Western Australian Rogaining Association
Setting and Vetting Manual

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Based on the WARA setters manual prepared by Bryan Hardy from various sources.

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NOMENCLATURE AND ABBREVIATIONS

Where they are used in the manual abbreviations, acronyms, definitions and terms have the meaning shown below.

Abbreviation	Description
ARA	Australian Rogaining Association Inc.
CLT	Control logistics team
DCBA	Department of Biodiversity, Conservation and Attractions – Parks and Wildlife Service
DOW	Department of Water
DRA	disease risk area
FCU	Field control unit
FPC	Forest Products Commission
RPZ	Reservoir Protection Zone
SPOC	Single point of contact
WARA	Western Australia Rogaining Association Inc.

1 Preface

This is a manual designed to assist setters and vetters of rogaines held in Western Australia under the auspices of the Western Australian Rogaining Association. It is not a complete guide to running WARA rogaines. It is not a novice guide for rogaining, or an encyclopaedia covering every possible aspect of rogaining. Separate manuals exist for Administration, truck driving and hash house operations.

Thank you for agreeing to set or vet a rogaine – rogaining belongs to its members and the more who get involved the better. Please do not be put off by the size of this manual. WARA strongly advise that you read through these pages carefully. This manual contains some of the experience and wisdom accumulated since rogaining commenced in Western Australia in 1980. Many time- and effort-wasting methods, as well as embarrassing or disastrous mistakes, can be avoided if the practices in this manual are followed.

This manual is generally not prescriptive. Setters have a great deal of flexibility in the style of event they set. There are, however, some mandatory technical regulations for map production and control descriptions. Safety, in all aspects of rogaining, is a priority.

The success of rogaining in Western Australia is due to many factors including the suitability of nearby terrain and our legendary hash house. A significant contributor to the popularity of WARA rogaines is that the abilities and desires of social and family rogaining teams are considered foremost.

Even if you have set many events before, please read through this manual carefully. It will refresh your memory. Some practices, in particular restrictions on and processes for obtaining permission from government authorities, change every few years and it is important to know that the latest practices are.

Your experience in using this manual will help us improve it. Please offer any feedback to the WARA Committee.

2 Introduction

Setting or vetting an event will improve your rogaining. As there are no controls to confirm your location, to place a control perfectly you have to utilise all your previously acquired rogaining skills - map reading, pace counting and compass skills (with a good dose of concentration thrown in). It makes for some of the best rogaining practice possible, as well as being a rewarding and enjoyable experience in its own right.

After the event, people generously offer their advice on all your control placements.

Not counting the time required to hang controls just before the event, you will normally spend about six days in the field for a 24 or 12 Hour event and about four days for a 6 Hour event. Meeting with and seeking approval from landowners is normally a setter's task, and this will add to the time required. Areas that provide good access by vehicle, such as farms, will require less time.

During the day before the event both the setters and vetters are expected to *pitch in* and assist with the establishment of the hash house site, unloading the truck and the erecting of tents. Other volunteers and competitors will be available to help with this.

2.1 Duties of Setters

The setters have an enormous amount of responsibility for and influence over the style of the event. The setters are responsible for a reasonable number of tasks, none of them too arduous. These include:

- the selection of the event site
- the location of the hash house
- liaison with landowners and gaining access approval (WARA committee support is available for approvals from government bodies where needed)
- selection of control sites
- correctly describing control sites
- production of the map using OOMAPPER
- production of control description sheets
- hanging of controls
- preparation of the hash house site immediately prior to the event
- conducting water drop checks and road patrols during the event
- writing newsletter articles.

The setters work closely with the vetters who will double-check all aspects of their work.

2.2 Duties of Vetters

The main role of the vetters is to check that the control placement and descriptions are correct and fair. They should maintain their independence from the setters and view the setters' work through the eyes of a participant. Vetters must be convinced that the control site is fair, from likely angles of approach and in the dark.

Vetting is not as simple as just finding the control markers or tapes in the bush, reporting to the setters, and then going home. The only aspects of organising the rogaine that the vetters are not normally associated with are:

- event site selection and contacting landholders
- map production
- the initial allocation of control values.

It is unfair to expect the setters alone to carry out the large amount of work involved in organising a rogaine. Duties that the vetters should share with the setters include the:

- hanging of controls
- preparation of the hash house site and erecting tents as required.

It is essential that the vetters are available during the event to patrol roads and maintain water drops. Their knowledge of the event area will be essential if a team is overdue and a search needs to be conducted.

In some rogaines, setting and vetting duties are shared equally across a team, with team members setting controls in some areas of the map, and vetting controls in others. This is acceptable, so long as control placement and descriptions are vetted independently of the person that set them.

2.3 People Who Can Help You

If you need assistance or are unsure about any aspect of setting or vetting your rogaine, please seek advice as quickly as possible. The elected office bearers and committee members with specialist knowledge are available to help you. There are also specialist roles, such as

- *Technical Officer* – obtains data from Landgate (if required) and provides base data to setters in OOMAPPER format.
- *Training Officer* – can assist with learning to use OOMAPPER.
- *Event Co-ordinator* – co-ordinates overall event, making sure that all inputs are received in a timely manner and that information is passed between the appropriate parties
- *Camp Manager* – co-ordinates the delivery of equipment (such as toilets) to site and oversees the
- *Locations Officer* – can assist with the selection of areas and obtaining permissions from the relevant government authorities
- *Safety Officer* – ensures that the event map conforms with WARA's safety standards, develops emergency management plan, and communicates with emergency services prior to the event
- *Map Librarian* – manages the historical database of event and can provide copies of previous events and potentially local landowner information (albeit dated as of the last event in that area).

The volunteers holding these positions may be noted on the Contacts page on the WARA website. If you have problems contacting anyone please ask a committee member (see Contacts page on the WARA website) or look for updates to this manual at the address given in *Section 1- Preface*. It is noted that due to personnel turn-over, some of these roles may not be filled at any one time. If in doubt, please ask a committee member.

2.4 Schedule of Tasks

Many setters and vetters enjoy organising an event more than competing in one. The secret to enjoying setting and vetting is to allow time to perform the various tasks. Do not let the tasks build up to the point where you have to rush, as this leads to shortcuts and inevitably mistakes. The time required to organise an event will vary, however your schedule should look something like Table 1.

Table 1 – Recommended Schedule of Tasks

Time To Event	Manual Section	Activity
6 months	4. Site Selection	Select potential sites, drive to these and look at them. Consider hash house location, access for equipment truck, sufficient space for admin and hash house and camping?
5 months	5. Landholder Permission	Contact landholders and seek permission from DCBA
4.5 months	6.Overview of Competition Map Production 7. Armchair Control Selection and Course Planning	Select your map boundaries. Learn to use OOMAPPER Plan your course. Armchair selection of water drops and control sites
4 months	8. Setting and Vetting in the Field	Setting (hanging setting plates and taping selected sites)
3 to 2 months	8. Setting and Vetting in the Field	Setting and vetting
8 weeks	8.4. Vetting	Vetting
7 weeks	8. Setting and Vetting in the Field	Final fieldwork. Setters and vetters agree disputed control sites.
7 weeks	10.1. Newsletter/Website Teaser	Submit promotional article
3 to 2 weeks	10.2. The Pre-Event Meeting	Attend the pre-event meeting
From 4.5 months To 3 weeks	9. Competition Map Production – The WARA Way	Finalise drawing of the map

Time To Event	Manual Section	Activity
3 to 2 weeks	10.5. Control Description Sheet	Finalise Control Description Sheet
3 to 2 weeks	10.7. Preparing the Controls	provide list of controls to Control Logistics Team
2 weeks	10.3. Event Directions	Submit directions and special comments for the event for inclusion in the event directions to Event Coordinator
1 week	9.6. Printing the Map	Send map and control descriptions to printer
2 to 1 week	11. Hanging Controls	Hang most controls
The day before and during the event	12. At the Event Site	Meet the truck, toilets and tents. Hang controls near roads and put out water drops. Put direction signs on roads Give event briefing. Patrol roads and maintain water drops Read results to competitors
Within a week after the event	13. After the Event	Submit computer files of finished map, control descriptions and landholder details.

3 Safety and Duty of Care

In any sport, safety and the duty of care to the people who are involved is extremely important. In rogaining, participants should be able to complete their course in a safe manner without risk of serious injury. For this reason, you need to think about safety when selecting sites, hash house location, and assessing hazards on the course. Carefully read *Appendix H - Safety Manual Extract* before finalising your site selection.

Every effort must be made to avoid leading participants into danger. If a proposed event site has more hazards than can be identified or mapped, the site should be abandoned.

When field-checking a control site, always consider how safe it would be like to locate at night. What seems safe during daylight hours may present problems during the night. If in doubt, put a warning on the control description sheet of any dangers at or near controls. Also, likely routes between controls must be assessed for obvious hazards (eg. cliffs, mine shafts, fast-flowing rivers). It may be appropriate to relocate controls if the access routes prove to be safety-compromised.

If there is information that participants need before they plan their course (e.g. electric fences, mine shafts or mandatory watercourse crossing points), then setters must provide event information notes (*Section 10.6 - Event Information Notes*) for Administration to distribute to participants as they register.

