - 11.5.3 The course lengths given in this table are for guidance only. There is no obligation to stick to the recommendations, but the ratios do give an indication of what different age classes expect in relation to the Open Men. Large variations from the recommendations should be highlighted in the event advertising to help prospective competitors make a decision before entering.
 - 11.5.4 Course lengths are given as straight line distances. Obviously, due to the nature of Urban races, the actual

distances run by competitors will usually be considerably greater. If these variations differ significantly between courses, this should be taken into consideration when determining course lengths. Lines between controls on the map need only be bent where competitors have to use a compulsory crossing point. Care needs to be taken when editing the course overprint to ensure control circles and lines are sufficiently broken such that no important detail is obscured.

11.5.5 Guidance should be given on the entry information as to the approximate distance competitors will actually be expected to run.

11.6 Urban Event: Suggested courses and classes

Course	Course Length Ratio Black=1	Min-Max Length (km)	Technical Difficulty	Men Classes	Women Classes
1 Black	1.00	6.0-10.0	3	Men Open (M18-35)	
2 Brown	0.83	5.0-8.0	3	Veteran Men (M40+)	Women Open (W18-35)
3 Blue	0.67	4.0-6.5	3	Super Veteran Men (M55+)	Veteran Women (W40+)
4 Green	0.50	3.0-5.0	3	Ultra Veteran Men (M65+)	Super Veteran Women (W55+)
5 Short Green	0.40	2.5-4.0	3		Ultra Veteran Women (W65+)
6 Light Green	0.50	3.0-5.0	3	Junior Men (M16-)	Junior Women (W16-)
7 Yellow	0.35	2.0-3.5	2	Young Junior Men (M12-)	Young Junior Women (W12-)

11.7 Practical planning considerations

11.7.1 Controls may need to be manned to avoid vandalism, especially if the terrain is public and/or spectators are allowed on the course.

11.7.2 Alternatively, controls may need to be securely fixed to permanent objects such as street furniture. Where this is done using ties through the hole in SI boxes, care needs to be taken to ensure it is still possible to punch easily.

11.7.3 It may be necessary to use marshals at road crossings and at exits from narrow passageways, alerting spectators of approaching competitors and making sure that competitors are not hindered.

11.7.4 Take care to ensure that the gates etc. which are marked as open on the map are those that are actually open on the day of the race.

11.7.5 Courses must be planned to avoid tempting competitors to take short cuts through private property or other out-of-bounds areas.

11.7.6 Where there are impassable walls/fences/hedges, there is a high risk that some competitors may try to cross them. Provision of warning tapes and marshals should minimise this.

- 11.7.7 Controls on impassable features (walls, fences, etc) may tempt competitors to cross, lean over or reach through the impassable feature. Such control sites are best avoided but, if this is not possible, great care is needed with control (and punch) placement to avoid the possibility of competitors gaining an unfair advantage. At events using maps produced to the ISSOM specification, impassable features (as defined in ISSOM) must not be crossed by any part of a competitor's body. Hence it is NOT permitted to reach through or lean over such a feature to punch at a control site.
- 11.7.8 Where a busy road has to be crossed it is preferable to plan a long leg crossing the road diagonally in order to give competitors more opportunities to cross safely.
- 11.7.9 Where possible road crossings should be avoided towards the latter stages of a course when competitors are becoming fatigued.
- 11.7.10 Consider requiring competitors to wear numbered bibs as a way of aiding identification by marshals in the competition area.
- 11.7.11 Having the Start and Finish in the same arena makes for a good atmosphere.
- 11.8 Control descriptions
 - 11.8.1 Control descriptions are often more important than at forest-based events. Many control sites have a number of possible descriptions. The Planner should try to use the most obvious description; the challenge of Urban orienteering is to navigate (and chose routes) between controls rather than decipher complicated control descriptions.
 - 11.8.2 Loose control description sheets should be available to competitors.
- 11.9 Safety issues
 - 11.9.1 These guidelines should be read in conjunction with British Orienteering Rules of Orienteering and Appendix E: Event safety.
 - 11.9.2 Urban terrain brings additional potential risks to the event and it is essential that a proper risk assessment is carried out before the event is sanctioned
 - 11.9.3 Urban Orienteering presents a number of potential hazards not usually present at forest based events.
 - 11.9.4 The most significant of these is the presence of public roads and moving vehicles. These hazards are to be carefully assessed as part of a comprehensive Risk Assessment early in the organising process. Risks can usually be reduced by holding the event on a Sunday morning.
 - 11.9.5 Where necessary, busy roads may need controlled crossings with marshals and/or timed-out controls.
 - 11.9.6 Competitors should be reminded of their responsibility towards their personal safety and the safety of others at the start of the course.
 - 11.9.7 Particular attention needs to be given to courses planned for competitors under 16 years of age. In the eyes of the law, the Organiser is acting in loco parentis for children under the age of 16 and must be seen to take precautions over and above what a careful parent would take for the safety of their children.
 - 11.9.8 Juniors aged under 16 on the day of the competition are not permitted to compete on courses where there are possible routes that require competitors to cross roads with significant traffic unless appropriate traffic management arrangements have been put in place. A disclaimer signed by a parent or guardian does not circumvent this rule.
 - 11.9.9 Appropriate traffic management arrangements may include: mandatory safe routes, crossings controlled by lights/marshals, the use of under-passes/bridges, timed out legs etc.
 - 11.9.10 Roads with traffic management that induce low speeds (eg 15mph as on many campuses) are acceptable for under 16s as are minor roads with good visibility, but busy public roads are not.

11.9.11 The Planner's input into the risk assessment form should be completed at an early stage, e.g. at the draft planning stage.

12 Relay course planning

12.1 Terrain

12.1.1 The terrain should be appropriate for the level of competition and the courses planned. It should offer some route choice possibilities, preferably with reasonably complex terrain.

12.1.2 Typically Relay Orienteering takes place in non-urban and mainly forested areas. Open areas may be used but should be of suitable complexity such that they allow runners to lose contact with others.

12.1.3 Terrain with continuous good long distance visibility does not allow competitors to pass each other during the race and turns the competition from a navigational challenge into a physical one.

12.1.4 There should be sufficient variety of control sites in the area to allow different sites to be selected for different courses.

12.2 Map

12.2.1 The map should be produced to the latest version of the International Specification for Orienteering Maps (ISOM). See also Appendix D: Mapping. The map scale should usually be 1:10,000. Subject to the provisions in Schedule 1, Appendix D Mapping 2014.

12.3 Planning philosophy

12.3.1 The Relay is team competition. It takes place in a non-urban (mostly forested) environment. The format is built on a technically demanding concept, more similar to the concept of the Middle than the Long distance.

12.3.2 Some elements characteristic of the Long distance, like longer, route-choice legs should occur, allowing competitors to pass each other without making contact [IOF Competition Rules].

12.4 Laps

12.4.1 Courses should be planned such that competitors cannot easily follow fellow competitors in the same class.

12.4.2 Assuming 3 person teams, for small events it may be sufficient to plan three courses A, B and C and to randomize the allocation of laps to teams.

12.4.3 This gives 6 possible permutations for team / lap allocations: ABC, ACB, BAC, BCA, CAB and CBA

12.4.4 For larger events it is better to divide individual courses into two or more sections. The simplest option is to have 3 first parts A, B and C, a common middle control and 3 second parts a, b and c.

12.4.5 The combinations can be Aa, Ba, Ca, Ab etc. Any one team must complete overall laps containing one part A, one part B etc. This ensures that all teams complete the same overall course during the event. It also separates the groups of runners doing (for example) part A as after the common control only one third of the group will carry onto the same second part. This option gives rise to 9 maps with 36 permutations, for example one team may run Ab, Ba and Cc, another Ac, Bb and Ca.

12.4.6 This is generally more than sufficient to separate teams during the competition and it is rare that more complex gaffling of courses is necessary. It is a good idea to select the common control with care such that it is not immediately obvious to competitors that the courses divide following that point. So a control at a compulsory crossing point would not be an optimum common control.

12.5 Gaffling

12.5.1 Sufficient different laps should be planned so that teams are not all running the same course at the same time, in other words such that competitors will need to navigate successfully in order to complete their

course.

