

## NZOF A/B Level Event Course Difficulty Colour Coding

	White	Yellow	Orange	Red
<b>Start triangle</b>	On a drawn linear feature else taped			
<b>Legs</b>	Follow drawn linear features (handrails) else taped. No use of contour features.	Follow handrails or cut corners, else taped	Stepping stones. Limited distance estimation	As difficult navigation as possible. No handrails and no obvious attack points.
<b>Control sites</b>	At decision points, for example, track junction.  No contour features.	<50m from drawn linear feature.  Contour features OK.	Small point features are OK. Prominent attack points and/or catching features <100m behind control.	In detailed areas.  Small point and contour features
<b>Control marker</b>	Visible on approach	Visible on approach	Not necessary	Not visible on approach
<b>Compass use</b>	Map orienting only	Rough direction	Rough use	
<b>Route choice</b>	none	Handrails or cut corners	yes	Important, as much as possible
<b>Dog legs</b>	yes	yes	no	no

The difficulty levels in Australia are “very easy, easy, moderate and hard” and are not colour coded. Easy course specifications follow – note the differences with the NZ .

**Very easy:** course must follow drawn linear features (tracks, fences, etc.). A control site is needed at every turning point and all control markers must be visible on the approach side. Large obvious features, visible from and close (<25m) to the linear feature may also be used as control sites.

**Easy:** control sites must be on or near drawn linear features but preferably not at turning points. This gives the opportunity to follow handrails or to cut across country. Short distances along large linear features that are not drawn (such as large gullies or well-defined spurs) may be included in the course but then catching features are essential. Control markers should be visible from the approach side by any reasonable route.

Colour codes in the UK are white, yellow, orange, red, light green, green, blue and brown.

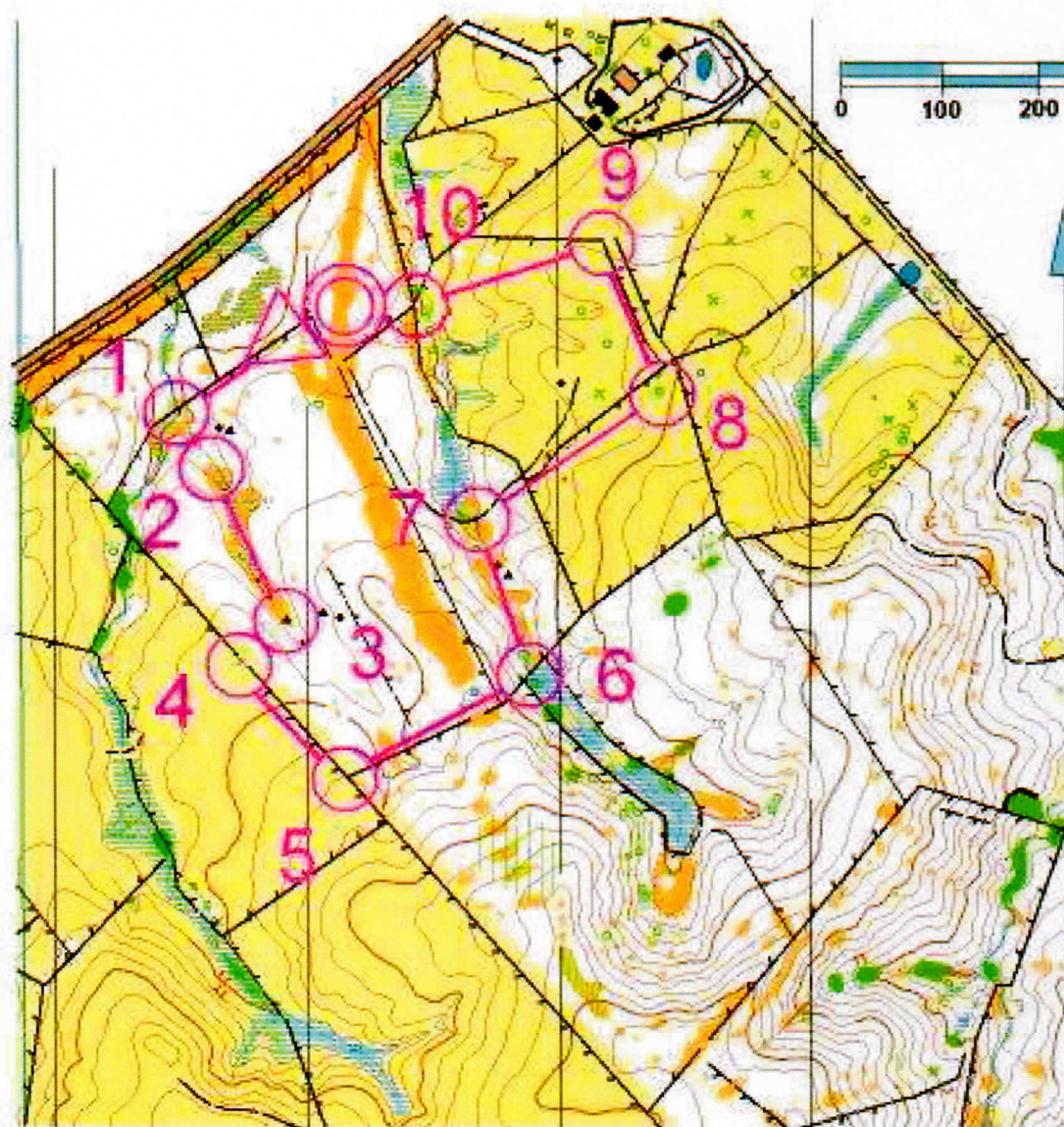
- Colours can go up but not down, for example, you can have an orange leg on a red course but not a red leg on an orange course.
- The CM members’ booklet has an expanded version of the NZOF specifications. The colour codes are a guide and you can modify them for club events, planner proposing and the controller disposing.