The specified roads must be patrolled every few hours regardless of weather conditions or amount of remaining water at water drops. Patrolling every two hours would be ideal, but circumstances may not allow this to occur. A seriously injured participant may be waiting for assistance at the location or roads you have specified. *See Section 12.11 - Patrolling Roads.*

The setters must report any serious accidents or incidents (a near miss) to the WARA Safety Officer. You may be asked to fill in the accident report form (*Appendix N - Accident Report Form*), which should be returned to the WARA Safety Officer.

Also consider your own safety when setting and vetting. Set and vet in pairs. If you do separate, know where your co-setter-vetter will be. Inform someone back home that you will be fieldworking in the countryside, and ensure you carry appropriate safety items with you at all times (e.g. whistle, first aid kit, water, GPS, PLB or EPIRB). Note that in remote locations within WA it may be necessary to obtain (hire) a satellite phone both for the event and during setting and vetting.

Please take these safety considerations seriously for the welfare of yourselves, all participants and for the legal protection of yourself and WARA. An unfortunate but realistic feature of modern society is that people are becoming increasingly litigious.

4 Site Selection

The first thing to do after agreeing to set a rogaine is to decide where to hold it. The selection of a suitable site can make all the difference for an enjoyable and memorable event. Distance to the site, the terrain, the amount of forest or farmland and what the site will be like in a different season all need to be considered. If you are struggling to find an area, the Locations Officer can assist.

You **must** also contact the Volunteer Coordinator and Locations Officer and seek information on the area you are considering. You may be referred to the Technical Officer or Map Librarian. The committee may have had experience with such issues as access, weed spread, endangered animal releases, rare plants, and the attitudes of farmers and government landowners in that area. The committee will sometimes black-ban an area if it has been over-used. In some previously mapped areas, the names and contact details of landholders may already be available thereby saving you valuable time.

Please read *Appendix J - Australian Rogaining Association Environmental Guidelines*. This contains some good ideas and recommendations on event site selection and control placement that are not mentioned in the main body of this manual.

4.1 Finding Suitable Areas

You will probably have a general notion of where you would like to set the course. If not, seek advice from previous setters, a mentor listed in *Section 2.3 - People Who Can Help You* or from a WARA committee member. Perusal of the maps held in WARA's library of maps is also useful. Contact the map librarian for assistance.

A master map of WARA's event locations is kept on-line at http://wa.rogaine.asn.au/index.php/information/11-list-of-waras-bush-rogaines. The map is in PDF format. At the time of publishing this manual the map was several years out-of-date though plans are in place to update it. An alternate source of information is the GoogleEarth kmz file, available at the same location. This file enables you to review previous events overlain on the aerial photography. Having selected one or several possibilities for your event site, visit each area to check that the terrain, the forest and farmland are suitable. You may find that large areas of farm will be under crop so not utilisable (particularly during the August 24 Hour and October 12 Hour events), the undergrowth in the forest is too thick, or that parts of the map have been rendered unusable by clear-felling or other developments such as sub-division.

Consider road access, in the worst possible wet weather, for participants and heavy vehicles travelling to the hash house site, as well as accessibility of the course for organisers distributing water drops and conducting road patrols.

A hash house site in the centre of the map is preferable, especially for 24 hour events. This allows greater choice for participants doing *loops* in and out of the hash house site.

Government policy states that you will not be permitted to have a hash house in a drinking water catchment area. If you want to access water catchment land you must locate the hash house in nearby farmland or outside the water catchment area. See *Sections 4.8 - State-owned Land* and *5.4 - Contacting Government Agencies.*

DCBA may have maximum use limits for outdoors activities across their managed areas, and it is important that, if you hope to include DCBA-managed lands within your rogaine, permissions are sought in good time. The Locations Officer should be contacted at the earliest opportunity. Should an area be proposed for prescribed burning, DCBA will inform WARA during the applications process and it may be necessary to defer or avoid using those areas.

WARA policy is that chemical toilets are to be used at all events. The Camp Manager / Event Co-ordinator will arrange their hire, with the number of toilets dependant on the number of entrants.

4.1.1 On-line Aerial Images

If you have access to a broadband Internet connection, you can view your prospective event site on-line.

Google Earth is the most popular system of this type. You can use Google Earth on the web at http://maps.google.com or download the Google Earth application at http://earth.google.com/download-earth.html. Other systems include Bing and NearMap

The WA State Government agency Landgate offers a service (Map Viewer Plus) which allows you to view aerial photographs in some detail. The resolution is often better than Google Maps, but can be more difficult to use and the window that shows the aerial photos is rather small. Go to https://www0.landgate.wa.gov.au/maps-and-imagery/interactive-maps/map-viewer - you will be able to zoom in on any area and you will see both the aerial photo and the property Lot numbers. You can use these to obtain the landowner information from the local shire councils.

Many Shires also have access to a freely-available Intramaps mapping service, which utilises Landgate-based aerial images but often in a more user-friendly format than Map Viewer Plus and which may better resolve Lot numbers. To find these, search for Intramaps on the relevant Shire's website.

4.2 Distance from Perth and Bunbury

The distance that participants have to travel to the event is important. As a rough guide, the number of participants may diminish markedly if the travelling time is more than two hours for any event. If the event is a significant distance from Perth (more than three hours) then the committee should be advised well in advance as an attempt may be made to organise coach transport. Experience has shown that there is not much demand for coach transport, but it still needs to be considered by the committee.

You should also consider that the time penalty and cost to the association and yourself will increase as distance to the event site increases. Please read *Section 14 - Setters' and Vetters' Expenses*.

You should not reject an event site simply because it is a long distance from a population centre. One of the delights of rogaining is being able to explore different regions of the state. Popular rogaines have been organised on the South coast, Mt Singleton, and Millstream Chichester National Park. Remote-area rogaines have more complex requirements however (safety, logistics, etc) and should be discussed with committee well in advance.

4.3 Area Required

The size of the area needed can vary. Generally, the area ranges from 120 sq kms for a small 12 hour rogaine to 250 sq kms for a 24 hour event. Six hour events require less than 80 sq kms. Successful events have been held on smaller areas which feature steeper terrain or dense vegetation. At a scale of 1:50,000:

- 12 and 24 hour events will fit on an A3 page, including credits and a legend. This allows for an area of up to 230 sq kms.
- 6 hour events should fit on an A4 page, including credits and a legend. This allows for an area of up to 100 sq kms.

You do not need a huge area to run a successful event. Having a large number of controls in a smaller area can help create a situation where route choice for participants is a complex problem and their chosen routes will vary enormously. There are other advantages in having a smaller map area. You may not need to contact as many landowners and patrolling roads and inspecting water drops can be easier.

Also consider that the top teams typically travel up to twice the distance of teams around 10th place. So, a smaller map area may still provide multiple route choice options for the bulk of the competitors while the top couple of teams may clear the course.

4.4 Terrain

Your choice of terrain - scrub or farmland, flat or hilly, prickly parrotbush, dense *aquafolia* or open wandoo forest - is important. The popularity and rapid growth of rogaining is largely due to WARA's philosophy of encouraging participants at all levels, and of emphasising the non-competitive aspects of the sport. Very taxing terrain should be limited so that participants are not forced to visit it but do so by choice. The terrain should be such that "social rogainers" and the less physically capable can do a course without undue difficulty.

The most popular courses have a mix of forest and farmland, of hills and gentle slopes. Courses entirely in forest or farmland have been set and well accepted but do not offer the tactical route choice challenges of a mixture.

4.5 Seasonal Changes

From the time you first visit the event site to the date of the actual event there will be many changes to both the forest and farm terrain. An area that seems ideal in summer might be water-logged in winter. Dry waterbeds can change into raging torrents in winter and become impassable by car and foot. That fabulous hash house site by the watercourse may turn into a quagmire.

Lambing ewes, crops and the possibility of spreading noxious weeds may make farmers reluctant to give permission to use their land at particular times of the year. A perfect knoll in a bare paddock may become surrounded by crops.

Local resident landholders and DCBA officers are good sources of information about the condition of an area at the time of your event.

4.6 Landholders' Permission

A most necessary but time-consuming task can be obtaining of landholders' permission to access their property. Remember that it is not our land and permission must be obtained before progressing with any further action on that land. Methods for finding and approaching landholders for access permission are covered in depth in *Section 5 - Landholder Permission.*

4.7 Farmland

Select a site with as few small farms as possible. Dealing with a large number of owners with small properties will add significantly to the workload of organising the rogaine.

Avoid areas that have been subdivided into small hobby farms. Seeking approval in such an area would be a nightmare, mapping the small out-of-bounds areas difficult, and rogaining would not be practical.

4.8 State-owned Land

In Western Australia, state forests and national parks are usually managed by the Department of Biodiversity, Conservation and Attractions – Parks and Wildlife Service (DCBA), and permissions must be sought well in advance by the Locations Officer. Some areas, particularly near dams or rivers leading into dams, may also be under the control of the Water Corporation as well as DCBA. It is possible that DCBA may give permission to use a location for rogaining but not for camping or hash house, and lateral thinking may be required to find private land situated adjacent to state land which gives camping and hash house options.