- 12.5.2 The likely numbers of teams in any one class will indicate how much the Planner needs to gaffle laps and how many courses need to be planned for each class.
- 12.5.3 Gaffling may range from minimal (where only two or three different courses are needed for a 3-person relay) to complex (where courses may split at one or more common controls and 9 or more different maps may be used to cover different combinations).
- 12.5.4 In most cases laps need to be very similar in overall length and physical difficulty and be of the same Technical Difficulty. Some classes at events such as the JK or Harvester, have laps of differing length and/or Technical Difficulty, and the Planner must consult the relevant Competition Rule.
- 12.6 Fairness
 - 12.6.1 Fairness between laps is crucial to good Relay course planning. Planners often create lap variations by grouping control sites, however it is not good planning to have groups of controls visible from each other as this tends to reduce navigational challenge, leading to a “hunt the right number” approach.
 - 12.6.2 Conversely if three different first controls are in radically different directions from the start then runners can immediately identify the sub-group that they are competing against for the first part of their lap.
 - 12.6.3 Early on in courses runners are often best separated by having different leg lengths but in the same general direction from the start.
 - 12.6.4 Head-to-head racing is an important element in Relay events and, in particular, individual laps should have similar challenges in the later part of the course.
 - 12.6.5 Consequently, it is not good practice to have significant differences in leg lengths or physical / Technical Difficulty between controls in the very late stages of any lap. If control site options are limited towards the end of courses, it is acceptable to have controls common to all laps.
- 12.7 Control sites
 - 12.7.1 As for all orienteering competitions, control sites must be fair in all aspects. In Relay events competitive pressure, especially following mass starts, can mean that competitors may make assumptions regarding “their” control sites.
 - 12.7.2 Sites must therefore be unambiguous and any possibility of confusion with other similar sites (whether on the map, description or on the ground) should be avoided at all costs.
 - 12.7.3 Careful consideration of control locations, descriptions and codes should be made.
- 12.8 Loading
 - 12.8.1 Mass starts lead to packs of runners in the early stages of any competition. The flow of runners through a particular site should be assessed as well as the overall numbers visiting the site. Higher than expected numbers of runners passing through a control at any one time can result from multiple courses using the same site. Examples would be a site which is the second or third control on a course being used by a later starting course as a first control, or a common control, especially if after a “collecting feature” such as a crossing point.
 - 12.8.2 Adequate punch units will be needed for the maximum expected flow and the actual location of these also needs careful placement such that all can be used simultaneously.
 - 12.8.3 The actual control location for a heavily used site should also be considered. A steep slope or restricted access (such as between boulders) is not suitable for high competitor flow.
- 12.9 Changeover and assembly area
 - 12.9.1 The location and design of the changeover area is crucial to a successful Relay event. It should be adjacent

to, or within, the competition area in order to reduce dead running at the start and end of laps.

- 12.9.2 It is preferable to design the changeover such that waiting competitors are able to see their incoming runner in sufficient time to get to the handover point.
- 12.9.3 The spectator element is very important to a good Relay event, so there should be enough space to also allow spectators to see incoming runners, preferably from the last control onwards.
- 12.9.4 Larger events such as JK or British Championships should provide additional spectator “value” either by including spectator control(s) or radio control links into a commentary system.
- 12.9.5 Commentators need to be able to see incoming runners and therefore the siting of the commentary team needs careful consideration.
- 12.9.6 It is also important that any cabling from spectator or final controls can be routed safely into the commentary position.
- 12.9.7 It is difficult (but not impossible) to provide the above in a totally flat field but locations where a broad re-entrant, or concave slope are present will provide the best assembly areas.
- 12.9.8 A convex slope will significantly restrict line of sight for all concerned and is best avoided.
- 12.9.9 Mass starts inevitably lead to packs of runners exiting the assembly area at one time, so very narrow or steep downhill legs to the first controls are likely to be dangerous.
- 12.9.10 Sufficient distance should be given for the mass start to spread out before runners meet a potential obstruction or hazard.
- 12.9.11 All of these considerations need close collaboration between the Planner and Organiser, with approval by the Controller, before detailed course planning can be started. It is therefore important that the location is agreed very early on in the planning process, preferably with a site visit of all of the relevant parties.
- 12.9.12 The actual handover area also needs careful planning. If at all possible waiting pen(s) for runners should be placed so that waiting competitors can identify their incoming team-mate.
- 12.9.13 They also need to allow everyone in the pen to see, not just the tall competitors at the front of the group, so a gentle downhill slope is ideal.
- 12.9.14 Consider having a separate area in front of the pen for shorter (younger) competitors. Incoming and out-going runners need to be able to touch and then exit the handover line safely, so incoming runners approach at an acute angle to the line, not head-on and similarly for out-going runners.
- 12.9.15 Marshals will be required to keep the line clear and also to help those incoming runners whose team-mate does not appear when expected.

13 Score course planning

13.1 Terrain

- 13.1.1 Score orienteering challenges competitors to maximise their score in a pre-defined running time. There are three aspects to the competition:
 - Selecting a subset of all available controls to be visited;
 - Selecting the order in which controls are visited;
 - Route choice and navigation between chosen controls.
- 13.1.2 A competitor has to optimise all three aspects and may reconsider them as his run evolves.
- 13.1.3 The terrain should be appropriate for the level of competition and the courses planned. Score events may be staged in any type of terrain.

13.2 Map

13.2.1 The map should be produced to the latest version of the International Specification for Orienteering Maps (ISOM) or International Specification for Sprint Orienteering Maps (ISSOM), as appropriate to the terrain and event. See also Appendix D: Mapping.

13.2.2 The values of controls should be available on the map, either indirectly through control code when there is a simple relationship of value to code, or with the control value being printed with the control code adjacent to the control circle. This latter option causes more map detail to be lost under the overprint.

13.2.3 For two-part courses including a transition, an option is to have separate back-to-back maps for part 1 and part 2.

13.3 Planning philosophy

13.3.1 In a Score event, at the start, and at most controls, the competitor should be presented with a challenge to decide where best to go next. Competitors heading off in many different directions are indicative of a well-planned Score event. It is poor planning if it is obvious to competitors to take a series of controls in a particular order.

13.3.2 In addition to route selection there should also be route choice between neighbouring controls, except for novices who would usually run cross-country courses at Technical Difficulty 2. For these novices it is useful to have a number of controls make up what would approximate to a course of this standard.

13.4 Technical Difficulty

13.4.1 Score events are unsuitable for young novices who usually participate on Technical Difficulty 1 courses.

13.4.2 A standard cross-country course at Technical Difficulty 1 should be considered as an addition to the Score course(s).

13.5 Time limit

13.5.1 The time limit for adult age classes is usually one hour. For younger or older age classes shorter time limits can be offered.

13.5.2 There should be a penalty for exceeding the time limit for the course. It should be such that it is impossible for a 'net gain' to be achieved by significantly exceeding the time limit. For example, if control values are in the range of 10-40 points, make the penalty 30 points per minute late. It needs to be made clear to competitors how this penalty is applied: 30 points per minute (or part thereof), or 1 point for each 2 seconds.

13.5.3 In an ideal Score event it should not be possible for a good orienteer to visit all controls in the allotted time. In a Score event one of the most important decisions for a competitor to make is which controls to omit. If some competitors can visit all controls in the allotted time then, because they do not have to select a subset of controls to be visited, they are running in a different, easier event than the other competitors. They also miss the tactical decision of going for a control at the risk of losing some or all of those points by finishing late.

13.5.4 If the proposed area is so small that the best competitors might collect all controls within the time limit, the following strategies can be considered:

- Use another area that is big enough.
- Use many controls. More work for the Planner and often results in route choice being replaced by a control-picking exercise. Not recommended.
- Reduce the time availability. In small competition areas it is reasonable to reduce the time limit to 45 minutes; any reduction below that is likely to be unpopular with competitors.
- Divide the course into two parts, using the area twice. A method commonly employed is for

competitors to collect all controls in part 1 and then as many as they can in part 2. This approach is flawed because part 1 becomes a free route selection cross-country event, missing the selection of a subset of controls aspect of a good Score event. Better is to have two parallel courses, each a part of a total course which cannot be completed in the time limit. Competitors may transition from part 1 to part 2 at any time and at any location. Once they have punched a part 2 control any further part 1 controls they visit are not scored.

- Run the event as a 'Spanish' score event in which all the controls have to be visited, but in any order, the competitor who completes this in the fastest time is the winner. This format removes many of the decision making strategies of a traditional score event but may be suitable for some events.