### White Course/Very Easy

Start triangle	On a handrail otherwise taped from the start grid
Legs	Follow handrails else taped. No use of contour features.
Control sites	At <b>significant</b> decision points, eg, a track junction <b>or &lt;20m from the drawn linear feature (handrail)</b> . No contour features.
Control marker	Visible on approach <b>from the linear feature being followed</b> .
Compass use	For map orienting only
Route choice	none
Dog legs	OK

Note the additions in red to NZOF rules, which are what I use. A turning point at a track junction is an example of a significant decision. Legs 2 and 4 are marked (taped) routes.



**Leg difficulty:** The above map shows white legs of varying difficulty, which arise from differences in leg length, map detail to read, visibility and the number of decisions required. Leg 5 is easy as it requires only one decision (turn left or right), it is in the



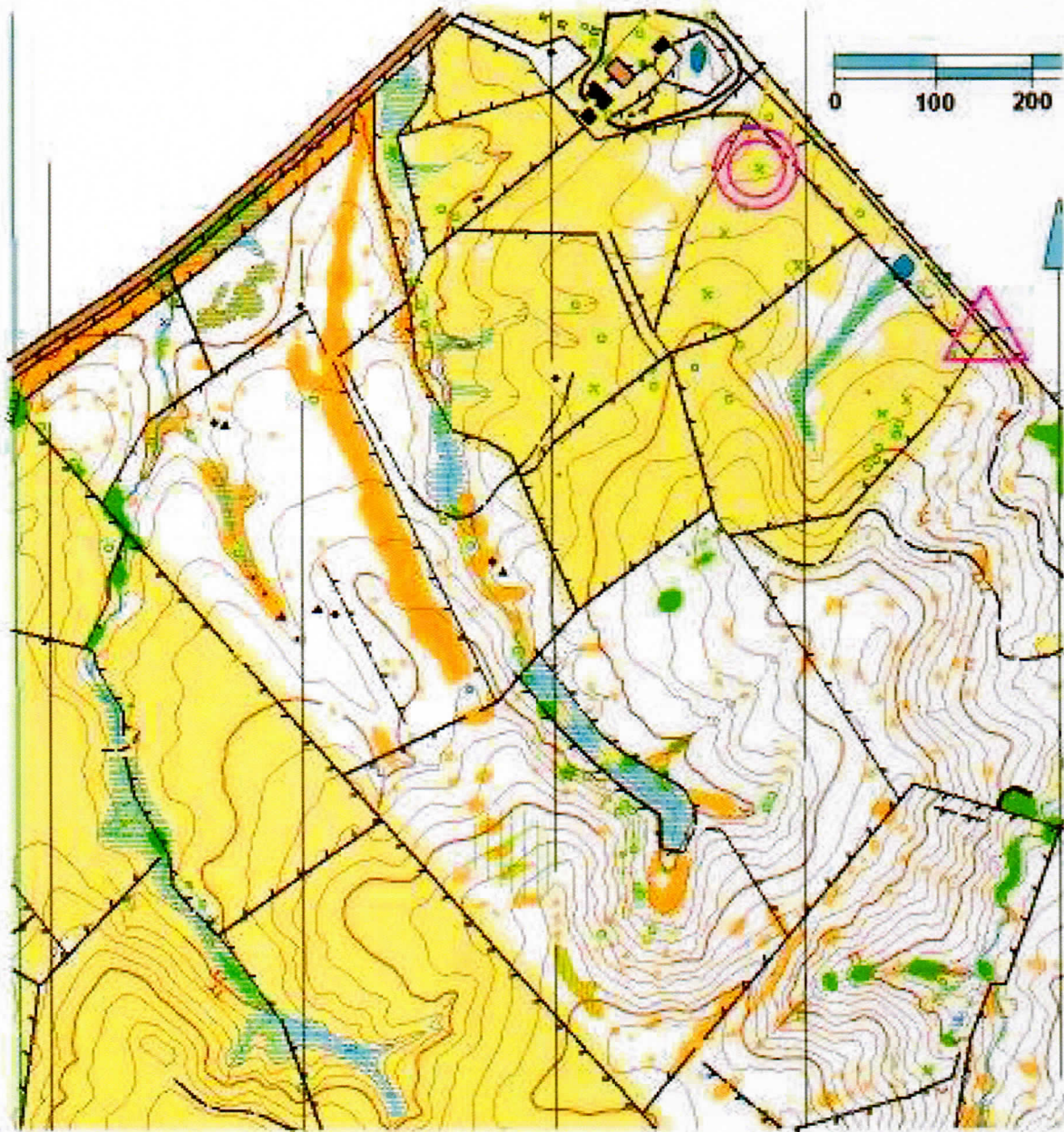
open and it is a short distance to the control, which is visible soon after leaving control 4. Leg 8 is hard because the control is not on the handrail and it has the detail of white, track, yellow, fences, tree stump, rock and a tree to read.

**Exercise 1:** Classify the other legs in the above white course into easy, moderate and hard and compare with the answers at the end of this chapter.