Section 5.4 Contacting Government Agencies has more details on obtaining government approval and the issues you are likely to have to deal with.

4.9 Road Access

Getting into and around the event site is important. Consider vehicle access for distributing and checking water drops and make sure the hash house site can be accessed by the ordinary two wheel drive cars as well as heavier vehicles such as the rogaine equipment truck, school or scout buses and the truck carrying chemical toilets. Tracks that are solid in summer can be boggy or covered in huge puddles during the wet months. Check for low overhanging branches, narrow gaps between trees, and sharp bends – all will be difficult for the equipment truck and any rogainers with caravans to traverse. Try to imagine the roads on a wet weekend with 200 cars travelling on the same track. The majority of volunteers who will collect controls will have two wheel drive vehicles. Seek advice from locals.

4.10 Map Boundaries

Where possible, use a major linear feature such as a road, railway, or river to be the boundary of your competition map. This will assist novice participants as they are unlikely to cross a major feature and walk off the map. If a road, then it would also provide a good patrolled road and water drop access route.

5 Landholder Permission

Setting and vetting can be very rewarding as you meet some great people. Many rogaines are held in previously used areas because of the good relationships WARA has formed with government and private landowners.

5.1 Time Commitment

Contact with landholders can be very time consuming in terms of:

- determining who they are and determining their property boundaries
- explaining what rogaining is, and seeking their permission
- trying to contact them prior to each site visit

- meeting with them when on their land.

5.2 Thoroughness in Landholder Contact

Usually you will be outsiders to the district in which you will hold the event. It is always best to let local people know in the most open way who you are and what you are doing. Even if they have never had a rogaine held on their land, many landowners are aware of rogaining as events have been held on their friends' and relatives' properties. The continued existence of rogaining depends upon its good reputation. A thorough approach to obtaining landholder permission is essential for preserving that reputation.

Any land belonging to an uncontactable or unwilling landholder must be declared out-of-bounds. Without permission anyone entering would be trespassing.

Do not enter farmland in anticipation of receiving permission. While this may seem harmless, it is presumptuous and may affect your chances of obtaining access.

5.3 Identifying Private Landholders

Determining who owns or is currently managing a property can be a problem, so allow yourself plenty of time. You may approach landholders directly by visiting farmhouses and asking for permission and for information about adjoining properties. However, this is time-consuming and sometimes unreliable because some property holders are unable to define their own boundaries on a map. Do not expect them to be able to point out their property boundaries on your draft rogaine map. They will usually have their own farm map and usually these do not have contours, being based around cadastral boundaries, roads and creeks. It is useful to know whether the landholder is the owner or a manager of the property. If the farm is managed by someone other than the owner, ask whether it is necessary to obtain permission from the owners.

A more reliable method is to consult the cadastral map of your event area using Landgate MapViewer Plus or Shire Intramaps services (see *Section 4.1.1*).

These maps will list properties with CG (Crown Grant) numbers. The local council can provide a list of owners and telephone numbers for these CG numbers. This is just a starting point. In the time since the cadastral map was produced the landowners will have purchased, sold, swapped and leased land so you will have some detective work to perform.

Some local councils will charge a small fee for providing information. This is acceptable.

Many farms have residential tenants on the property. Although obtaining their permission is not essential, it is polite to identify these people, inform them of the event, and mark their home as out-of-bounds on the competition map.

Ask all landholders to identify their property boundaries on your map and to give the names of their neighbours. Do this even if they have refused your request for permission as you need to confirm the areas that will be marked as out-of-bounds, unless of course they are particularly hostile. Many landowners will have difficulty reading your map – they usually have their own farm maps which have different scales, orientation, presentations, and displayed features. It pays to check with adjacent landowners – if both point to the same boundary, then you are fine, otherwise a bit more investigating may be required to confirm the actual boundary.

Try to identify any leading figures in the community. Their identities are often made apparent when people respond to your request by asking whether certain locally prominent people have given their permission. Once the approval of community leaders has been obtained, permission from others generally follows quickly.

Remember the farmer is doing you a favour. Do not expect a farmer to return phone calls or to have the time to write letters back to you.

After you have approval, you should write the farmers a confirming thank-you letter that includes the dates of the event and your own contact details.

Verbal approval from farmers is adequate and written approval is not normally required, unless you feel there are special circumstances, such as approval from an absentee owner.

5.4 Contacting Government Agencies

The most important thing you need to know about seeking government approval is to start early, and do not expect that approval will be received quickly or according to your schedule. You should have your hash house and event area approved at least five months before the event date. As part of this process you will become aware of any out-of-bounds areas or other restrictions imposed by DCBA.

If you are undertaking the permissions process yourself (i.e. your map lies outside of the Swan District) and are having difficulties in dealing with or understanding the requirements of government agencies, contact the Locations Officer. This person will be able to assist you, translate government-terminology, explain the likelihood of your application being successful and assist with the submission of your application form.

5.4.1 Government Agency Names

It is worthwhile understanding the roles and names of the various state government agencies:

DCBA - The Department of Biodiversity, Conservation and Attractions – Parks and Wildlife Service was formed in 2017, incorporating the Department of Parks and Wildlife (DPAW) which in turn was formed in 2013 from the Department of Environment and Conservation (DEC). DEC was formed in 2006 from the amalgamation of the Department of Environment and the Department of Conservation and Land Management (CALM).

FPC - Forestry Products Commission – manages the harvesting of WA‘s plantation and native forests

DOW - Department of Water. They set the policies for recreation use of catchments.

WC - Water Corporation - They implement Department of Water policy in the water catchments of the various water supply dams.

5.4.2 State Forests and National Parks

DCBA manage state forests and national parks. There may be restrictions on access for camping, for organised activities over certain use limits, for areas with rare plants and animals, and where prescribed burning or logging are planned. Permissions for all events on DCBA land must be carried out in conjunction with the WARA Locations Officer as described in *Section 5.4.4*, due to the requirements for advanced planning and inter-agency coordination. Setters should discuss their location with the Locations Officer well in advance of their event and may be encouraged to a location where DCBA has already approved permissions for an event.

Access to roads in dieback “disease risk areas” (DRA) may be denied during wet weather or restricted to roads specified by DCBA personnel. A normal condition for setting work is that vehicle access to be denied up to three days after rainfall in a DRA. Vehicle access to other areas may also be refused. You must abide by these conditions.

DCBA sometimes offers us conditional access dependent on dry weather. Do not set an event where approval is of this nature. Keep in mind unseasonal rain can occur in summer or autumn.

You may be required to carry a DRA permit which you can obtain from DCBA. This permit should show the make, colour and number plates for vehicles working on your event and it will cover the setting and vetting period as well as the date of the event.

You may be asked to submit a traffic management plan, disease risk management plan, and an emergency management plan for DCBA. Templates for these are provided as *Appendix D - Emergency Management Plan* and *Appendix E - Traffic Management Plan Template*. The WARA Safety Officer will develop these with your assistance.

5.4.3 Water Catchments

Gaining access to water catchment areas to run an event is possible. However, camping is not permitted on state-owned land within a water catchment area. You should locate your hash house either immediately outside of the water catchment boundary or on private property within the catchment area. All drinking water dams have a Reservoir Protection Zone (RPZ) that is and area within 2 kms and upstream of all reservoirs. Recreational access to an RPZ is forbidden. The locations of the RPZs are shown in *Appendix B – Department of Water*

Catchment Map. RPZs are also shown on a master map of WARA rogaines, which is downloadable from http://wa.rogaine.asn.au/index.php/information/21-manuals-for-volunteers.

5.4.4 Applying for Access

As a significant proportion of rogaines occur within the DCBA's Swan Region, centred on Perth, WARA now uses a single point of contact for this region, this is the Locations Officer, for all DCBA applications. Contact the Locations Officer and advise them of your desire to set a rogaine in your chosen area. The Locations Officer will need a sketch-map of the event area and proposed hash house site, plus a description of any unusual circumstances that may be involved in your event e.g. Different start and finish times, the provision of soup kitchens, etc. The Locations Officer will lodge an application on your behalf and advise you of the application's progress. Note that it has become increasingly difficult to obtain DCBA permission for camping on State land, and setters are recommended to seek a privately-owned hash house location to access DCBA land for rogaining within the Swan Region. Discuss this prior to applying for permissions with the Locations Officer.

For events in the South West, South Coast or other regions, the Locations Officer will contact the local DCBA office (see *Appendix A - Government Contacts* and https://www.dpaw.wa.gov.au/about-us/38-physical-and-postal-addresses-for-dpaw-regional-and-metropolitan-offices). Each of these offices is staffed differently, and setters may be asked to assist with this process. The most useful point of contact for discussion and information on the suitability of an area will be the ranger for the Park concerned, but formal permissions will be required from the central office for that region.

Do not proceed with setting a rogaine on the basis of verbal approval from anyone such as a park ranger. Government authorities will grant WARA permission in writing. There have been cases where verbal approval was given and then subsequently withdrawn four weeks before an event.

Written approval from DCBA, and the DOW if relevant, is required before proceeding with the purchase of digital map data or doing any field work for your event.

5.5 Corporately Owned Land

It is sometimes difficult to obtain permission from absentee landowners or corporate owners. Sotico (formerly Bunnings Tree Farms - a subsidiary of Wesfarmers) and Alcoa are examples of corporations whose land WARA has used.