13.6 Control sites

- 13.6.1 In a Score competition a delay in finding one control when sound technique has been used to locate it can have a devastating effect on a competitor's finely judged route selection. Just because a competitor does not have to punch at a control is not to be used as an excuse for an unfairly difficult control placement.
- 13.6.2 In a well-planned Score event competitors will arrive and depart from controls in many directions. The control feature and control marker should be capable of being approached safely and fairly from all directions.
- 13.6.3 Control locations should be commensurate with the Technical Difficulty of the course. It is preferable to have separate courses with control sites and legs between them at the appropriate Technical Difficulty. In most Score events there will be two control sets used for different courses: one for juniors and novices consisting of sites and legs of Technical Difficulty 2 and 3, the second for experienced orienteers with TD 3 to 5 legs.
- 13.6.4 Beware of planning a course consisting of a ring of controls about a central start and finish. Although competitors may leave the start in a variety of directions, their only route selection thereafter will be to decide whether to run the ring clockwise or anticlockwise.

13.7 Control codes, values and control descriptions

- 13.7.1 Controls may have different points values. This can be used to give additional complexity to the competition, but be careful not to over-emphasise this. Score orienteering is a navigational challenge, not an obscure mathematical exercise. Control values should not necessarily be correlated with distance from start or with difficulty to find. But be aware that high value controls near the start or finish will attract more competitors than other controls.
- 13.7.2 The values of controls should be instantaneously recognisable from their control code. An option is to give every control the value of its control code; in this method different subsets of controls are less likely to sum to the same score. Another option is to block values, e.g. all controls with codes between 30 and 39 are value 30, controls with codes between 40 and 49 are value 40, etc.
- 13.7.3 For courses involving transition (see 13.5.4 above), part 1 and part 2 controls should be clearly distinguishable through their control code; for example, part 1 control codes may be in the range 100-199 and part 2 control codes in the range 200-299. If (some) controls in part 2 are given higher scores than those in part 1, early transition is encouraged.
- 13.7.4 Control descriptions should be produced in accordance with The British Orienteering Rules of Orienteering except that in the heading the course length and climb should be replaced by the course time limit.

14 Ultra-long distance course planning

14.1 Terrain

- 14.1.1 Ultra-long distance events challenge the competitor to race over a distance which is usually much longer than the guidelines for a 'classic' Long distance event.
- 14.1.2 Ultra-long distance may take the form of a cross-country or a score event.
- 14.1.3 This guidance applies to events which are registered with British Orienteering. It does not apply to mountain marathons and adventure races that may also have navigation content.
- 14.1.4 The terrain should be appropriate for the level of competition and the courses planned. The area should be large enough for competitors on the longest course to be presented with a challenging course without the route crossing itself frequently.

14.2 Map

- 14.2.1 The map may be an orienteering map of a large area, drawn to the latest version of the International Specification for Orienteering Maps (ISOM), or a composite of smaller maps of adjacent areas that can be linked in an obvious way.
- 14.2.2 Purpose-surveyed and drawn 'mountain maps' may be used, as may specially produced OS extracts, providing that they meet the appropriate approval of the Club or Association, and of the Controller, and can be overprinted with essential information such as crossing points and 'out of bounds' areas.

14.3 Planning philosophy

- 14.3.1 The essential feature of Ultra-long distance courses is that they should not only test the navigation and route-choice skills of the competitor, but they may also test, by choice of course, their strength and endurance. The competition may also be a test of the competitor's ability to judge their own rate of progress to enable them to complete the course without reliance on aid from another person.
- 14.3.2 The use of control sites requiring fine navigation may have significant time implications and the use of such sites may be inappropriate for this type of event.
- 14.3.3 The density of control sites may be lower than that of 'Long' courses, with legs of several kilometres appropriate in many cases.
- 14.3.4 The competition is not a test of mountaineering, climbing, camping or survival skills.

14.4 Courses

- 14.4.1 The organising club decides which courses are to be provided.
- 14.4.2 Planners should provide courses of varying Technical Difficulty and, indirectly through length, varying winning times for different age groups.
- 14.4.3 In the case of a score event, or where there are score courses on offer, they should follow the score format above.
- 14.4.4 Very long courses may be unsuitable for novices or those with health and fitness problems. The provision of alternative shorter courses at the event should be considered.

14.5 Safety

- 14.5.1 The Planner must plan the longest courses with a clearly stated estimated leading time assuming a high quality entry. The officials must allow a reasonable time for slower competitors to complete courses before they are closed.

15 Night course planning

15.1 Terrain

- 15.1.1 Night events are usually staged in runnable forest or on open areas. The initial risk assessment must take into account any potential dangers associated with the area, and may result in it not being used.
- 15.1.2 The possibility of bad weather may present an unacceptable risk for exposed terrain, especially in winter. As darkness increases the Technical Difficulty (TD) of any course, the use of areas which provide TD5 orienteering in daylight (such as complex sand dune terrain) should be treated with caution.

15.2 Map

- 15.2.1 The map should be produced to the latest version of the International Specification for Orienteering Maps (ISOM) or International Specification for Sprint Orienteering Maps (ISSOM), as appropriate to the terrain and event. See also Appendix D: Mapping.
- 15.2.2 The map scale should be 1:10,000 or larger. It is much harder to read maps at night with only a headlamp, so the event map should take this into account and colours should be checked for clarity under night conditions. Subject to the provisions in Schedule 1, Appendix D Mapping 2014.

15.3 Technical Difficulty

- 15.3.1 The definitions of the levels of Technical Difficulty are explained in an earlier table (section 3.2). Darkness can increase TD so that a leg which is TD3 in daylight can easily become TD4. This should be borne in mind when planning Night courses.

15.4 Course lengths

- 15.4.1 Running speeds at night are 10% to 15% slower than in daylight for faster competitors. Course lengths should be adjusted accordingly.

15.5 Practical planning considerations

- 15.5.1 Relocation is much more difficult at night because of the competitor's restricted view of the surroundings, even with a powerful light. A safety bearing should be provided.
- 15.5.2 Control features are to be clear and unambiguous and their suitability should be checked at night. Small features below ground level are to be avoided, especially when vegetation restricts visibility.
- 15.5.3 Legs which require navigation through "walk" areas and indistinct vegetation boundaries, which are unclear in the dark, are to be avoided.
- 15.5.4 As in daylight events, competitors may take a route which is unexpected by the Planner. Controls are to be fair if approached from all feasible directions.
- 15.5.5 In high visibility terrain competitors on different courses approaching a common control from different directions can reveal its location more readily than in daylight.

15.6 Safety

- 15.6.1 Junior and novice orienteers are relatively rare competitors at Night events. The British and Area Night Championships have a youngest class of M/W16. If they are to be permitted to start at lower level events the Organiser has to be certain that they are competent enough to complete their course, and has the power to insist that they compete with an adult. In a score event a course of daylight TD2 standard can be separated out if there are sufficient controls for this.
- 15.6.2 In the eyes of the law, the Organiser is acting in loco parentis for children under the age of 16 and has to be seen to take precautions over and above what a careful parent would take for the safety of their children.

- 15.6.3 It should be noted that disclaimers, signed by parents, are ineffective and would not absolve the Organiser of his/her responsibility in law
- 15.6.4 Score events should be planned so that there is little temptation to stay out beyond the time limit. This can be done by having severe penalty points for exceeding it.

Appendix C: Event Officials

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- 16. Appointment of event officials
- 17. Licencing of Controllers
- 18. British Orienteering approved training courses

These Appendices are to be read in conjunction with the British Orienteering Rules of Orienteering (Event Officials) 2014

1 Appointment of Event Officials

1.1 Introduction

- 1.1.1 The following information suggests the advised experience required for the main officials at events. It is acknowledged that not all Organisers and Planners will meet the advised requirements exactly, and equivalent experience may be taken into account.
- 1.1.2 The Training and experience requirements in section 2.1 are mandatory for all grades of Controller
- 1.1.3 It is recognised that the methods for the appointment of officials vary throughout the country.
- 1.1.4 Officials of events of a particular format (e.g. Relay, Night, Sprint, etc.) should have relevant experience of that format.
- 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.

1.2 Organisers

ALL organisers will have completed safety training prescribed within the British Orienteering Event Safety & Welfare Workshop.

Level	Responsibility for appointment to event	Experience advised
A	By Organising Body approved by Event and Competitions Committee	Successfully organised a minimum of 2 events at Level B or above. Have experience of the role of the Planner Prior to the event, attend the British Orienteering Event Officials Conference.
B	Club	Successfully organised a minimum of 2 events at Level C or above.
C	Club	Successfully organised a minimum of 2 events at level D or above.
D	Club	If a novice official, then an experienced mentor is required.

1.3 Planners

ALL planners will have completed safety training prescribed within the British Orienteering Event Safety & Welfare Workshop.

Level	Responsibility for appointment to event	Experience advised
A	Organising Body 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 Prior to the event attended the British Orienteering Event Official Conference.
B	Club	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.