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### Course Setting Practice

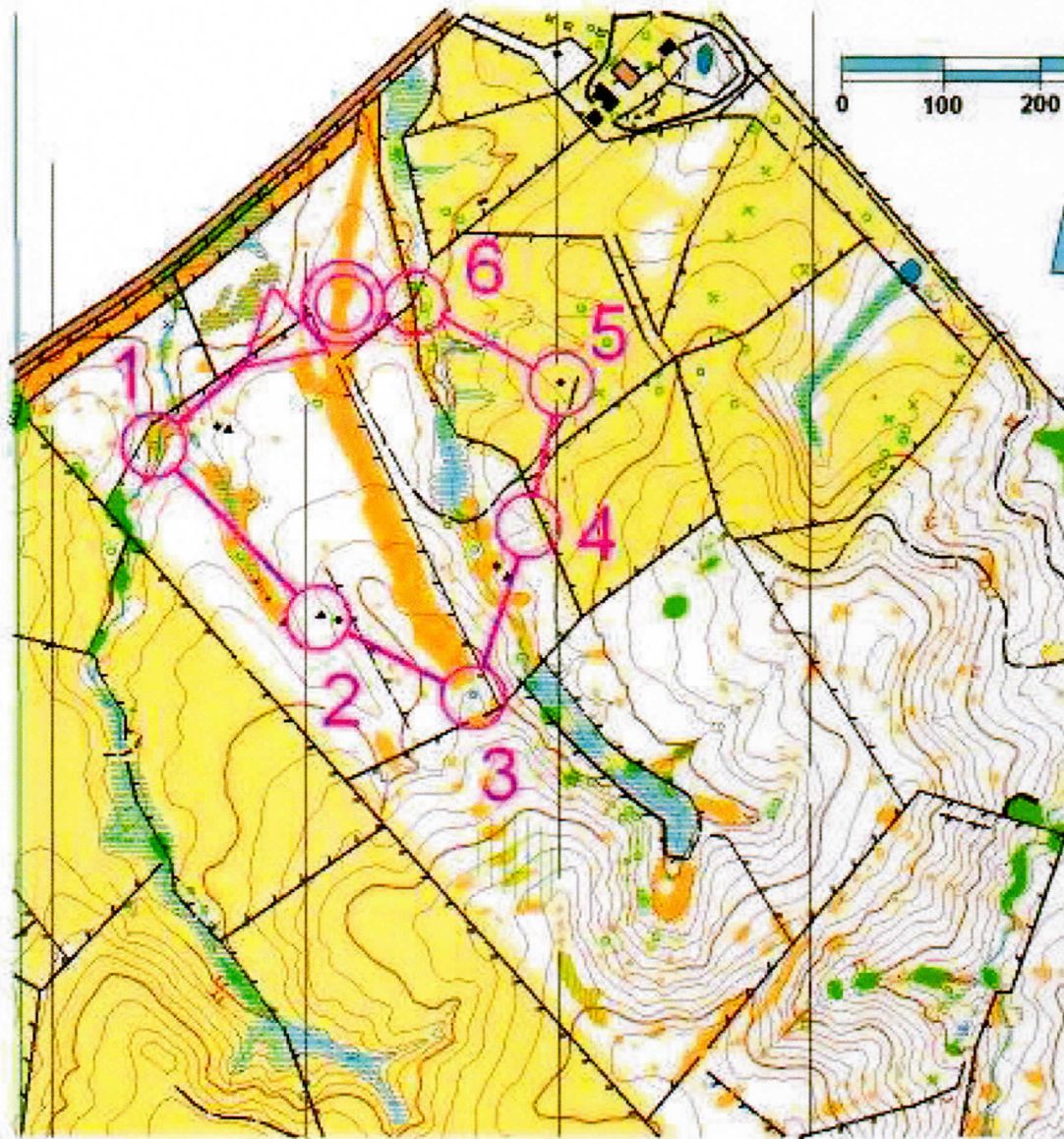
Plan a white course on a copy of the following map.





### Yellow Course/ Easy

Start triangle	Unrestricted
Legs	Follow handrails, cut corners, else taped
Control sites	<50m from drawn linear feature. Contour features OK.
Control marker	Visible on approach <b>if appropriate</b>
Compass use	Rough direction
Route choice	Handrails or cut corners
Dog legs	OK



Classify the legs as easy, moderate or hard and compare with the answers at the end of this chapter. (Note that leg 1 is white if the control is placed so it is visible on approach).

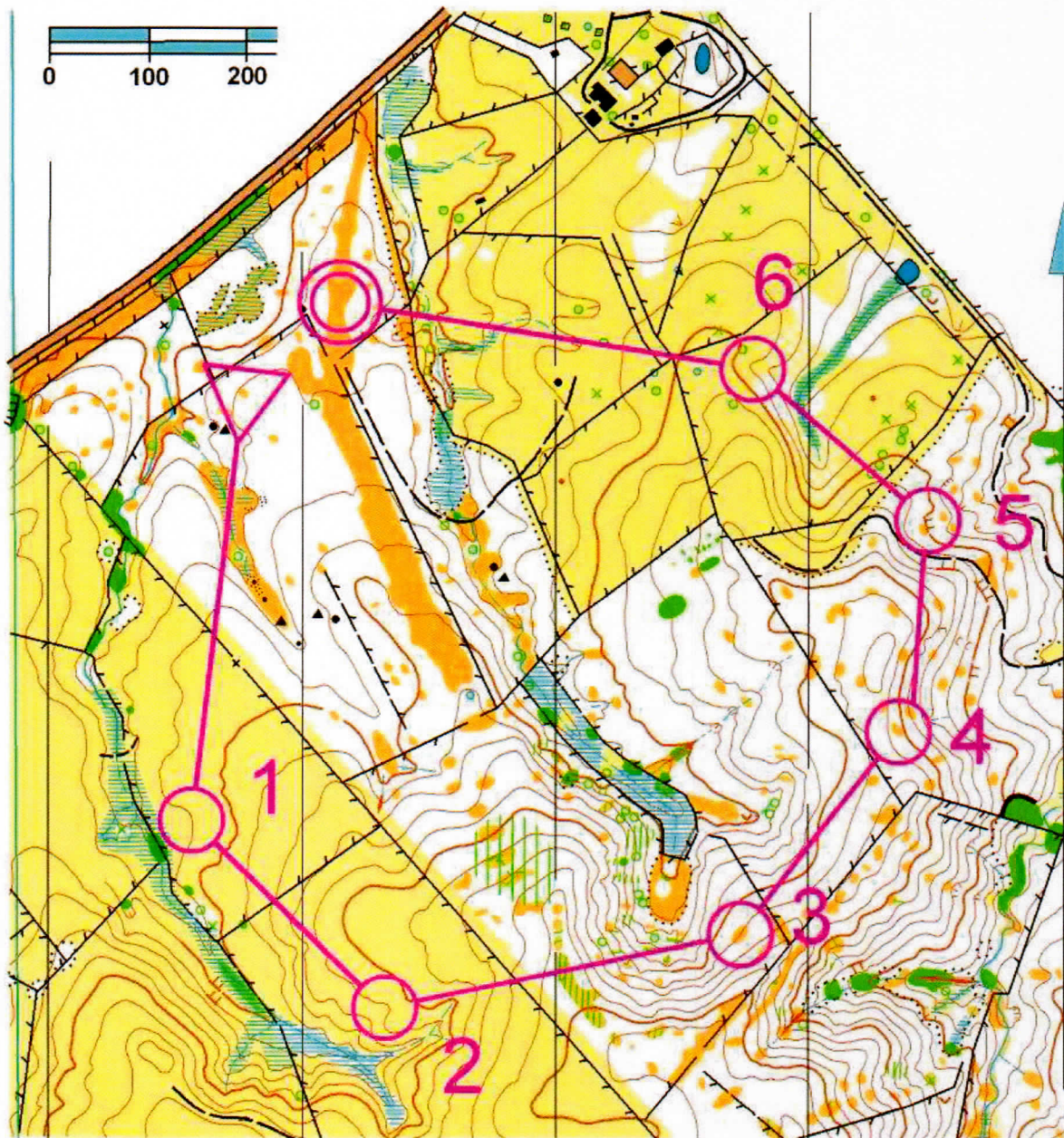
**Exercise 2:** Plan a yellow course on a copy of the map providing a mixture of leg difficulties.