You should obtain in writing any corporation requirements regarding our insurance and any documentation that WARA needs to sign. Approval to use the land must be in writing – **not verbal**. In the past problems have been encountered with corporations asking for additional insurance information from WARA and threatening to withdraw permission only days before an event, even though verbal approval was received several months beforehand.

It is likely that corporate owners will require details of our public liability insurance, and this should be included in your correspondence to corporate land owners. See *Section 5.10 - Public Liability Insurance*, or contact the WARA Treasurer if insurance is an issue.

5.6 Strategy for Contacting Land Owners

However much you enjoy travelling and meeting people, approaching numerous landholders can easily become a tedious business.

To help you do this efficiently, you should make a rough ranking of landholders in the following order:

- those critical for the event to proceed. Large and/or central holdings and those with a potential hash house site
- land important for the creation of a well-balanced course
- other land.

It is also worth giving early attention to those landholders who are most likely to refuse permission such as corporations with plantations or DCBA where conservation areas are involved.

When talking with farmers try to avoid rogaine-centric terminology. Call the *hash house* the *base camp* and refer to the *controls* as *checkpoints*. Take a control and an old event map that shows farmland with out-of-

bounds areas. The farmers will find it easier to understand rogaining if they can see what is going to happen. You will find it easier to explain what rogaining is using a rogaine map. Have a sample map with a typical course marked on it, so that they can see that not everyone will be going to every control.

Stress to the landowner that giving permission is entirely up to them – if they do not wish to, then you fully understand. If you have enough landowners in the area, then you can tell them that the event will still proceed, but that their property will be marked as out-of-bounds. You will still need to confirm with them their property boundaries so that you can mark them as out-of-bounds. Occasionally, landowners will not give permission, but may still let you traverse their land to set, hang, and collect controls. They may also allow you to use a *corridor*, down a farm track or fence line, so you can connect to isolated properties where you do have access permission.

After you have obtained permission, explain the following:

- the setting and vetting process in simple terms
- when you and the vetters are likely to visit the site
- that you will tape or mark the control sites, and these will be replaced with the actual checkpoints (controls) on the weekend or week before the event date. Ask them to please not disturb the tapes, markers or controls
- that on the event weekend of the event there will be lots of activity particularly around the hash house/base camp area
- that on the Sunday of the event weekend the controls will be removed by volunteer members, not necessarily yourself.

If a landholder seems particularly generous or enthusiastic then they are a good candidate for hosting the hash house site.

Invite the local farmers to the hash house for dinner and to compete in the event. Event entry is free for landholders.

Ask whether the landholder wishes to be informed each and every time you intend visiting his property. Provide the landowner with a description of the vehicles you are likely to be using, and when you are likely to be visiting, for example only on weekends over the next two months.

5.7 Assurances to Landholders

Naturally, all landholders will want to know about the nature of the event and it is important to give an accurate description of it. Assure them of the following:

- all participants will be on foot, and in teams of between 2 and 5 people
- WARA is a not-for-profit volunteer recreational sporting organisation, largely comprising social and family groups
- teams choose their own routes and are quickly dispersed over a wide area
- the landowners' homes will be marked as out-of-bounds, to avoid disturbing residents and dogs, especially at night
- not all the teams competing will cross a particular tract of land during the event. Perhaps only a few teams may do so. This is especially true if the land is far from the Hash House
- any part of their property can be declared out-of-bounds (lambing, crops, prize bulls, weeds) if they wish
- the event organisers will not drive their vehicles through stubble in the hot and dry months due to the risk of starting a fire.

It may be necessary to give further assurances as follows:

- the rules state that participants will be instructed to leave gates as found and to cross fences with care
- participants will not bring dogs, other pets or firearms with them
- smoking cigarettes and lighting fires is not permitted outside of the base camp. The only fire permitted is the base camp fire which is controlled by the organisers. See *Section 5.8 - The Hash House Fire*
- WARA does have comprehensive public liability insurance. See *Section 5.10 - Public Liability Insurance*

- WARA has been operating for nearly forty years and has an excellent relationship with government bodies and farming communities
- landholders from previous events are available as referees.

Once given, such assurances must be strictly enforced. WARA routinely sets out appropriate conditions in participant information forms.

Give the landholder a copy of the rules. Supplies of pamphlets can be obtained from the WARA Secretary.

5.8 The Hash House Fire

When seeking permission from a landowner to locate the hash house on their property, you should discuss the hash house fire. Fires make landowners nervous, especially during the dry months. Explain the following:

- the hash house camp fire is under the strict control of organisers and this is the only permitted fire
- during the dry months (the Upside Down, the March 6 Hour and possibly the Autumn 12 Hour) fire restrictions will apply
- in the past WARA has paid country fire association volunteers to be on duty at our camps. A $200 donation to their association is normal.

Farmers may know of a good supply of accessible firewood that you could use and may even offer to collect/stockpile it for you. You could plan your hash house location so it is adjacent to a good supply of firewood.

5.9 Keeping Records

It is well worth keeping good records about the landholders. Record their name, partner's name and children's names, and their phone number, address and whether they wish to be contacted every time you visit. Carry this information with you in the field. Keeping this information will:

- assist you when dealing with landholders - try keeping the names of 40 strangers in your head
- assist you when sending thank-you letters or copies of the event map to landowners after the event
- be a huge time saver for setters who may wish to re-use your event area at a later date
- be useful for vetters, who may not be as familiar with the area or landowners as the setters.

5.10 Public Liability Insurance

WARA has $10,000,000 comprehensive public liability insurance under coverage provided by the insurance policy of the Australian Rogaining Association (ARA). Any insurance questions you have should be raised with the WARA Treasurer.

The following wording is based on the insurance documentation from the ARA:

- The ARA with whom WARA are affiliated, holds Public Liability Insurance to the value of $10 million in respect of all rogaining events conducted by ARA affiliated bodies. This insurance indemnifies landowners for acts of negligence by the Insured arising out of their participation in the rogaining event including time spent at the event site by organisers and participants in preparations for, and packing up after, the event. This insurance does not provide indemnity to landowners for acts of negligence by the landowner. A copy of the current Certificate of Currency can be downloaded from https://rogaine.asn.au/documents/insurance (go to http://rogaine.asn.au and chose the menu option *Documents* and then *Insurance)*.

Current documentation on insurance and a copy of the certificate of currency is available on the ARA web page at the web address given above, under the *Insurance Documents* link.

If you are dealing with a landowner who requires a statement that the insurance covers your specific event, or to include the name of the landowner on a certificate of currency, then please contact the WARA Treasurer.

6 Overview of Competition Map Production

6.1 Mapping Software

The preferred method of map production is to use the OOMAPPER mapping software package. To enforce standards, OOMAPPER must be used for all state championships. Setters who are experienced users of other drafting packages such as MicroStation can use these packages for non-championship events. However they do so with the understanding that they are on their own, they will cause inconvenience to others when the event area is re-used and that they must conform to the mapping standards given in *Section 9 - Competition Map Production – The WARA Way* as well as *Appendix K - Map Standards and OOMAPPER.*

Although the topographic maps available from Landgate and DCBA are useful for initial reconnaissance work and defining property boundaries, these maps should not be used for armchair setting. Instead, you should use a draft version of the competition map. There will often be significant differences between different maps of an area, and it makes sense to plan using the map the participants will eventually use. The digital data WARA purchases usually has a contour interval of five metres, which may reveal a great more topographical detail than you may already have. When you have approval to access all the land you require, contact the Technical Officer who will obtain the base map data for your event area.

OOMAPPER is free software, specifically developed for orienteering (OO stands for Open Orienteering) and can be downloaded directly from https://www.openorienteering.org/apps/mapper/ (just put OOMAPPER in an internet search and it will take you to the home page). When you receive the data, you can request a member of the committee to visit you and teach you enough OOMAPPER to get started. If you get stuck at any stage do not hesitate in calling one of the OOMAPPER experts listed in *Section 2.3 - People Who Can Help You*.

6.2 Map Generation Process

The process of drawing the map is very much a step by step one involving the cartographer (normally a setter), along with the vetters and other setters. After an armchair setting session, the cartographer should add the control locations to the base map using OOMAPPER. The setters then visit the site using what is basically an early version of the competition map. After returning from the field they make corrections to the control sites plus any other observations (road changes, new or missing dams and buildings) and print a newer version of the map.

This newer version of the map is then given to the vetters. The vetters must be provided with the same map that the competitors will use, with no extra map details and no missing map details. Under no circumstances should the vetters be provided with GPS coordinates of the control sites. In this way the vetters have the best possible chance of doing their job properly as they will be vetting with a proposed copy of the competition map with the same information the competitors will use.

6.3 Map Technical Characteristics (in brief)

WARA events are held using specially produced topographic maps printed in several colours and normally have a contour interval of 5 m. In some areas of WA with greater topographic variation than normally experienced around Perth and Bunbury, a contour interval of 10 m has been used, but this is unusual. Outside WA, contour intervals of 10 m and 20 m are more common. The map scale is generally 1:50,000 although 1:25,000 has been used on 12 Hour and 6 Hour events. The drawback of the 1:25,000 scale is that the paper required is four times than that required for a 1:50,000 scale and thus costs considerably more.