1.4 Controllers

1.4.1 Only licensed Controllers will officiate at events. The grade of Controller required for each level of event is as defined below, except where superseded by the Competition Rules for that specific competition.

1.4.2 Appointment to the role of Controller:

ALL Controllers will have completed safety training prescribed within the British Orienteering Event Safety & Welfare Workshop.

Level	Responsibility for appointment to event	Requirement
A	Event and Competitions Committee	Grade A Controller
B	Club	Grade B Controller or above; the controller will be from a different club to the organising club
C	Club (and Association where a Grade C Controller is from the organising club)	Any Controller, who should be from a different club from the organising club
D	Club	Controller not necessarily required, however as a minimum a different British Orienteering Licensed Controller or licensed Organiser or licensed Coach, to the author must review the Risk Assessment Form

2 Licensing for Controllers

2.1 Training and Experience Requirements:

ALL Controllers will have completed safety training prescribed within the British Orienteering Event Safety & Welfare Workshop.

Grade	Requirements
A	<p>Successfully control a minimum of 2 events at Level B within the previous 8 years (one of which within 4 years).</p> <p>Successfully plan or co-plan at least one event at Level B after becoming a Controller Grade B and within the previous 8 years.</p> <p>Successfully organise or co-organise at least one event at Level B within the previous 10 years</p> <p>Complete a British Orienteering Controller Grade A course.</p> <p>Be appointed to the Grade by Event and Competitions Committee</p>
B	<p>Successfully control a minimum of 2 events at Level C within the previous 8 years (one within 4 years).</p> <p>Successfully plan or co-plan at least one event at Level B within the previous 10 years.</p> <p>Successfully organise or co-organise at least one event at Level C within the previous 10 years.</p> <p>Complete a British Orienteering Controller Grade B course.</p> <p>Be appointed to the Grade by their Constituent Association.</p>
C	<p>Organise a competition registered with British Orienteering within the previous 10 years.</p> <p>Plan a minimum of 3 events, with at least one at Level C, and at least one within the previous 5 years.</p> <p>Complete a British Orienteering Controller Grade C course.</p> <p>Be appointed to the Grade by their Constituent Association.</p>

2.2 Applying

2.2.1 Application forms for grade A Controllers are obtainable from the British Orienteering web site. Application forms for grade B and C Controllers are obtainable from Associations. Details of the application procedure are given on the forms.

2.2.2 Exceptionally, individuals can be appointed directly to a particular grade without first having qualified at a lower grade. This will only be possible when their experience merits it, such as in the case of an orienteer moving to this country from abroad, having already become an experienced Controller in their home country.

2.2.3 In order that the lists of licensed Controllers can be kept up to date, appointing bodies are asked to notify British Orienteering Office of all appointments which they make, together with any necessary regrading.

2.3 Maintaining the Controller License

2.3.1 Controllers should have fulfilled all three roles at the event Levels stated and within the stated number of years.

Grade	Roles, Levels and years		
A	Controlling:	Level A	5 years
	Planning:	Level B	10 years
	Organising:	Level C	10 years

B	Controlling:	Level B	5 years
	Planning:	Level C	10 years
	Organising:	Level D	10 years
C	Controlling:	Level C	5 years
	Planning:	Level C	10 years
	Organising:	Level D	10 years

- 2.3.2 At the end of each year, appointing bodies should review the recent experience of the Controllers for whom they are responsible.
- 2.3.3 Where a Controller does not satisfy the requirements laid out in 2.3.1 above, the Controller will be moved down one grade unless there are sufficient extenuating circumstances. Allowance will be made for the practicality of meeting the requirements in the defined timescales, such as in cases where one of the three requirements is not met, but the other two are significantly exceeded, or where the person is actively involved in other relevant areas of the sport. Such a judgement should be made by the appointing body.
- 2.3.4 Where a Controller's performance at an event during the preceding year has been unsatisfactory, the Controller should either be moved down one grade, or should be required to attend a course for that grade of Controller before taking on that job at another event and within twelve months.
- 2.3.5 It is the responsibility of Associations to notify Event and Competitions Committee of any factors that may influence the eligibility of any Grade A Controllers to remain at that grade.
- 2.4 IOF Event Advisers
- 2.4.1 This is a separate scheme administered by the IOF, and replaces the previous IOF Controller scheme. Further details and an application form are available from the IOF. Anyone who is interested in becoming an IOF Event Adviser should first discuss this with the Chairman of Event and Competitions Committee.

3 British Orienteering Approved Training Courses

- 3.1.1 The British Orienteering-approved courses listed are mandatory for Controllers wishing to be listed at the appropriate Grade.

Appendix D: Mapping

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This Appendix is to be read in conjunction with the British Orienteering Rules of Orienteering and has the same authority.

Any issues associated with mapping or with any of the details in this Appendix should first be referred to Map Advisory Group.

1 Mapping

1.1 Application of Rules

- 1.1.1 See the British Orienteering Rules of Orienteering sections 18 & 19 for mandatory requirements.
- 1.1.2 Approval to vary any of the British Orienteering or IOF specifications or details in this Appendix must be obtained in good time from Event & Competitions Committee.
- 1.1.3 See Rules 18.8 and 18.13 for essential information to be shown on the map. In addition, the following variations should be noted:
 - It is not essential to show the full legend on Level A event maps apart from special symbols.
 - Colour check and register crosses are required on off-set litho printed maps.
- 1.1.4 For professionally printed maps, the name and contact details of the printer should be shown or a suitable space should be left (Printer's Imprint Act 1961). For club printers add "Printed by [Name of Club]" or similar.
- 1.1.5 Maps for Level A events must use the British Orienteering layout design, which can be obtained from the British Orienteering office.
- 1.1.6 The map should carry the appropriate access and permission statement, for example "Possession of this map does not imply right of access to the area for orienteering or any other purpose. Permission must be obtained from the landowner. The representation of a path or track does not indicate a right of way."

1.2 Specifications

- 1.2.1 Maps for Trail Orienteering (ISOM), Mountain Bike Orienteering (ISOM) and schools should be produced using the appropriate specification.
- 1.2.2 Maps for schools should be produced using the British Orienteering Specification for School Orienteering Maps.
- 1.2.3 Symbols specific to one discipline should not be used for other disciplines,

- 1.2.4 Some Level D events such as street events and training events fall outside these specifications and this appendix does not apply to maps produced for those events.
- 1.3 National variations: additional symbols and colours
- 1.3.1 The approved British Orienteering variations to the IOF ISOM Specifications are listed below. Dimensions are specified as for 1:15,000 scale.
- 1.3.2 Map symbols
- 1.3.3 (a) Symbol 119: Platform - a flat area originally used for charcoal burning is represented by a brown triangle pointing down the slope, 0.8mm each side (the same size as the boulder cluster 209)
- 1.3.4 (b) Symbol 525.1: Stile - a crossing point over a wall or fence suitable only for foot passage is represented by a black line 0.18mm wide and 1.0mm long
- 1.3.5
- 1.3.6 (c) To improve the visibility of contours and other brown features on maps comprising only open and rough open land: Symbol 401, open land (normally Yellow 100%) and symbol 403, rough open land (normally Yellow 50%) may both be reduced in intensity
- 1.3.7 See the British Orienteering Rules of Orienteering Sections 20 & 21 Course Planning for mandatory requirements with regard to Course Drawing. The approved British Orienteering variations to the IOF ISOM Specifications are listed below.
- 1.3.8 Course setting symbols
- a) Symbol 703: Control number dimensions are recommended to be between 4mm (16pt) and 5mm (20pt) in Arial Bold colour purple
- b) For multi-age competitions in which both scales are used, the size of the symbols on the 1:10000 maps may be 150% greater than on the 1:15000 maps – this makes for consistent control descriptions across both map scales.
- c) For maps produced only at the 1:10,000 all the overprint symbols may be enlarged to 150%. For 1:10000 maps, where the overprints are not enlarged to 150% the line thickness should still be increased to between 0.40mm and 0.50mm. The thicker line should be used where the map has a lot of content such as vegetation, buildings or contours.
- 1.3.9 Map Advisory Group recommends that to improve legibility for runners with colour vision defects, the colour used for course overprints on a laser printed map is changed in the OCAD colour table from the default value (100% magenta) to at least CMYK 20,100,0,0 and ideally between 30,100,0,0 and 40,100,0,0.
- 1.3.10 Map Advisory Group has issued a set of symbols for use with OCAD in accordance with the latest ISOM 2000, ISSOM 2007 and British Orienteering Specifications for School Orienteering Maps. Copies may be obtained from British Orienteering web site.
- 1.3.11 Features that are smaller than defined by the IOF Specifications, that is less than 1m, (pit, dot knoll, boulder, small depression) in less well-featured, smoother terrain may be mapped if they are prominent. The lower value may increase in rougher terrain with more or larger features.