### Orange Course



### Orange Course

Start triangle	Unrestricted
Legs	Stepping stones. Limited distance estimation
Control sites	Small point features OK. Prominent attack points and/or catching features <100m behind control.
Control marker	Unrestricted placement
Compass use	Rough use
Route choice provided	Yes
Dog legs	No



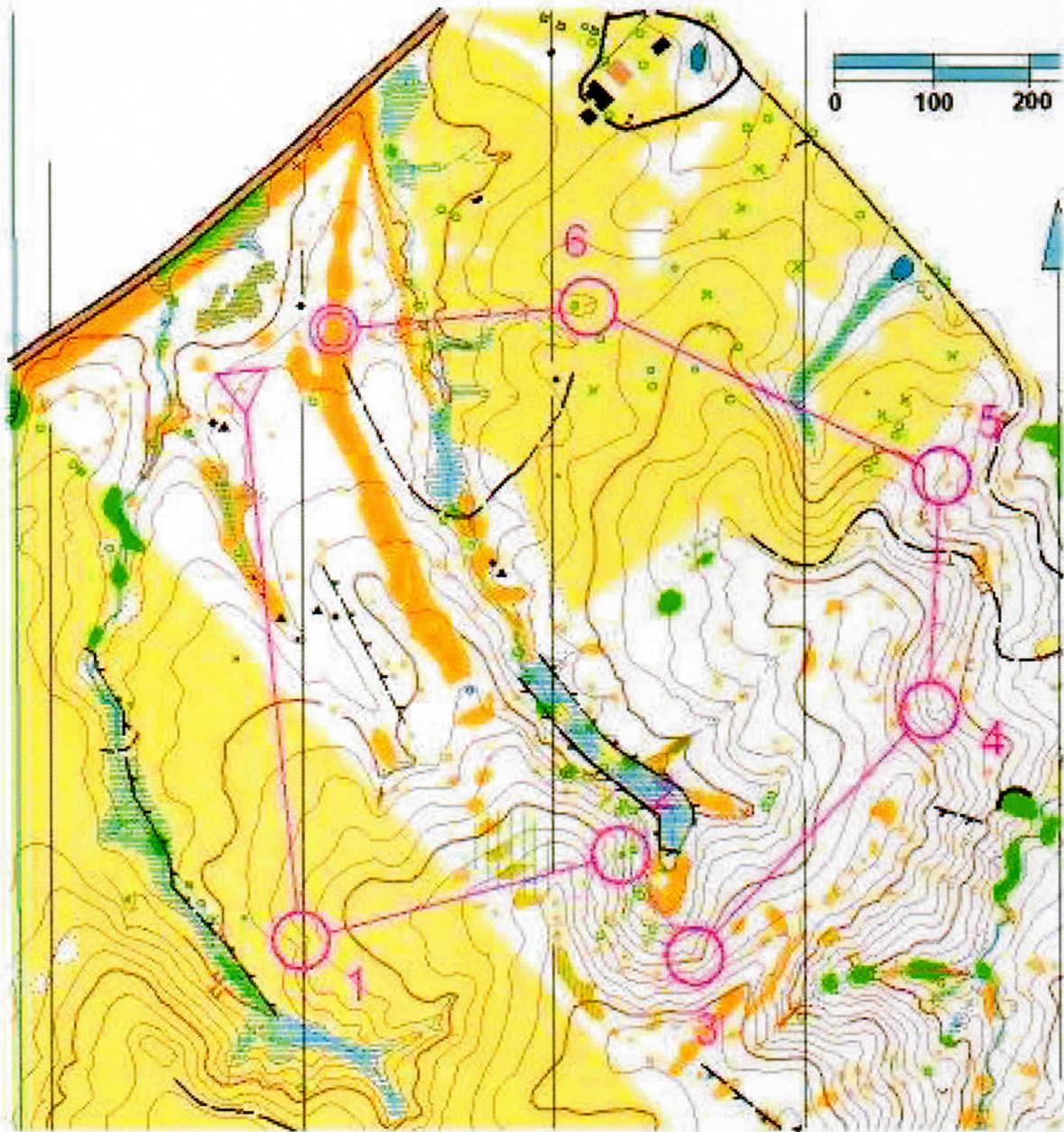
Classify leg difficulty and compare with those below.