Other Australian state associations use a wide variety of scales. Scales of less than 1:50,000 are used to show fine contour details. For example, the 7th World Rogaining Championships in NSW used 1:33,333 (3 cm = 1 km). The complexity of the topography in South West WA doesn't necessitate this level of detail.

Obtain approval from the Technical Officer before producing a map at a scale other than 1:50,000.

7 Armchair Control Selection and Course Planning

7.1 Time Commitment

The time required for preparing the course is usually about six months from approaching the first landholder up to the time of the event. If you are setting events early in the year (Upside Down, 6 Hour or autumn 12 Hour) then remember that the Western Australian countryside is often hot and inhospitable in summer. Try to get your fieldwork done in the previous spring or use the cool days as they occur. Conversely, you should set in a DRA during the dry months, even if the event will be held at the end of winter. Having to apply for a DRA permit every time you want to go in, and have trips aborted due to rain the day before, makes the whole process very tedious, and will not win many friends in the DCBA.

Read *Section 8- Setting and Vetting in the Field* carefully before armchair setting.

7.2 Event Style

WARA has always been tolerant of the individual's influence on the style of the course. However, you should respect the established conventions of the sport. Any deviation from the norm should be presented to the committee before you finalise your plans.

You can influence the style of an event by your selection of the event area as well as the location, spacing, quantity and value of controls. You are strongly encouraged to place five or six controls close to the hash house for the reasons described in *Section 7.9 - Controls Close to the Hash House.*

7.3 Upside Down Rogaine

Special consideration must be given when setting an Upside Down event. Many novice and intermediate rogainers will try night navigation during this event. When setting the Upside Down bear this in mind - set slightly less difficult controls and use an area which has open vegetation or is predominantly farmland. You are encouraged to hold an upside down rogaine close to Perth and Bunbury, as there will be more participants than normal who are unfamiliar with rogaining all night without sleep. WARA promotes the message "Don't Drive Tired". If an event is far from the population centres entrants are more likely to drive home without having a sleep first.

7.4 Length of the Course

The objective is to set the event such that the top teams will visit a significant proportion, but probably not all, of the controls. The distance teams can travel will obviously vary depending on the steepness of the terrain and the vegetation. Recently top teams have travelled 110 kms in a 24 Hour event, 70 kms in a 12 Hour event, and 35 kms in a 6 Hour event. Some eastern states rogainers are capable of travelling 130 kms in Western Australian terrain in a 24 Hour event. Bear this in mind if you are organising an Australian championship.

Section 4.3 - Area Required outlines the area needed to hold a rogaine. Most recent WARA maps, even 24 Hour events, have been printed on A3 pages with a scale of 1:50,000.

An A3 rogaine map at 1:50,000 scale has sides of 15 x 21 km.

7.5 Maximum Number of Controls

Unlike the early days of rogaining when the number of controls on an event was limited by the number of squares on the control card (initially 72, then 100), with digital punching there is no theorical limit to the number of controls on an event. However, the computer software used to manage the event is currently configured for up to 100 controls. There are 100 potential controls, numbered 10 to 109. This is matched by equivalent-numbered controls and field control units. It is not necessary to use all 100 controls.

7.6 Selecting a Hash House Site

If possible, locate the hash house in a scenic location. The success of the rogaine will be greatly enhanced by a memorable hash house site.

Do not just assume you can camp where you want to. Seek permission from the appropriate landholder, whether on private property or in state forest. Obtain this permission as early as possible as the whole course largely depends on the hash house location. Note that DCBA has imposed limitations on camping in state-managed land, and it may be essential to obtain a privately-owned site for camping to access some areas.

Consider the layout of the hash house site and where will you locate the:

- catering area and hash house tent. The white hash house tent requires an area of 6 x 9 metres for the tent itself, with a perimeter of another 3 metres, for a total of 12x15 metres. There are also two 6 m x 3 m gazebos that are used for recycling, washing up or for providing extra serving area. So the required area may end up being 18 x 15 m or 12 x 18 m.
- administration tent, which is 6 m x 4 m and requires a clear area in front of it of least 6 m, so allow a total of 12 mx 12 m
- hash house fire and eating area bearing in mind the prevailing wind
- camping area, toilet facilities and car parking for up to 200 cars and camping for nearly 500 people without damaging native vegetation.

Consider also the following:

- the availability of firewood
- road access for the WARA and toilet trucks as well as cars and buses. There should be no tight corners or low branches overhanging the road and the surface should not require 4WD access. If there are a large number of competitors and hence toilets, the toilet truck may require a trailer. This introduces more access constraints
- position of toilets
- the time of year. For the 6 Hour and Upside Down events the participants and volunteers will appreciate a location with some shade
- soft ground is preferable for hammering in tent pegs
- good drainage is required for all events, but especially for the winter and spring events
- a level site is preferable for campers and essential for the hash house and admin tents
- the proximity to major highways and busy roads. These provide good access for participants and organisers. Avoid hash house sites visible from major roads due to security concerns
- the hash house should not adjoin an out-of-bounds area as this limits the directions that participants can leave and enter the hash house. This would also increase the possibility of participants unknowingly crossing through an out-of-bounds area
- a central location is best, particularly for 24 hour events. A hash house in a corner of the map can make course planning by participants awkward, particularly for social and family teams which visit the hash house and plan multiple loops into and out of the hash house site
- hash house sites in farmland during events in summer or autumn can be extremely dusty (e.g Hillman Hunter Safari in May 1999 and A Picnic in the Pingle in April 2000). If you are organising the Upside Down, March or Autumn 12 Hour events and you have farmland for your hash house then pick a paddock that has a good coverage of grass if possible. Paddocks that were cropped in the previous season will be dusty
- campsites in state forests can become distributed over a wide area. Try to avoid this. Consider the people who are camped at the outer-limits and have how far they have to walk (or limp) to the Hash House or Administration
- avoid hash house sites that conflict with other recreation groups such as tourist locations and picnic grounds.

7.7 Control Codes

When you are planning your control sites you do not know and you should not care about the value that control will eventually have. The initial codes that you assign to your control sites will be temporary. Experience has shown that while setting and vetting it is preferable to use letter codes rather than numbers. That is, code your proposed controls AA, AB, AC and so on. There are two reasons for this:

- WARA have special two sided "setting controls" that use these codes
- there will be less confusion when you have to convert your control codes to the actual control numbering system used for the event.

7.8 Planning the Controls

When planning your control sites remember that the bulk of WARA members are not elite athletes, and that the event must be enjoyable for all participants. Almost all controls should be located on distinct topographic features (knolls, spurs, gullies), linear features (tracks and watercourses) or large point features (dams or buildings). When entrants are within the control circle on the map, they should be able to find the control easily. Placing controls in overgrown minor water watercourses or within parrot bush thickets is not fair-play.

Chose your Hash House site and patrolled roads first. Locate the water drop controls on the patrolled roads, then plan the remaining controls based on these. The controls close to the Hash House should tend to be relatively closer together and navigationally easier.

Consider the layout of your map early in your planning. Most WARA maps are A3 in size. 6 Hour events will fit on A4. Consider where to place the map title, legend, logos and other elements of the final map. See *Section 9.3.1- What should be on the map*. Working out the map layout *after* setting the controls can lead to problems and wasted effort.

You may use one of many methods to select your control sites. Most experienced setters have a favourite method that they all insist is the best. One method is simply to pick the locations you prefer at spacings according to the terrain. Other setters overlay a grid on the map and pick the best site in each grid section. You then look at the result and make any adjustments you deem necessary.

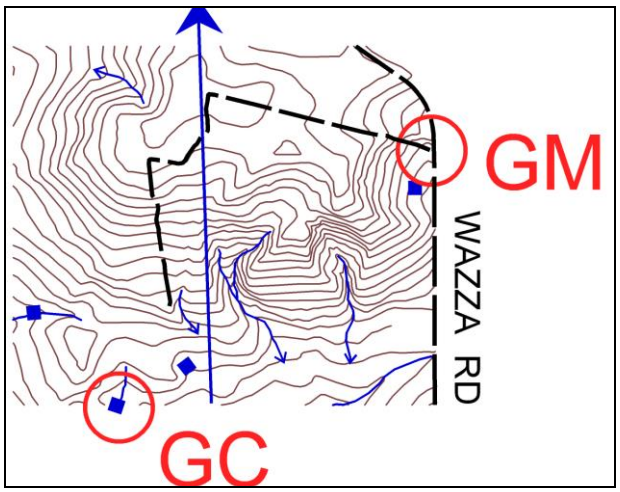
Examine aerial photography of your event site from Google Earth or similar internet-based mapping systems. The aerial photographs will reveal features that you may wish to use, such as bare rock surfaces, and will also show you which areas have been cleared and which are forest (though the photography can be out of date, with forest blocks being harvested after the aerial photography was taken). *Section 4.1.1 - On-line Aerial Images* explains how to access the Landgate's website, where you can zoom in on the aerial image from any part of your proposed map. Google Earth can be useful but may lack the required close-up resolution for many rural areas of the south west. Some commercial mapping systems (e.g. Nearmaps) can provide up to date (within days) aerial maps, but these are usually outside the WARA budget.