2 Map scales

- 2.1.1 The scales, symbol sizes and contour intervals for maps for each type of event at levels A, B, C and D are set out in tables 1 to 4 below. Subject to the provisions in Schedule 1 to this Appendix.
- 2.1.2 For Level A long distance events enlargements must be provided for classes M/W16 and below and M/W45 and above in accordance with the Level A Competition Rules.
- 2.1.3 For Level B Events, other than Sprint or Urban, the map must be printed at a scale of 1:15,000 or 1:10,000

with 5m or 2.5m contours. When a map scale of 1:15,000 is used, enlargements must be provided for classes M/W16 and below and M/W45 and above at 1:10,000.

- 2.1.4 For Level C Events it is preferred that these scales are used, however other scales and contour intervals may be used but care should be taken that this does not result in the inclusion of an excess of small details and features affecting clarity. Where ISOM maps use other scales, for scales between 1:10,000 and 1:5,000 the symbols size should be 150% and for larger scales should be 200% of the 1:15,000 scale symbol.
- 2.1.5 In order to ensure that a map is legible, terrain should be surveyed and drawn to ensure that it is legible when printed at a scale of 1:15,000 (ISOM) and 1:5,000 for Sprint and Urban maps (ISSOM). The surveyor must select which features to include on the map to ensure the clarity of the end product. The ISOM and ISSOM map specifications define the minimum distances between lines and symbols.

3 Map printing

- 3.1.1 The map printing method required for each level and type of event map is set out in tables 1 - 4 below.
- 3.1.2 Maps for Level A events must be printed by off-set litho, or by other method as shown in Table 1 provided that:-
 - a) The professional printing firm is approved by Map Advisory Group. To gain approval the printer must submit samples of their work including a test file (available in OCAD and PDF format from <http://lazarus.elte.hu/mc/print-tech/index.html>).
 - b) Following confirmation from the Controller and Map Adviser that they agree the quality of the map will be adequate for the event, Map Advisory Group agree approval based on submission of a print of the whole area at the smallest scale on the paper that is to be used.
- 3.1.3 Level B maps should be printed by an approved professional printing firm or approved club printer provided that the printer is approved by Map Advisory Group. To gain approval the printer must submit samples of their work including a test file (available in OCAD and PDF format from <http://lazarus.elte.hu/mc/print-tech/index.html>).
- 3.1.4 Maps for all events should ensure that all detail is legible and colours are distinguishable.
- 3.1.5 The Map Advisory Group will provide advice on map production for mappers.

4 Mappers and Map Advisers

- 4.1 Mandatory requirements
 - 4.1.1 See the British Orienteering Rules of Orienteering section 19 for Mappers and Advisers mandatory requirements.
 - 4.1.2 Event and Competitions Committee are responsible for ensuring that a Map Adviser is appointed for each Level A event. The Map Advisers role is to give advice and support on all aspects of the mapping process.
 - 4.1.3 It is expected that Map Advisers will keep up to date with current mapping trends through their own mapping and by attendance at the National Mapping Conference from time to time.
 - 4.1.4 For all other events where a new map is being produced, a Map Adviser is desirable and Event and Competitions Committee will appoint an adviser if one is requested.
- 4.2 Map Advisers' responsibilities
 - 4.2.1 The Map Adviser should give advice to the mapper(s) and the Organiser to ensure that the map is of a proper standard for the event.
 - 4.2.2 This advice should aim to ensure that:
 - a) adequate manpower and time are available for the task.
 - b) appropriate methods and materials are used.

- c) the appropriate Rules, specifications, symbol sets etc are applied, in both survey and cartography and approval from Map Advisory Group is sought for any proposed deviations from them.
 - d) reasonable and realistic time scales are adhered to.
 - e) the interpretation of the terrain and the generalisation of the contents are suitable for a map for the event at the appropriate scale and level.
 - f) the cartography is completed to specification within a suitable layout.
 - g) Arrangements for printing are appropriate.
- 4.2.3 The Map Adviser should keep close liaison with the event officials and advise what steps need to be taken if serious inadequacies are discovered.
- 4.2.4 Unresolved problems must be referred to the Map Advisory Group Chairman.
- 4.2.5 Brief reports should be provided periodically for the Map Advisory Group and the Chairman, Events & Competitions Committee. An advising procedure for level A events is available on the British Orienteering web site.

5 Schedule 1

5.1 Background

5.1.1 Schedule 1 was passed at British Orienteering AGM 2014 Effective January 2015

5.1.2 Applies to all Level A & B competitions, where the format is either Long distance, Middle distance, Night or Relay.

5.2 Permitted map scales

Event Type	Age Classes	Map scales
Long (Level A)	18E, 20E & 21E	1:15,000
	18 to 40 excluding Elite Classes	1:15,000 or 1:10,000
	10 – 16 45 and above	1:10,000 or 1:7,500
Long (Level B)	18 to 40	1:15,000 or 1:10,000
	10 – 16 45 and above	1:10,000 or 1:7,500
Middle and Night (Levels A and B)	18 to 40	1:10,000
	10 – 16 45 and above	1:10,000 or 1:7,500
Relay (Levels A and B)	Premier Trophy, 40, 120+	1:10,000
	Other classes	1:10,000 or 1:7,500

5.3 When the permitted map scales should operate

5.3.1 Where a decision is required about which map scale to use for certain classes at a Level A or B event, the presumption must be in favour of the smaller of the permitted scales.

5.3.2 The larger of the permitted scales may be used if the Planner and Controller of the event agree that the map at the smaller scale is too difficult for competitors in the relevant class to read while running.

5.4 Resolution in the event of a dispute

- 5.4.1 At Level A events where the Planner and Controller are unable to agree which map scale to use for certain classes, the issue must be referred to Events & Competitions Committee, whose decision will be final.
- 5.4.2 At Level B events where the Planner and Controller are unable to agree which map scale to use for certain classes, the issue must be referred to the Constituent Association in which the event is registered, whose decision will be final.

6 Table 1 - Level A event maps

Competition maps must include the information set out in the British Orienteering Rules of Orienteering, Section 18 - Mapping. The map must be current and reflect the state of the terrain at the time of the event. Subject to Schedule 1 above.

WRE events require approval at IOF level for Laser/digital printing.

	Specific ation	Scale	Symb ol Size	Enlarged Map Scale	Enlarged Symbol Size	Contour interval	Print Method	Approved Printer	Comment
Long Distance	ISOM 2000	1:15,000	100%	1:10,000	150%	5m or 2.5m	Offset litho	Approved Professional	Maps at 1:15,000 of more contoured areas must be printed by offset litho. Maps of less contoured areas may be printed by laser/digital; subject to approval.
Middle Distance	ISOM 2000	1:10,000	150%	None	None	5m or 2.5m	Offset litho	Approved Professional	Maps of less contoured areas may be printed by laser/digital; subject to approval.
Sprint	ISSOM 2007	1:5,000 1:4,000	100% 100%			2.5m or 2m	Offset litho or Laser/digital	Approved Professional	Laser/digital printing permitted. Competition Rule C refers to use of enlarged scale (1:4,000 & 1:3,000) for older competitors. Paper size should not exceed A4.
Relay	ISOM 2000	1:10,000	150%	None	None	5m or 2.5m	Offset litho or Laser/digital	Approved Professional	Laser/digital printing permitted subject to approval
Night	ISOM 2000	1:10,000	150%	None	None	5m or 2.5m	Offset litho or Laser/digital	Approved Professional	Laser/digital printing permitted subject to approval.

7 Table 2 - Level B event maps

Competition maps must include the information set out in the British Orienteering Rules of Orienteering, Section 18 - Mapping. Maps should be up to date and reflect the current state of the terrain. Subject to Schedule 1 above.

WRE events require approval at IOF level for Laser/digital printing.

	Specification	Scale	Symbol Size	Enlarged Map Scale	Enlarged Symbol Size	Contour interval	Print Method	Approved Printer	Comment
Long Distance	ISOM 2000	1:15,000 or 1:10,000	100%			5m or 2.5m	Offset litho or Laser/digital	Professional or Club	
Middle Distance	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Professional or Club	
Sprint	ISSOM 2007	1:5,000	100%			2.5m or 2m	Offset litho or Laser/digital	Professional or Club	Paper size should not exceed A4.
		1:4,000	100%						
Urban	ISSOM 2007	1:5,000	100%			5m or 2.5m	Offset litho or Laser/digital	Professional or Club	
Relay	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Professional or Club	
Night	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Professional or Club	

Score and Ultra Long Distance events: maps should use the appropriate specification.