**Exercise 3:** plan a <sup>orange</sup>yellow course on a copy of the map providing a mixture of leg difficulties.



### Red Course

Start triangle	Unrestricted
Legs	As difficult navigation as possible. No handrails and no obvious attack points.
Control sites	In detailed areas and small point and contour features
Control marker	Unrestricted
Compass use	Fine and rough use
Route choice provided	Important, as much as possible
Dog legs	No



Classify leg difficulty and check your answers below.

**Exercise 4:** Plan a red course on a copy of the map providing a mixture of leg difficulties.



**Ex 1-4 Answers:**

**White:** easy 1, 2, 4, 5, F; moderate 3, 7, 10; hard 6, 8, 9

**Yellow:** easy: 1, 5, F; Moderate 2, 6; Hard 3, 4

**Orange:** easy: 1, 6; Moderate: 2,4,F; Hard: 3, 5

**Red:** easy: 1, 6, F; Moderate: 3, 5; Hard: 2, 4

**Exercise 5:**

This table shows the control descriptions for the control sites in the following map.

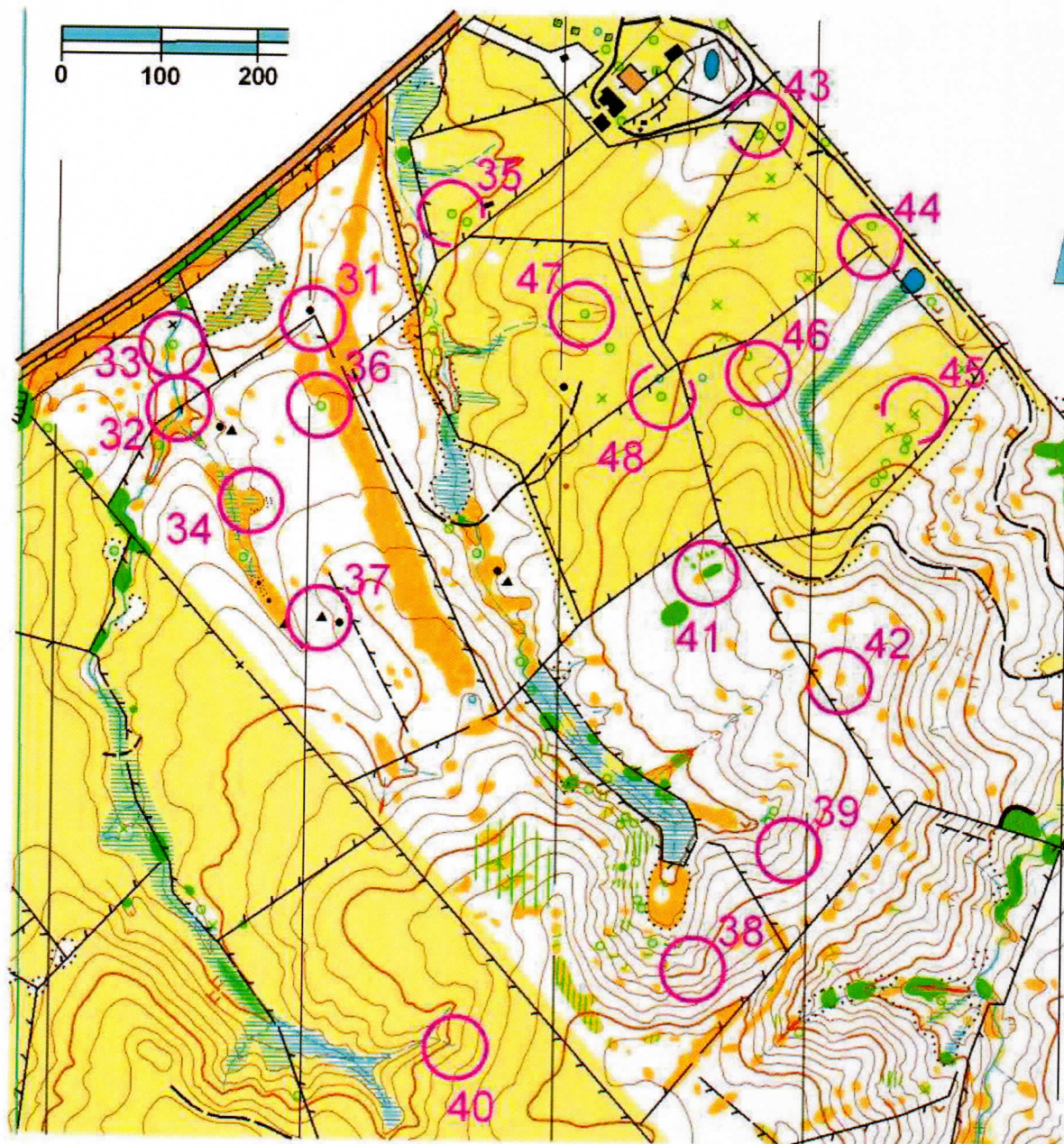
Assign the colour codes of following legs and then assign easy, moderate or hard difficulty levels. Note that the clearing to the West of control 39 can be seen from time to time through the trees after going over the crest of the spur. This is not the case for the clearing to the North of control 38 when climbing down from the ridge.

Answers below.