The distance between controls is up to you, although typically they are 1 to 2 km apart, and further apart on longer events.

The most challenging course for both setter and participant is one that offers no obvious single route choice. This can be achieved by careful balancing of the control values and making sure that there are no "holes" in the distribution of the controls. You may need to fill any gaps with a control that is not navigationally challenging, such as one on a track bend

Do not be too concerned about control values at this early stage.

Figure 1 - Avoid Placing Controls on the Map Edge



Avoid setting controls too close to the edge of the map as shown in *Figure 1 - Avoid Placing Controls on the Map Edge* or where a feasible route choice runs close to the edge. Participants can be lured off the edge of the known world and can easily become lost. Controls near the edges are acceptable if there is a collecting feature such as a major road, railway or river running between the checkpoint and the edge of the map. Leave at least 500 m (1 cm at 1:50,000) between the map edge and all controls.

Under no circumstances should controls be placed on the very edge of the map (e.g. GC). If a rogainer overshoots the control, they will be off the map and have no contours/features to help them relocate.

7.9 Controls Close to the Hash House

You are strongly encouraged to have five or six controls near the hash house because this:

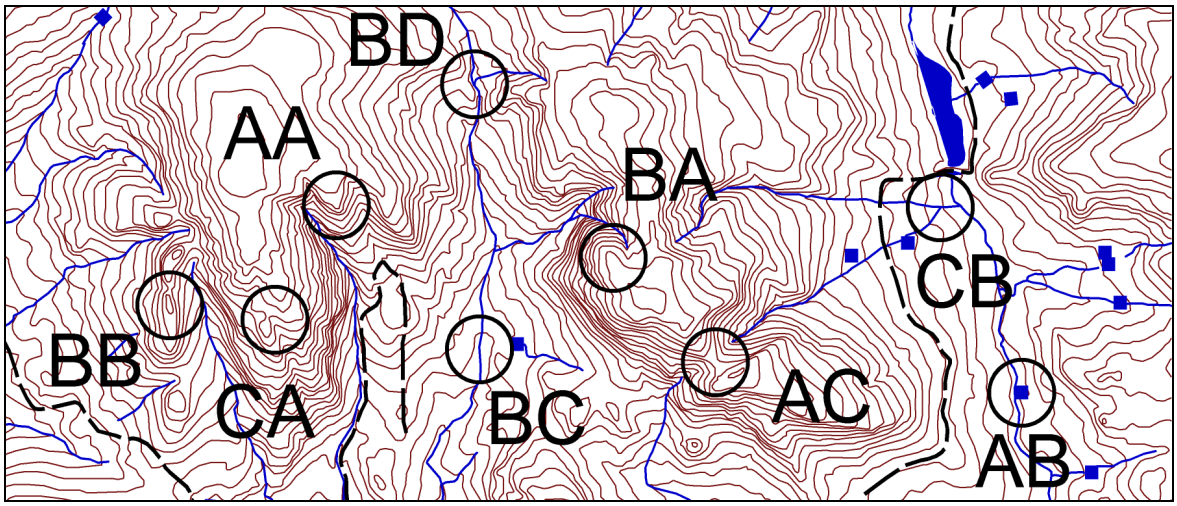
- enables teams who cannot walk long distances such as family teams the opportunity to visit many controls
- assists novice teams, as they are less likely to become lost walking between their first few controls; Consider that many novices have no appreciation for distances on the map nor how long it will take to traverse these distances. After visiting a few controls, they should develop a better feel for the map
- helps break up the crowds that occur around controls at the start of an event
- offers tactical route choices for teams returning to the hash house
- enables teams to visit different controls if they choose to do loops in and out of the hash house.

7.10 Format of Control Descriptions

A control location must be described in a manner that makes sense to the casual reader while also remaining within the guidelines described in this section. The description should be consistent with both the map and the ground.

WARA's standard format for control descriptions is that you describe the main map feature then provide any extra locational and descriptional information if required. The control numbers used refer to the map in *Figure 2 - Map Showing Typical Control Features.*

Figure 2 - Map Showing Typical Control Features



Control Number	Map feature, then extra details
AA	The spur, rocky
AB	The dam, south east side
AC	The saddle, north side of a 3m boulder

Refer to *Appendix L - Sample Control Description Sheet* for examples of control descriptions and a sample control description sheet.

7.10.1 "A" and "The"

If the geographical location of the checkpoint is clearly and unambiguously shown on the map (mapped) it is described using "**The**".

If the location of the checkpoint is not explicitly shown on the map (unmapped), the feature is described as "**A**".

An example common "A" feature in Western Australia is "A watercourse junction" when only one watercourse in shown in the control circle, and the control is placed on an unmapped watercourse junction. Use "A knoll" when the knoll is just a slight rise on a spur or hilltop and does not have a separate contour on the map.

An "A" feature should not be used as a control site if:

- there are several of the named-feature within the area of the control circle, and finding the control isn't straightforward
- there is a mapped named-feature within the area of the control circle, but the feature you intend using isn't mapped.

It is preferable to use "The" controls wherever possible. You may be able to correct the competition map to resolve the problem by converting the "A" feature into a "The" feature.

As an example, you could have a complex watercourse system with many small and unmapped tributaries. The control description would read: “A watercourse, on a bend”; this is a “bingo” control where participants require luck to locate. Participants fruitlessly searching for a control like this at night will not be pleased. If there is more than one mapped (or "The") features of the same kind mapped within the control circle then a direction must be given to indicate the control’s location (CA and CB in Table 2). However, setters should not be discouraged from placing controls in challenging areas with complex features.

Table 2 – Examples of Control Descriptions

Control Number	Map feature, then extra details
BA	A knoll
BB	The knoll, rocky
BC	A watercourse junction, east side
BD	The watercourse junction, south west side
CA	The eastern gully, head of
CB	The western watercourse junction

7.11 Placement of Water Drops

In WA there is normally a lack of naturally occurring drinking water, so it is essential to have water drops on the course. Allowing a water drop to run dry does more than spoil the event for participants; it can have serious safety implications.

Five or six water drops are needed for all events including a 6 Hour. However, the number of water drops will depend on your ability to maintain them during the event. A setter or vetter must check the water drops for water levels and for injured participants at least every few hours, so easy access is extremely important.

If the control values on your course suggest a limited number of very obvious route choices, there will be a procession of rogainers following the same circuit. Consequently, water drops on these routes will be visited by large numbers of people. A water drop at the half-way point of a circuit will be hit doubly hard, as rogainers travelling in opposite directions will visit the water drop at roughly the same time. At autumn and spring 12 Hour events participants may consume over 100 litres at a single water drop within a couple of hours. The solution to this problem is not to bias the number of water bottles you place at the water drops, but to have a well-balanced course that doesn’t lead to processions of rogainers.

The best locations are controls on drivable roads and tracks. Such sites are easily accessible by vehicle to check the quantities during the event and allow participants to top up without time wasting deviations. All water drops must be situated at or within 150 m of a control. Placing water drops on or near controls with high values will encourage participants to visit them. It is recommended that water drop controls have a value of at least 50 points. Locating water drops on tracks on a direct bearing between two distant controls is not permitted.

Consider the roads you intend to patrol for injured rogainers, and place the water drops on these roads.

Avoid placing water drops on the edge of the map as this makes them less accessible.

7.12 Out-of-Bounds Areas

The following areas should be marked as out-of-bounds on your map:

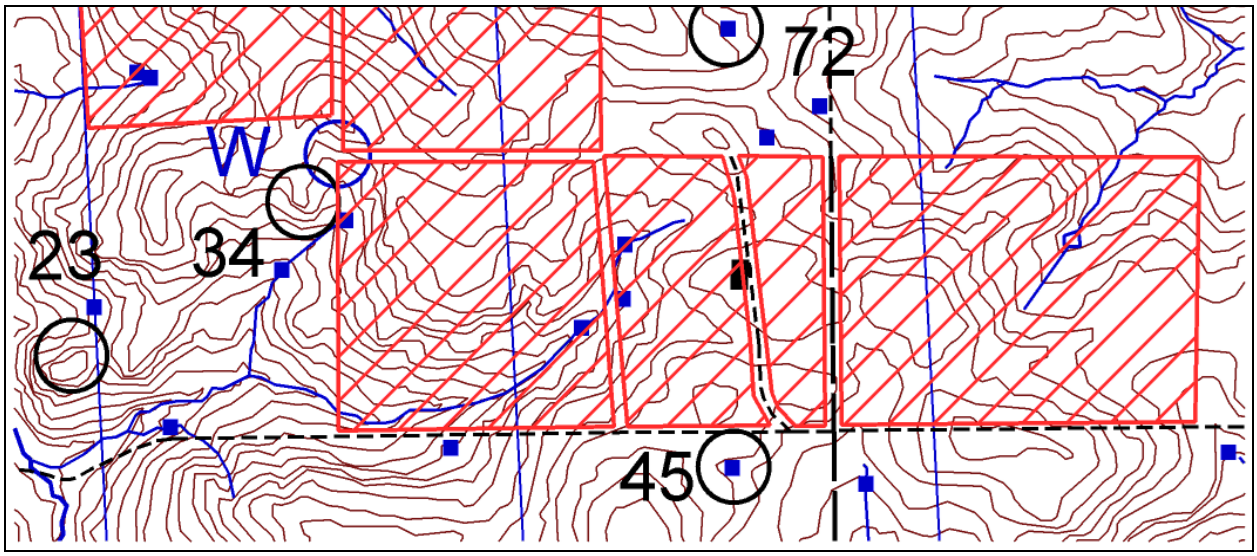
- homesteads
- hazards, such as mine shafts and cliffs
- paddocks for which access has been denied due to crops, bulls or other reasons

- any property shown on your map for which access permission was denied or not sought
- areas that DCBA requires to be out-of-bounds, for example disease risk areas or those with rare plants or animals

Do not locate controls in ways that would encourage teams to take short cuts through out-of-bounds areas. Do not locate the hash house adjacent to an out-of-bounds area. This increases the chances of a participant straying into the out-of-bounds area.