8 Table 3 - Level C Event maps

These are recommendations and not mandatory. However, competition maps should include the information set out in the British Orienteering Rules of Orienteering, Section 18 - Mapping.

	Specification	Scale	Symbol Size	Enlarged Map Scale	Enlarged Symbol Size	Contour interval	Print Method	Approved Printer	Comment
Long Distance	ISOM 2000	1:15,000 or 1:10,000	100%			5m or 2.5m	Offset litho or Laser/digital	Not required	
Middle Distance	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Not required	
Sprint	ISSOM 2007	1:5,000	100%			2.5m or 2m	Offset litho or Laser/digital	Not required	
		1:4,000	100%						
Urban	ISSOM 2007	1:5,000				5m or 2.5m	Offset litho or Laser/digital	Not required	
Relay	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Not required	
Night	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Not required	

Score and Ultra Long Distance events: maps should use the appropriate specification.

9 Table 4 - Level D event maps

Specification	Scale	Symbol Size	Enlarged Map Scale	Enlarged Symbol Size	Contour interval	Print Method	Approved Printer	Comment
These are recommendations and not mandatory								
Long Distance	ISOM 2000	1:15,000 or 1:10,000	100%			5m or 2.5m	Offset litho or Laser/digital	Not required
Middle Distance	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Not required
Sprint	ISSOM 2007	1:5,000	100%			2.5m or 2m	Offset litho or Laser/digital	Not required
		1:4,000	100%					
Urban	ISSOM 2007	1:5,000					Offset litho or Laser/digital	Not required
Relay	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Not required
Night	ISOM 2000	1:10,000	150%			5m or 2.5m	Offset litho or Laser/digital	Not required
Score and Ultra Long Distance events: maps should use the appropriate specification.								

Appendix E: Event safety

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1. Introduction
2. Risk Assessment and risk management
3. Communications
4. First Aid cover
5. Checks for finishers
6. Accidents, incidents and insurance
7. Training and further information

This Appendix is to be read in conjunction with the current British Orienteering Rules of Orienteering.

1 Introduction

1.1 Background

- 1.1.1 The British Orienteering Rules of Orienteering cover event safety and set out the key areas of responsibility for event officials. This Appendix provides additional guidance on how to comply with those rules.
- 1.1.2 Event officials should also refer to Appendix A: Event systems and Appendix B: Course planning.
- 1.1.3 The Event Officials Handbook on the British Orienteering website contains standard forms and plans for use by Organisers.
- 1.1.4 Safety includes safety and risk management throughout the duration of the event. This includes the competition area & courses, arena/assembly, traffic to/from and in the car parks, routes to and from all these areas, as well as competitors, spectators, members of the public, landowners.
- 1.1.5 Orienteering involves people with a wide spectrum of physical abilities making their way across potentially hazardous and challenging terrain. Despite this, the incidence of serious injury is low.

1.2 Responsibility

- 1.2.1 The responsibility for personal safety at the event lies with the competitor; this is clearly set out in the Rules and should be highlighted in event information.
- 1.2.2 It might be advisable to suggest that competitors who have any medical issues or medications with them when out running, that they write any essential medical details on their race number or carry an information sheet with them.
- 1.2.3 The Organiser has overall responsibility for ensuring that the necessary safety and risk management arrangements for the event are in place both for competitors and non-competitors.
- 1.2.4 Competitors have the right to assume that whilst they are responsible for their personal safety, an Organiser has put in place reasonable risk management arrangements to mitigate the hazards that a competitor might reasonably not be aware of. Such as locally known hazards e.g. mine shafts.
- 1.2.5 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.
- 1.2.6 The Controller (or, for level D events an accredited person) has responsibility to ensure that risk management arrangements for the event have been planned and implemented.

2 Risk assessment and risk management

- 2.1.1 The Organiser must complete and regularly update the risk assessment in consultation with the Planner, Controller and other key officials.
- 2.1.2 The Controller (or for level D events if not by a Controller then either a licensed Organiser who has attended an Event Safety workshop or a licenced Coach) must review the risk assessment and sign it to confirm it has been reviewed.
- 2.1.3 The risk assessment form must be kept for 5 years after an event or activity has taken place.
- 2.1.4 Registers of appropriately trained people are available to clubs through the website database. In all instances the person signing the risk assessment form must confirm the form has been reviewed by signing, printing their name and dating the form.
- 2.1.5 In the case where an Organiser, who has responsibility for risk management, and the person signing the risk assessment form disagree, the signee should indicate their concerns on the form.
- 2.1.6 If the situation above occurs the matter should be referred to the Chief Executive.
- 2.1.7 It is important that the preparation of the relevant risk assessment form is commenced at an early stage in the planning process, so as to help identify and assess safety issues and to decide on actions that should be taken to mitigate these identified risks.
- 2.1.8 It may not be possible to run a perfectly safe event but Organisers should be aware of the main safety issues and, if an incident occurs, be prepared to deal with it in a calm and effective manner.
- 2.1.9 Organisers have the right to impose whatever additional safety rules they think appropriate for an event; provided that competitors are clearly notified. Whilst this right will only be used occasionally, Organisers should be confident that they can require competitors to follow specific instructions where to do otherwise would compromise safety.
- 2.1.10 Where a risk assessment has set out circumstances when an appropriate control measure must be employed, the Organiser must act to comply with the control measure. The Organiser must therefore not avoid their responsibility, after consultation with other officials, to restrict or stop the event if a key aspect of the risk management measures is not in place.

3 Communications

- 3.1.1 The Organiser must have a system in place for communicating with key officials at the main locations such as start (s), finish(es), car park, assembly/arena and download.
- 3.1.2 This may be arranged by using mobile phones, 2 way radios, runners, cyclists or vehicles if all the locations are not immediately adjacent.
- 3.1.3 Mobile phone and/or radio coverage needs to be checked in all locations and alternative arrangements made for areas of poor reception.
- 3.1.4 Provide a laminated list of personnel names, essential numbers and any protocol for each radio/mobile phone user.
- 3.1.5 The Event Officials Handbook contains information on setting up a radio communication system.
- 3.1.6 First Aiders and key officials should be clearly identified by the use of a labelled high visibility jacket/vest worn over their outdoor clothing.

4 First Aid cover

- 4.1 Overview
 - 4.1.1 The Organiser must ensure that appropriate First Aid is available.
 - 4.1.2 First Aid provision must be appropriate to the particular needs of the event bearing in mind:

- The time of year
- The location of the start (s) & finish(es)
- The terrain and area involved
- The format of the competition
- The nature of the competitors taking part.

4.1.3 There are several options that can be considered.

- Professional First Aid provider
- Voluntary organisations such as St John, St Andrews, Red Cross, Mountain rescue
- Trained First Aiders who are club members/coaches.

4.1.4 When arranging First Aid cover with outside agencies the following information should be supplied to them to allow them to quote for and provide an adequate service for the event.

- Set up and start times, course closing time, and control collection time.
- Expected numbers and any particular needs for this event (e.g. all school children)
- If they may be required to rescue a casualty from the terrain.
- If a static First Aid point is required in addition to a mobile unit.

4.2 Casualty rescue plan

4.2.1 The Organiser must prepare a casualty rescue plan if they anticipate any significant difficulties in recovering a casualty from any parts of the competition area.

4.2.2 A casualty rescue plan is essential if the format is ultra-long or held at night in forest terrain.

4.2.3 A retirement and evacuation plan for competitors taking part in an ultra-long distance course should also be considered.

4.2.4 The Event Officials Handbook contains a suggested casualty rescue plan

4.2.5 Organisers should know the location of the nearest accident hospital and other minor injury facilities (are they open at weekends?) and be able to arrange the transfer of any casualty.

4.2.6 The grid reference/post code and sat nav. co-ordinates to be given to ambulance control for emergency vehicle access points should be written on the first page of the risk assessment.

4.3 Extreme weather arrangements

4.3.1 The Organiser is responsible for deciding what action to take (e.g. such as delaying or cancelling the event, or shortening courses) in exceptional circumstances: this includes extreme weather conditions.

4.3.2 These may consist of the following:

- Cold
- Heat
- Wind (storm damage expected)
- Wet and cold
- Flood

4.3.3 Measures should be in place to deal with the likely effects of these extreme weather conditions, such as drink points on courses, clothing requirements and curtailment of courses.