- (a) 43-44, 43-47, 43-48, 44-46, 45-48 and 45-42
- (b) 31-32, 31-33, 31-34, 31-35, 31-36 and 31-37
- (c) 38-40, 40-38, 38-39, 40-42, 37-38 and 42-41

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## Answers

Note that the assessment of leg difficulty is a matter of judgment rather than measurement and, in some cases; one person's 'easy' might be someone's 'moderate'. Note also, that although the distinction between white and yellow may sometimes be blurred, and also for orange and red, this is not the case for yellow with orange as yellow control site have to be less than 50m from a linear feature. Anything over 50m cannot be yellow.

Ex 1 - White course leg difficulty: easy 1, 2, 4, 5; moderate 3, 7, 10; hard 6, 8, 9

Ex 2 - Yellow: easy: 1, 5, F ; moderate 2, 6; hard 3, 4

Ex 3 - Orange: Easy: 1, 6; Moderate: 2,4,F; Hard: 3, 5

Ex 4 - Red: Easy: 1, 6, F; Moderate: 3, 5 ; Hard: 2, 4

Ex 5

(a) 43-44 We, 43-47 Ym, 43-48 Wm, 44-46 Ye, 45-48 Wh, 45-42 Yh

(b) 31-31 We, 31-33 Ye, 31-34 Ym, 31-35 Wh, 31-36 Wm, 31-37 Yh

(c) 38-40 Om, 40-38 Rh, 38-39 Re, 40-42 Oh, 37-38 Rm, 42-41 Oe



## Technical Guidelines

There are a number of ways of determining the number, colour, lengths and climb of courses for an event. Sections 16 and appendix 4 of the NZOF Rules provide a detailed statement for NZOF events.

### Near enough is good enough

This section outlines two approaches for club events. They lack the precision of the EWT age-classes approach, but are simpler and quicker and good enough for a club event if not for the area championships. Course lengths and climbs should be chosen to give a win time for the red and orange courses between 45 and 60 minutes.

Set white and yellow course lengths between 2 and 3 km although going over 3km for the yellow course could be appropriate on some occasions.

#### (a) Use the results of the last event on the map

Example, Waiuku South, 2013, OY. (Note that climbs **are not** given in the results on the AOA website but the nature of the terrain is such that climb will be similar for a given length where ever the course goes.)

Red 1, 10.0 km: 61 min, winner was Gene Beveridge. He's one of the fastest in this course so use 10 km as the maximum for the length and a minimum of  $10 \times (45/61) = 7.4$

Red 3, 5.1 km: 45 min, Bryce Brighthouse, who is regularly towards the top of the field so use 5.1 km as the minimum and a maximum of  $5.1 \times (60/45) = 6.8$  km

Red 4, 3.5 km: 38 min, Tegan Knightbridge. Win time is less than 45 min but the fastest four are juniors and this course is for the older seniors (65 +) and the first of these has 53 mins, hence, use  $3.5 \times (60/53) = 4.0$  as max and  $3.5 \times (45/53) = 3.0$  km as minimum (Age-classes can be found in the NZOF champs results if not provided in club results).

Set the course length for orange long to be close to Red 3 and Red 4 for orange short. This will give a choice and largely cover the range of physicality. Those who choose the wrong length will know next time. White and yellow should be in the 2-3 km range.

#### (b) Use percentages of the Red 1 course

Average the course length data for each orange and red course for the previous year and express as a percentage of Red 1 taken to be 100. Determine the length of Red 1 using the approach above and calculate other lengths using the percentages. The data from the OYs for last year was used to calculate the table below.

Red 1	Red 2	Red3	Red 4	Orange L	Orange S	Yellow	White
100%	73%	50%	25%	50%	31%	2.8 km	2.5 km

### Exercise

Plan course lengths and climb for the next event on the Waiuku North map.



## Course Planning

Criteria for evaluating the quality of course planning are appropriate:

- event centre location,
- start, finish and course control sites,
- length and climb of courses,
- technical difficulty ,
- course quality and
- safety.

### Event centre location

Factors to take into account are where the event centre has been on previous occasions, parking, ease of car access for workers, erection of tents and ease of providing a white course.

### Start and finish controls

Have the finish at the event centre. A long walk to the start, 300+ metres, is OK if it provides better courses, but not for white and yellow courses which should, in this case, have a separate start.

Those waiting to start should not be able to see the route choice of the person in front.

### Course control sites

There are four reasons for a control.

- marking the end of a good leg.
- moving the orienteer from the end of a good leg to the beginning of the next good leg. This can be a short leg with little navigation.
- to avoid a dogleg and
- to get people around sensitive areas or to lead them to a crossing point such as a gate in a nasty electric fence.

### Length and climb of courses

See document on technical guidelines.

### Technical difficulty

See colour coding document.

### Course quality

Good courses provide:

- variations in leg length, detail, difficulty, general direction, shape, terrain, visibility and an overall balance of easy, moderate and hard legs. The first leg on a course should be easy, for example, a yellow leg on an orange course. The overall difficulty of the white and yellow courses should be on the easy side at the beginning of the year.
- opportunities for people to make errors: parallel, contour height and which track, knoll and vegetation feature.
- good legs joined by short links designed to enhance the legs rather than a larger number of even but lesser quality legs.



Don't

- have long red legs where there is little navigation involved because of prominent features or large catching features.
- have different courses coming into the same control from opposite directions.
- have controls on the same feature , for example, knolls, within 60 m of each other.
- have a control site where the control is hidden. If orienteers are at the feature described in the control description they should be able to see the control.
- have controls near the edge of the map unless there are large catching features.

Safety

Consider road crossings, cliffs, out of bounds areas, steep sided erosion gullies, stream crossings etc. Place water stops on courses at least every 30 minutes based on the winner's speed and preferably on roads or driveable tracks.

**Course Types**

- (a) Classic – the standard orienteering course
- (b) Motala
- (c) Score
- (d) Line

This may have been predetermined for the event.