Where you have an out-of-bounds area that can be traversed by walking along a track, fence line, or a watercourse, make this obvious on the map by drawing corridors through the out-of-bounds as shown in *Figure 3 - Map Showing Access Routes Through Out-Of-Bounds* Paddocks. Also, draw attention to it in the pre-event notes *(Section 10.6 - Event Information Notes*) and the pre-event briefing *(Section 12.7 - Event Briefing).*

Figure 3 - Map Showing Access Routes Through Out-Of-Bounds Paddocks



7.13 Map Checking by Safety Officer

A WARA requirement is that the WARA Safety Officer inspects the proposed map for overall control positioning and, most importantly, the number and location of water drops. This is not meant to be an imposition on the course setters, nor is it meant to question their setting ability. However, water placement has, on occasion, been poor and it is important to avoid a repeat of these mistakes. The WARA Safety Officer will also check the length and distribution of the patrolled roads.

The sensible time for checking is prior to any field work. If, after approval by the WARA Safety Officer, water drops or controls have to be moved slightly due to factors you discover while setting, there is no need to seek further approval.

8 Setting and Vetting in the Field

It is essential that each control site be *independently* and critically vetted. The value of this two stage process cannot be stressed strongly enough. Both steps - setting and vetting - should be performed using the map the participants will use. Just one misplaced control can ruin an event.

The procedure to be followed is as follows:

- Each control must be visited by the course setters and the setting control or tape hung. Expect to move many of the control sites chosen during the armchair setting stage. Some fussy setters have relocated a third of their proposed control sites.
- The setters should prepare a corrected map of control sites and a list of control descriptions for the vetters to confirm. No extra information on how to locate the control site should be given to the vetters. This map should be the same as the map the competitors will use, with no extra features and with no missing features. It is essential that they find each control site independently of the setters.

- The vetters then confirm the control site and its description. Vetters should do more than just find the marker or tape left by the setters. The vetters should check the accuracy and fairness of the marker placement and the general map accuracy. They should assess the actual place with respect to finding it at night and from different directions.
- With the prior agreement of setters, vetters may move a badly located marker. The setters then have to "vet" any markers moved by vetters. Some setters do not like their markers moved! Setters and vetters should come to an understanding on this issue before vetting commences.
- This process is repeated until all control sites have been set and vetted, and agreement has been reached on their final location.
- It is critical that vetters do NOT use a GPS to locate controls, and setters should not provide GPS information to vetters. Vetters should vet using a draft competition map and a compass to locate controls, in the same way as competitors. A GPS may be used by vetters to verify their location to setters subsequently but should not be used in navigating. It is also strongly recommended that as much as possible vetters access controls by foot, rather than by maximising vehicle use. Errors in locating controls have occurred when both setters and vetters accessed a control only from the same nearby track parking spot and approached the control in a direction that competitors will never use. Perhaps confusing parallel features experienced by competitors are not noticed, or perhaps the car parking location was incorrect and not GPS verified.

Both the setters and vetters should be constantly on the lookout for corrections to the map. The data that the base maps are derived from can be out-of-date. Changes in roads, dams, buildings and plantations are common. Participants use these features as they navigate and it is worthwhile making the map as accurate as possible. It is straightforward to use a GPS to redefine a track position for example, and it is recommended that this is done if the track concerned is not only incorrectly placed on the map but also provides attack points.

Whenever you are in the field, take a list of the landowners with you. If you are challenged by a forest or farm worker you will be more credible if you can quickly name the person who has granted you access permission.

8.1 Setting Control Sites

It is best for at least two members of the setting team to travel to proposed control sites. This is safer and you will have another setter with whom to consult. However, do not be easily swayed by the opinion of another setter. Feel free to argue as much as you like. Take it as a guide that the more you disagree about a particular site, the more likely it is that it will be difficult for a competitor to navigate to, especially at night.

By all means travel to easier control sites alone but make sure someone knows your movements and proposed time of return.

8.1.1 Where to place the control

A control should be rewarding to visit in ways other than the allocation of points. It could:

- be interesting to travel to
- be a challenge to navigate to
- be physically challenging, although you should consider the social rogainer
- offer a nice view when you get there
- be at an interesting location, such as a historical site
- simply be needed to fill a gap between more interesting controls.

Avoid placing controls on "A" (unmapped) features that are not on a distinct contour features or do not have a nearby attack point. Do not use, for example, "An indistinct track junction" or "A bare rock surface" in an area where there are no map features to assist participants in locating the control.

A control that is navigationally challenging is not the same as a "bingo" control. A bingo control is found purely by good fortune and not by the navigation skills of the participants. Controls located on extremely broad features, unmapped track features or in thick bush are bingo controls.

8.1.2 Determining Your Position

When setting, unlike competing, your location will not be confirmed by the presence of a control. Check your position in as many ways as possible as described below.

- All visible features match those on the map while you are approaching the control site.
- The feature is the right shape and in the correct orientation.
- The location is the correct horizontal and vertical distance from any other mapped feature that you have passed on your approach or that you can see from the control site.
- All the surrounding features that you can see relate to the feature as the map indicates they should.
- If possible, leave by a different route and continue checking as you go.
- Be especially wary of parallel or similar features. For example, make sure that you really are on the track you think you're on. If you are on a hill with many knolls, be sure you have the correct knoll. Similarly, be careful if you have set a control in an area of complex watercourse junctions or spurs that have the same orientation.
- Use pace counting from a nearby unmistakable location (called an attack point) to locate the control position, especially if the control is not on a point feature.
- If approaching the area in a motor vehicle do not be too reliant on the odometer, or that your track is correctly mapped. Remember you travel faster in a car and it is easy to lose contact with where you are. Be especially wary of parallel features and make sure that the track you are driving on is indeed the one on the map.
- Competitors will not have a GPS and so they won't know that they are exactly 1.37 km from the track junction at exactly 308 degrees. If you are using a GPS receiver, you should not be using this to determine your position during field work. Use the GPS when you return home to confirm you selected the correct feature.

8.1.3 Is it a Good Control Site?

When a team reaches a control site during the event, they should have little or no trouble finding the control. Consider the following when setting a control. If any of these conditions below are not met, you should find an alternative location for that control.

- The proposed control site must be describable using common topographic or rogaining terms. See *Section 7.10 - Format of Control Descriptions*
- The map must appear correct at the checkpoint location.
- The area around the control should be free from hazards such as cliffs and electric fences. Any potential hazards should be included on the control description. If there are hazards, then consider an alternative control site.
- A control site should be a sufficient distance from any property, natural feature or environment which may suffer from the passage of participants, such as a fragile habitat, rare flora or crops. Controls should be at precise locations and not be ones which you find by good fortune (known as a bingo control). Searching for controls on broad knolls, broad spurs or in broad gullies can be frustrating, particularly at night.
- Both the approach to and the location of the control should be free of overly thick vegetation. Walking or fighting through thick vegetation is slow and unpleasant, and will be a deterrent for the majority of teams. Controls in thick vegetation are bingo controls.
- The control location does not encourage participants to break any rules of rogaining. See *Appendix I - Australian Rogaining Association Technical Standards and Rules of Rogaining*.
- The control can be located without undue difficulty or danger, especially during the night.
- The control should not be a bingo.

8.1.4 Marking the Control Site

If the conditions in *Section 8.1.3 - Is it a Good Control Site?* are satisfied, then observe the following.

- Determine the exact location of the controls. Ideally, they should be hung on a small living tree where you can wrap the control around the trunk of the tree. This helps participants find the control because it is not obscured from any direction. It will also help prevent the breakage of pencils and stop the control from twisting or blowing away in strong winds.
- The control should be located so that it is easily visible at the feature described. It should be hung at the eye height of an adult and in the open so that any team that navigated accurately can be assured of finding the control immediately. This is especially important for teams searching for controls at night.
- Use surveyors tape and a WARA setting control to mark the exact point (fence, tree) at which you intend to hang the control. Don't use plastic dinner plates as these break down due to ultraviolet light exposure. Paper plates turn into pulp. Don't hang just a setting control, hang tape as a backup.
- Use a GPS to record the control location. This permits verification of control locations in OOMAPPER.
- If the control site is in a paddock that may have stock, make sure that you tie the setting control and tape up high so they won't get eaten.
- Use several different colours of surveying tape. Use at least a metre of tape and have some loose tape to drift in the breeze or hang in the open. Don't make it too hard for the vetters!
- Write the control setting code, your initials, the date of the event and "WARA" on the surveying tape. If you are not using WARA's setting controls, then write the setting code on whatever you are using.
- At some locations, such as in a public area, it may be necessary to hang the control a short distance (up to 100m) from the named feature. See *Section 8.2.1 - Offset Bearing Controls*.