This may be of importance if the format is ultra-long and Organisers should ensure that competitors are aware of minimum equipment and sustenance requirements, as specified in the risk assessment.

4.4 Personal safety

4.4.1 Competitors are responsible for their own personal safety and for assessing their own ability to complete

a course. However, Organisers must have made reasonable risk management arrangements to mitigate the hazards that a competitor might reasonably not be aware of.

- 4.4.2 Organisers have the right to impose whatever additional requirements they think appropriate for an event or activity and must make sure they notify competitors of these requirements.
- 4.4.3 Where the format is ultra-long, it may be appropriate to permit novices and juniors to compete in pairs and still remain competitive. The Organiser has the right to insist that specific age groups cannot compete alone.
- 4.4.4 The Organiser of an ultra-long event may decide to have certain controls staffed with an official, drinks, First Aid and radio/phone communication.
- 4.4.5 Junior and novice orienteers do not often compete at night events; the youngest age class at the British and Area Night championships is M/W16. The Organiser must be certain that competitors younger than 16 on those courses are competent to complete their course.
- 4.4.6 The Organiser has the right to insist they either withdraw their entry or participate under the direct control of an adult.
- 4.5 Clothing and equipment requirements
- 4.5.1 The Organiser must state if shorts are permitted to be worn (this will depend on the terrain). Otherwise competitors must wear clothing that fully covers their torso and legs. The Organiser may prevent competitors who do not comply with the full leg and torso cover requirements from taking part.
- 4.5.2 The Organiser must give notice if additional safety measures are required, competitors must comply with these requirements. These may be notified to competitors in advance or during the event. Examples of measures that may be required by the Organiser are:
- The carrying of a lightweight waterproof hooded running jacket or similar waterproof clothing.
 - The carrying of a whistle.
 - The carrying of a spare torch at night events.
- 4.5.3 The Organiser needs to explain the reasons in the pre-race information and/or prominently at the event so that the requirements are clear. Also as to whether it is a recommendation or a requirement.
- 4.5.4 The Organiser needs to ensure that the check for these items is located such, that if they are required, the competitor can easily return to obtain the required item. A further check may be required to ensure that competitors have not disposed of the items en-route to the start.
- 4.5.5 If such items are required by the organiser, then it is essential to check every competitor en-route to or at the start. The worst thing that an Organiser can do is require the items and then not bother to check.
- 4.6 Terrain hazards
- 4.6.1 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.
- 4.6.2 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.
- 4.6.3 Each area used for previous orienteering events may have particular hazards associated with it. It is suggested that for each area, a list of the known hazards is compiled. This list can be revised after an event has taken place.
- 4.6.4 The dangers of a particular type of terrain will generally be known to local inhabitants and to local orienteers so check with them, e.g. old mine shafts.
- 4.6.5 Dangerous features should be 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.

4.7 Finish location

- 4.7.1 There should always be someone at the finish, to supervise competitors and act as the point of contact in an emergency. The finish is the most likely place for somebody to go to report a problem such as an injured competitor.
- 4.7.2 If the finish is in a remote location consideration should be given to providing a qualified first-aider, a first aid kit and a shelter at the finish, in particular if the weather is likely to be poor.
- 4.7.3 A reliable means of communication also needs to be set up between the finish and assembly.

4.8 Electrical and other equipment

- 4.8.1 The Organiser must ensure that any mains voltage electrical equipment is installed correctly and used appropriately by suitably experienced persons.
- 4.8.2 Consideration should be given to preparing a separate risk assessment for all electrical equipment.
- 4.8.3 Equipment which is designed for external use will tend to be safe provided that it is used appropriately and by suitably experienced people. There is a danger that domestic equipment used outside is not suitable for such an environment. If in any doubt, seek qualified advice.
- 4.8.4 The use of generators to support event systems requires careful consideration to ensure that safety is maintained. For example, they must be sited away from main thoroughfares, cordoned off and spare fuel stored appropriately.
- 4.8.5 The use of computers, printers and other hardware to support event systems needs consideration with regard to the weather, electrical safety, generator support, cable runs etc.
- 4.8.6 Cable runs and connections must be suitably protected from the weather, the correct cable thickness for their function, and with protected joints. There should be protection from all traffic going over them – vehicle and pedestrian. Any cables at head height, e.g. travelling between tents and buildings, must be securely supported.
- 4.8.7 If bamboo canes are to be used at control sites, their siting should aim to reduce the chance of competitors falling on them. Cane caps or other suitable protection must be fitted to prevent possible injuries. These requirements also apply when canes are used elsewhere such as the assembly area, start, finish and string course.

4.9 Roads and traffic

- 4.9.1 The Organiser must include in their risk assessment all road crossings and traffic into and out of the event car park.
- 4.9.2 The Organiser and Planner must pay particular attention to courses planned for competitors under 16 years of age. In the eyes of the law, the Organiser is acting in loco parentis for children under the age of 16 and must be seen to take precautions over and above what a careful parent would take for the safety of their children.
- 4.9.3 Courses for those aged under 16 on the day of the event must not have any routes that require them to cross roads with significant traffic (where traffic is travelling at over 15mph) unless appropriate traffic management arrangements have been put in place. A disclaimer signed by a parent or guardian does not circumvent this rule.
- 4.9.4 Appropriate traffic management arrangements may include mandatory safe routes – crossings controlled by lights/marshals, the use of under-passes/bridges, timed controls etc. Roads with traffic management that induce low speeds (15mph as on many campuses) are acceptable but busy public roads are not.

- 4.9.5 There is the need to get vehicles in efficiently and parked safely. Measures should to be in place to ensure traffic does not 'back up' onto main roads or block junctions.
- 4.9.6 Traffic flows may need one way routes into and out of the area.
- 4.9.7 Car parks need to be sufficient to get all vehicles parked and leave room for emergency vehicle ingress and egress. The layout may include an empty lane every X number of cars. In case of fire, as much space as possible should be left between vehicles, particularly campervans.
- 4.9.8 Road crossings to and from the start/ finish may need to be marshalled – a separate lane for pedestrians if they share the car park entrance is desirable. Road crossings on a course should be avoided.
- 4.10 Night events
- 4.10.1 When the event is to be held during the hours of darkness the risk assessment must take account of additional hazards arising from this.
- 4.10.2 Competitors will be reminded of their responsibility towards their personal safety. If the organiser deems it necessary, additional safety measures may be required. In such circumstances checks will be made prior to participants starting to ensure that these requirements are being followed.
- 4.10.3 For Urban night events in which competitors may encounter moving traffic, the Organiser may require competitors to wear an article of high visibility and/or reflective clothing.
- 4.10.4 It is advisable for the Organiser to notify local police about a night event as well as local residents in case they receive or make reports about suspicious lights.
- 4.11 Urban events
- 4.11.1 Urban orienteering presents a number of potential hazards not usually present at forest based events. This include but are not limited to:
- The presence of public roads and moving vehicles.
 - The presence of pedestrians on roads and footpaths
 - The unexpected behaviour of pedestrians changing direction or exiting a building.
- 4.11.2 These hazards must be carefully assessed as part of a comprehensive risk assessment early in the organising process.

5 Checks for finishers

- 5.1 Introduction
- 5.1.1 It is a fundamental principle that all competitors who start a competition are required report to the finish. Competitors should be reminded in pre-event information and on control description sheets, of their obligation to report back. "Once started, you must report back to the finish."
- 5.2 The buddy system
- 5.2.1 The final details may need to explain the concept of the 'buddy' system. That if anyone travelling with a competitor, during the event becomes concerned that particular competitor has not returned to the finish/download within their normal expected time, they should report their concerns to the Organiser.
- 5.2.2 For those travelling alone current custom and practice is for their car keys to be left at download/enquiries.
- 5.2.3 Unless the Organiser declares otherwise, the use of this reporting out/reporting back system is optional.
- 5.3 Keeping a check on starters
- 5.3.1 One way to check for finishers is if a 'check' has been made for starters. This can be by ticking starters off on a pre-printed start list.