**Map options**

- Each course has its own map, controls and control descriptions, which is the standard procedure. The number of maps for each course is a guess, which can be wasteful of maps and awkward if there is not enough.
- Finnish system – there is one map with all controls and all control descriptions, which may be on the reverse. Orienteers draw their own course.
- Contour only maps
- No fences/roads/tracks on map



## **The Planner as Teacher**

The white to orange colour code courses provide a learning ladder for beginner orienteers with new skills to be learnt and practiced at each level. The course planner is, therefore, acting as a teacher in providing appropriate learning activities and it is expected that legs would be chosen so that they provided a variety of achievable learning tasks that give orienteers confidence and enjoyment. Note that parents often accompany their children around these courses and teach them the skills when the child is unable to successfully problem solve themselves.

Note, the differences amongst the colour code criteria for these easy courses is largely due to what is considered to be appropriate learning tasks. The NZOF criteria, for example, consider it inappropriate for children to have to look away from the linear feature to sight a control flag. Others, however, consider it important that the child learn to scan to the side of their direction of travel and estimate distances from the linear feature. I am, for example, quitted happy with a control flag on a water trough in the middle of the paddock some 20m from the fence along which they travel, which is what the Australians use.

Learners usually spend one year or perhaps eighteen months in the white or yellow courses before progressing to the next level.

In general, the children's courses should start with an easy leg and progressively increase in difficulty then reduce over the latter part of the course. The overall difficulty at the start of the year should be much easier than at the end of the year. Hard legs should not be included in the first few events in the year but some in the middle of the course at the end of the year would be appropriate.

Orange course orienteers consist of two distinct groups. There are the learners who have stepped up from the yellow course and then there are seasoned committed orienteers who find red courses too difficult and have settled in being an orange course orienteer. The focus for the planner is to provide appropriately for the learners hence similar considerations apply to those outlined above.

Red courses are a learning activity for only a small minority, hence plan for the experienced orienteer giving the learners an immersion learning experience. The differences amongst the red courses are the physicality required hence plan the shortest Red for the W65+ women and Red 1 for the best men and then fit the other Red course(s), however many is the current agreement amongst the clubs, in between.



## Club Level Event Planning Tasks and Time Schedule

An experienced planner and controller will be able to proceed through these tasks at a much greater rate than the inexperienced. The following time guidelines will help you produce a good quality event and avoid running out of time and making mistakes. If you find that you are unable to meet the time guidelines then you need assistance – please phone Robbie, 238-6911. [johnandval@clear.net.nz](mailto:johnandval@clear.net.nz)

**A common planning fault is leaving things to the last minute, running out of time and making errors. The younger your age the more likely you are to make this error.**

### At least 4 weekends before the event

(a) Obtain:

- a listing of available control codes (Robbie, 238 6911, [johnandval@clear.net.nz](mailto:johnandval@clear.net.nz)),
- the OCAD map for the event (Robbie) and
- the phone numbers of landowners through Lyndsay Shuker 235 9828, [shuker@farmside.co.nz](mailto:shuker@farmside.co.nz) and Ross Brighthouse, 235 9518, [brighthouse@clear.net.nz](mailto:brighthouse@clear.net.nz); or Robbie)

If your event is on a farm map, it is essential that you contact Lyndsay Shuker, or Ross Brighthouse in Lyndsay's absence, for him to have a farmer-to-farmer discussion about the location of stock on the day of the event, any restrictions the farmer might have on the use of the farm, and pre-event access for field checking draft courses.

On farm maps it is not always possible to get the best courses because of stock issues. If it is not possible to avoid stock, courses should all flow in the same direction, and control sites chosen so that stock are not stampeded from one side of the paddock to another. It is a problem that can be worked around with careful common sense planning and communication with the farmer. Remember that the landowner is always right.

In the case of forests, phone the landowner/forest manager and find what, if any, forest blocks are planned for felling or pruning prior to the event. Logging can occur at quite short notice so that if the area is loggable/pruneable be aware that you might have to make last minute changes mere days before the event. This is not the case for the Plantation forest, which has been grown for carbon credits, rather than timber.

(b) Choose the location of the event centre, start, finish and plan draft courses using OCAD.

Include the name and date of the event, scale, distance bar, contour interval and the names of the planner and controller on the base map. Use a 1:7,500 scale for white and yellow courses and for elderly eyes on the short Red.

The white and yellow courses have only English control descriptions and the others only international symbols.



Plan drinks stations around the courses at about 30 minutes based on the winner's speed. You will make it easy for yourself if you have water stops on drivable roads or tracks. Disposable cups should be provided and water at 150ml/person at a drink station (estimate traffic numbers for courses available from previous results). If you wish to use bottles at sites not readily accessible by car then check the supply (non pop-type). Bottles and cups are available from the club's gear officer, Lyndsay Shuker..

#### At least three weekends before the event

(c) Advise the landowners when you wish to visit the area.

(d) Visit the planned control sites and check that the features within the control circle are accurately mapped. Also, check the mapping accuracy of attack features on likely route choices and catching features for appropriate courses. Make any changes required on the base map.

Check cell phone function at the event centre and, if necessary, note the location of the nearest place at which it will work or the nearest landline.

Choose the location of registration, a crèche area, location of tents, taping and any out of bounds. If possible place the crèche and a parking area for 5 cars on the side away from the traffic direction into the event centre.

Note alternative exit routes in case of the access road being blocked during the event (car accident, fallen tree, fire etc).

(e) email the OCAD courses file and an event centre layout sketch to the controller for comment.

#### At least two weekends before the event

(f) Revise your courses in light of the controllers comments.

(g) Visit the control sites with the controller and tag all red and orange control sites using coloured ribbons and/or spray paint so as to avoid placement errors. If your foot travel speeds are very different you may prefer to place controls separately and then check each other's.