- 5.3.2 The list of starters is then matched against the known finishers. This system is not fool proof. It works best in good weather with a small event and an efficient finish/results team.
- 5.3.3 Electronic checks, e.g. interrogating the 'clear', 'check' or 'start' units used with electronic punching, can be more effective (or at least much quicker), but still require an understanding of how to carry out the check.
- 5.3.4 There should be at least one member of the download team who knows how to operate the downloading of data from check, clear and start boxes to cross check on who has started and finished and those who are overdue.
- 5.4 A missing competitor
- 5.4.1 The Organiser must inform competitors that they are required to report to the finish and/or download once they have started a course, whether or not they have completed the course.
- 5.4.2 The Organiser must ensure that a system is in place to confirm that all competitors have returned and have a plan as to how they intend to search for a missing competitor.
- 5.4.3 If a competitor is identified as not having finished, then the Organiser has to make a decision as to whether they are simply a bit overdue or seriously missing. Either way, the Organiser will want to get some preliminary information about the competitor, e.g. age, appearance, experience, course, start time etc.
- 5.4.4 If overdue then it could be appropriate to just wait – the lost competitor will almost invariably appear, having come to no harm.
- 5.4.5 Sometimes sending someone able to identify the missing competitor round the course backwards is helpful. It is important that they don't become missing as well.
- 5.4.6 The 'searcher' should only set out with the Organiser's permission, adequately equipped, preferably with the ability to be communicated with and with clear instructions about returning by a certain time.
- 5.4.7 The 'searcher' should never be the sole parent or guardian of a missing child, who should always remain at the assembly/finish in order to look after the child on their return.
- 5.4.8 If the Organiser feels that the competitor is missing and that there are genuine reasons for being worried, then they need to be prepared to take positive action.
- 5.4.9 It is essential that the strategy for this has been worked out before the event. Tasks to be done include:
- Gathering information.
 - Controlling the progress of the initial search.
 - Seeking leaders for search teams.
 - Liaison with other organisations (e.g. police, mountain rescue).
 - Preparation of a missing person rescue plan at major events.
- 5.4.10 The following factors should influence whether or not to search:
- age and/or experience of the competitor
 - amount of daylight left
 - unattended vehicle remaining in car park
 - weather currently & forecasted
 - known medical condition
 - density of competitors still in the terrain
 - nature of the terrain
 - Elapsed time
 - Time of year

5.4.11 What should be done next?

- Build up as much information as possible.
- Check obvious places and check the start list and finish list again to make sure the person really is missing.
- Get a good description of the person, both physical and psychological.
- Alert potential searchers, control collectors and others.
- Deal with the needs of friends and relatives.
- Quiz finishers to check if anyone has seen the missing competitor or anything unusual.
- Check the car park for vehicles without owners.
- If a safety bearing was given, check the route back that a person following that instruction would have taken.

5.4.12 How should a search be conducted?

- This depends on the environment and the nature of the problem. The deployment of searchers will be based upon probabilities and the terrain.
- Which areas have the highest probabilities of containing the competitor? A field may have the same area as a piece of woodland but can be covered much more quickly by a smaller number of searchers. Allocate searchers accordingly.
- If SportIdent electronic punching has been used at the event, interrogating all the control boxes on the missing runner's course will identify the last control visited by that runner.

5.4.13 There are two methods of search to consider?

- Ribbon searching – this only covers linear features and the land on either side. A competitor injured in the middle of a thick block of forest may still be found by ribbon searching if they use their whistle or shout for help. Following the competitor's course is a sort of ribbon search but may be difficult whenever there is a route choice.
- Sectoring – this involves a comprehensive sweep search of selected pieces of land. It is very slow and labour intensive - probably requiring more people than you will have available.

5.4.14 The reality of searching is that, if the missing person is unconscious, it could take a very long time to locate them in the sort of terrain that we use.

5.4.15 The search needs to be monitored closely to avoid duplication or omission. Any feature that cannot be 'cleared' must be noted, e.g. a mine-shaft. A map showing the progress of the search should be kept.

5.4.16 If the area is not bounded by a good physical feature, then consider the possibility that the person has strayed out of the vicinity completely.

5.4.17 If there are perimeter or access roads, then a quick tour by car may intercept the lost competitor. If and when the missing person is found, then the Organiser will need to recall the searchers.

5.4.18 When should the police be contacted and what sort of response should be expected?

- There is no simple answer but, in general, the police will appreciate early notification, even if you are not actually requesting help at the time.
- In particular, if the missing person is a junior or a vulnerable person by virtue of seniority or other reason, the police will want to know very early on.
- Their response will depend on the circumstances - they will decide whether to alert mountain rescue if you are in a suitable area or to start to gather searchers, based upon the information which you supply.
- It is important that you give as many details as you can of the situation and the missing person including, for example, home telephone number, car registration number etc.

- Although an officer may attend reasonably quickly it can take a significant length of time for them to mobilise any number of helpers.
- Even when help does arrive, the expertise of orienteers to navigate precisely over complex terrain, even at night, should be remembered.
- If attending, Mountain Rescue will want to take charge of search and rescue, thereby relieving the Organiser of this responsibility.

5.4.19 While the search is underway, what should be happening?

- The searchers themselves may have already had a long and tiring day.
- If the weather is bad, are they suitably prepared or will they become casualties themselves?
- Are the friends / relatives of the missing person being looked after?
- Is there someone briefed to deal with the press (in consultation with the police)?
- Are the searchers' families being informed that they will be late home?

5.4.20 What pre-event preparation should be carried out?

- The organising team and the Controller should discuss plans for meeting various crises.
- One of these crises is the overdue competitor and everyone involved should be aware of their responsibilities should the situation occur.
- Members of the organising club (perhaps the control collectors as a minimum) should be alerted to the fact that they should not leave for home until everyone has been accounted for.
- If appropriate, they could be asked to bring head torch, food and suitable clothing – just in case. Radios can make a big difference to the efficiency of the search, provided there is good radio reception, but make sure that the batteries are not running down at the end of the day just when you most need them.
- All clubs should ensure that their members are aware of the basic safety rules associated with orienteering.
- Running a search exercise for a missing competitor is informative and prepares the whole club for the day when it may be for real.

6 Accidents and incidents and insurance

6.1 Insurance

6.1.1 Up to date details on the insurance policy are available on the British Orienteering website. Outlined below are the key requirements of the policy that the Organiser needs to be aware of:

6.1.2 The contact details of all non-members details must be collected at the time of entry and stored for 5 years. A standard entry form showing the details that need to be collected can be downloaded from the British Orienteering website.

6.1.3 Normal submission of the results will satisfy the insurance company's requirements for a list of participant names.

6.1.4 Any volunteers that are not participating (and therefore do not appear on the results list) will need to be listed. The lists of volunteers are to be kept at club level.

6.1.5 The lists of volunteers, results and standard entry forms for non-members need to be kept for 5 years.

6.2 Incidents and accidents

6.2.1 Incident is a term used to cover all circumstances when there might be a claim against British Orienteering. This may involve an accident when there is personal injury or when property or livestock are damaged or any other occurrence where a claim might arise.

- 6.2.2 We have to inform our insurers of 'any serious incident, particularly those involving a personal injury, which could give rise to a subsequent claim'.
- 6.2.3 An Organiser must report a serious incident/accident as soon as possible via an incident report form available here. This is to be sent to the British Orienteering National Office. This must be received at the National Office within 14 days of the occurrence.
- 6.2.4 The Chief Executive must be informed by telephone (details at the end of this document), if a serious incident has taken place; such as a fatality or a missing child.
- 6.2.5 Minor incidents should be recorded by the Association; organising body; club; Organiser etc. and retained in case a claim is made at a later date.
- 6.2.6 Event officials must forward all correspondence regarding an incident unanswered, to British Orienteering or their brokers, as soon as they receive any.
- 6.2.7 Clearly, if incidents are not known about then they cannot be reported; but if they are known about, they need to be reported using the Incident Report Form.
- 6.2.8 If someone makes a claim let British Orienteering know immediately using the Incident Report Form, so that the insurers can be informed.
- 6.2.9 If you let it slide, or try to deal with it yourself, you may invalidate the insurance. Our insurers are required to respond to any claim within three weeks, so we need to know within two weeks of your receipt of the claim. Please treat this as a priority!
- 6.2.10 In addition to the reporting of actual accidents and injuries, when possible please also report to British Orienteering any 'near misses'. This will allow information to be passed on and if appropriate to be included in Event Safety workshops for future event officials to learn from.

7 Training and further information

- 7.1.1 Attendance at a British Orienteering Event Safety & Welfare Workshop is a mandatory requirement for all Organisers, Planners, Controllers and other key officials at all events registered with British Orienteering.
- 7.1.2 Before being initially appointed as a British Orienteering Controller Grade C or before moving up from Controller Grade C to B or Controller Grade B to A, attendance at an Event Safety and Welfare Workshop is a mandatory requirement.

8 Important contact details:

General enquires: info@britishorienteering.org.uk or by phone: 01629 583037

Emergency Contact: Mike Hamilton, CEO at mhamilton@britishorienteering.org.uk or on 07966 305800