#### At least a weekend before the event

- Print course maps and master maps.
- Get control boxes and poles.
- Place control boxes, flags and water stops on **non-public sites**.

#### On the Morning of the Event

The amount of time needed depends upon how far you have to run and drive to put out controls, how much taping you have to do, how fast you can run, the weather and the technicality of the terrain. You will find it worthwhile arriving at the event centre just



before first light.

Note – take extra controls for spares, for any finish shute and 10 for the string course.

- Place control poles and flags at public control sites.
- Place public water stops.
- Check that the event centre, start and finish have been set up correctly.
- Advise registration and the starter that orienteers can begin when all the above has been completed.

#### During the event

- Remain close to the event centre until you have had at least one runner returning on each course in case you have to check a disputed control placement. Refer any disputes to the controller.
- Check water controls around 11.30 am. Set your alarm to remind yourself.
- Make yourself available around the event centre to discuss courses with interested people.
- Towards the end of the event recruit control collectors and formulate a plan for control collection.

You will not get much unsolicited feedback from most orienteers and if you want some then you should ask people what course they did, what difficulties they had, what went well, whether they enjoyed themselves and so. If you are new to course planning and you want comprehensive and systematic feedback then seek comment from experienced planners and controllers. Have a copy of the courses with you.

You may get an annoyed blast from someone who couldn't find a control and thinks it is in the wrong place. Breathe deeply, count to ten and quietly explain to them that you and the controller agreed on its placement and nobody else has complained. Suggest to them that they revisit the control as it could be a valuable learning experience for them. If it is close to control collection time then they might like to help collect controls, including the one they could not find.

#### After the Event

Collect all controls. Claim expenses. Put copies of your course and master maps on your personal hard-copy course-planning file for future reference. Analyse the red course results in terms of how the time of the fastest compares with the expected win-times and the numbers of dnfs and mps. Have a round-up discussion with the controller.



## Controllers Tasks - Club Event

The planner proposes, the controller disposes: the final responsibility is the controller's.

### The Event

- Check from time to time that the planner is keeping to the planner's time schedule.
- Evaluate the courses, control sites, start/finish and event centre layout proposed by the planner and negotiate any changes.
- Check control descriptions, master map (the ones with all the controls and codes), maps for each course and notices.
- Help the planner to place and collect controls.
- Supervise the general organisation of the event.
- Arrange for publishing results including course lengths and climb.
- Discuss the event quality with the planner and report to the committee about the event – this could simply be done verbally at the end of the event or later over the phone.

### Health and Safety

- Advise the coordinator of course closure time, a "safety bearing" and any significant hazards that can be expected while taking part during the event. The coordinator displays the safety notice at registration.
- Search and rescue procedures follow.
- Note the GPS coordinates for the carpark/finish area in case the Police or Ambulance/Rescue helicopters are needed.
- Know the location/availability of the nearest telephone - if using a mobile/cell phone, check out the reception before the event.
- Check that no course has controls placed at the edge of a map, unless there is a very obvious catching feature, or other hazardous sites.
- Ensure adequate supplies of water are available on courses.
- A first aid kit is kept in the campomatic.

### Search and Rescue

The controller is in overall charge.

#### (a) Someone has not finished at course closure

- Check with the SportIdent operator for unfinished persons.
- Do not bring in the controls.
- Is their car still at the event?



- Have other people who know the missing persons seen them?
- Has their gear been uplifted from the start/finish/car?

Organise a search of the area as in (d) below.

(b) Reported overdue during an event

“Overdue” means that the person has taken an unusual length of time given the times of other finishers on the course and the time the person usually takes in relation to the others. This information is likely to be provided by the person who reports someone as being overdue. Take this person with you when you do the following accuracy check.

(c) When to start action

If a person is overdue by a short time, say 15 minutes, then you will want to wait a while to make sure that the person is significantly overdue. On the other hand, if they are overdue by 2 hours then you will likely want to start the search process immediately. The length of the acceptable overdue time before you initiate the search process is a matter of personal judgment according to the circumstances. For example, you are likely to be more concerned about someone who regularly finishes close to the expected win time than you would be with someone who has a history of erratic performance and a number of previous overdue episodes. Factors that may also be relevant are the weather, experience, age, fitness level, clothing, whether or not the competitor is carrying a watch and the daylight remaining.

In general, you should have a good reason for not starting the search immediately. You should explain your reasoning to the persons who reported the overdue status, if any, and seek an assurance from them that they will not start their own search. Get them to ask finishers if they have seen the missing person.

Advise the finish staff of the missing person and ensure that you will be informed immediately of the return of the missing person.

(d) Organise orienteers to carry out a sweep of the area:

- narrow the search area by finding if anyone has seen the competitor while they were competing,
- send a vehicle around the roads on the map, bordering the map and further out as the person may have run off the map,
- search in the reverse direction of the course along the likely corridor (approx. 100 metres wide if possible). Make lots of noise calling out their name. On 3 blasts of the search leader’s whistle, all stop and listen. Commence walking on a single blast of the whistle. T
- The person may be unconscious or dead so check the bottoms of cliffs, streams etc. Searchers should carry their own whistle in the event they get lost!

(f) The Rescue:

- A folder in the carravan gives guidelines for dealing with injured persons (?).
- A person suffering from severe hypothermia must not be walked out.
- If the person is dead, apart from attempting CPR, the body should be left where



and how it was found and the Police notified.

- Recall other search teams.

#### Who to Contact?

- Police - if initial search fails, a body is found, or insufficient manpower or daylight is left. Note it takes 2+ hours for a Police search to be organised and they may not be able to mount a full search until the next day. Controller, planner and next of kin should be available for any queries.
- Next of kin - if not at the event, they should be notified at the same time the Police are contacted