Having placed the tape as above take careful note of the following.

- The setting code (AA, AB, AC…) for the control site.
- Alter your proposed control description if necessary. When the control is on a broad feature, you should supply extra directional information in your control description. Such as "The broad knoll, southern part". The use of broad features is not encouraged, but sometimes you have no alternative.
- Look for other descriptive information about the site that wasn't known during armchair setting. Is the site rocky?
- Pay attention to whether the checkpoint is on a mapped feature or an unmapped feature. Is it **a** knoll or **the** knoll?
- Confirm or change the location of the control circle on the map. Be very precise in locating the control circle on the desired mapped feature. One millimetre on a 1:50,000 map represents 50 m. Be accurate!

It is vitally important to make all notes and map corrections while you are at the location. After a weekend of visiting 40 or more control sites you will have trouble remembering fine details.

It is especially important not to mark attack points or trails for vetters using tapes or other means.

8.2 Discussion on Some Control Locations

8.2.1 Offset Bearing Controls

This kind of control is used to hide the control from public view or where there is no suitable place to hang the control at the described feature. Do not overuse this style of control. It is often preferable to find another location.

The checkpoint description must include a bearing and a distance to the control from the feature. The distance should be no greater than 100 m and the bearing given is magnetic. In all cases the information is given in the same order – the feature, the distance and then the bearing.

Table 3 – Offset Control Descriptions

Control Number	Map feature, then extra details
34	The track crossing, 50 m @ 275 degrees

The control circle on the map is drawn centred on the specified feature and not the actual location of the control. In the example above, the control circle is centered on the track crossing.

The ARA Technical regulations state that the magnetic bearing and distance should be provided for controls that are more than 10 m from the described position.

8.2.2 Farm Dams

For small farm dams the control circle should be centred on the middle of the dam regardless of what side of the dam the control is hung on. Consider that the symbol for a small dam is 1 mm wide, which is 50 metres on a 1:50,000 map. If the dam is either greater than 50 metres wide or is large enough to have its actual shape drawn on the map, you centre the control circle on the appropriate side of the dam.

8.2.3 Watercourses

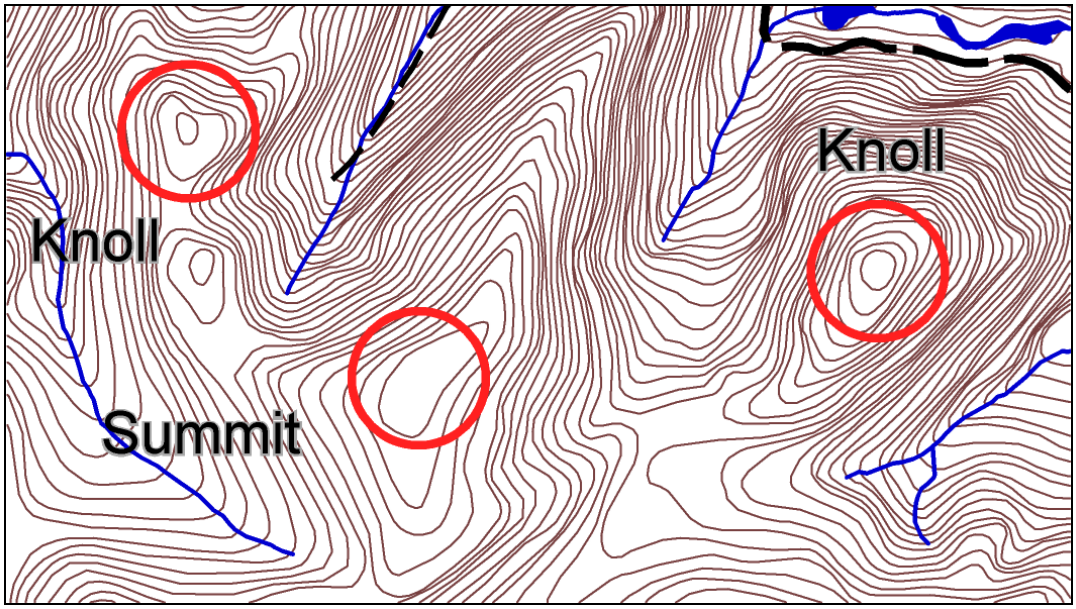
A watercourse is where water would flow, if water was flowing! It is very common in WA to have watercourses marked on the map that only exist in the imagination of the photogrammetrist that created the map. To fairly call a control site a watercourse there should be some visible sign of the passage of water. If you wish to use a site where the watercourse shown on the map is not easily visible in the field, it would be fairer to call the location a gully and to delete the blue line of the watercourse from the map.

8.2.4 Knolls and Summits

Knolls are local hilltops or smaller hills. Only use "summit" when describing the top of a very large hill which is the highest in an area as shown in *Figure 4 - Knolls and Summits. A*lthough knolls shown on the figure are large hills, they are not the highest in the area.

The control should be placed on the highest point on the knoll or the summit, which may not be located in the middle of the highest contour on the map. If the knoll or the summit is broad, then provide extra directional information, such as "The broad knoll, eastern side".

Figure 4 - Knolls and Summits



8.3 Setters' Preparation for Vetting

Setters should provide the following for the vetters:

- The most current map available with control locations printed on the map. The map should be the same that the competitors will use, with the same fences, tracks and dam corrections. Ideally, the map layout should be complete. At the very least the setters should be able to explain which areas of the map will be used for titles, legends, sponsors logos and other attributes listed in *Section 9.3.1 - What should be on the map.*

- A listing of control descriptions. Ideally, these should be a printout from a computer program such as Excel.
- A list of farmers and a map of their farm boundaries. It is very useful to know whose property you are on and to be able to refer to the landholder by their name.

For farmland events, if you intend to remove internal fences from your competition map, which is recommended, then the map you provide to the vetters should also have the fences removed. The setters should try to provide useful information to the vetters on how to travel through and between farms but should not give hints on how to find controls.

8.4 Vetting

The vetters should do more than just find the markers left by the setters. They should carefully check *all* the aspects of the setters' work. This includes looking for map corrections, overall design of the course and distribution of water drops. Vetters should inspect the whole course *through the eyes of a participant,* looking for any problems, and ensuring that the course and controls are fair and safe. Consider the approaches the participants may use.

For championship level events, vetting should be undertaken by an independent person(s) of recognised expertise both as a participant and as a setter or vetter.

It is most important that the setters and vetters do not discuss the details of controls in advance of vetting. Prior knowledge can weaken the vetters' objectivity and independence.

The vetters have an equal level of authority to the setters, and the setters should act upon their advice. If a disagreement about a control cannot be resolved, that control site should be deleted or moved.

8.4.1 Vetters' Preparation for Vetting

Vetters should be provided with a draft control list and a draft competition map which has been updated with all known corrections. Vetters should not be satisfied with a map with hand-drawn control sites. Only by giving the vetters a copy of the exact map you intend to use, complete with printed control circles, can the vetters do their job satisfactorily. The draft competition map should have everything carefully plotted on it, including all control sites, the hash house site and the out-of-bounds areas. Accuracy is of paramount importance.

The draft control list should read exactly as the final control list is intended, other than the final control numbers and point values.

Before going out into the field, all control descriptions should be checked against the map and any inconsistencies (including "a" and "the" mistakes) noted. The course setters should be consulted before the vetters start their fieldwork if any control sites are described poorly or appear to be bingos.

After doing the fieldwork, the vetters should provide the course setters with a written summary of suggested changes and be available to discuss them. Plan to repeat the setting and vetting procedure for any controls that need to be changed.

A sample vetters report sheet is provided in *Section 8.4.3 - Reporting Back.*

8.4.2 Vetting in the Field

The vetters should take *the* draft competition map and control descriptions provided by the setters, spare surveying tape, marker pens, notebook or a clipboard and paper with them into the field. They should not forget their normal rogaining gear like a compass, first aid, water, gaiters and whistle. All notes, control description changes and map corrections should always be made in the field as soon as the need arises. Do not take "mental notes".

As with setting, it is strongly recommended that vetters travel together for safety. Having another vetter nearby is useful if any discussion regarding a control site is required. Allow time for reasonable discussion and comment.

At each control location the following should be checked:

- The control site marker is in the correct location. Use all possible means to do this: take bearings, pace count from attack points and look at the contours on the map.

- The description correctly and concisely describes the checkpoint site.
- The location of each control and its immediate surroundings are sufficiently well mapped so as not to mislead participants.
- The location of the control will provide good visibility for participants approaching from all directions. Hanging the control around the trunk of a small and isolated tree that is in a reasonably cleared area is ideal.
- Any threat to the safety of participants has been minimised.
- Any threat to flora and fauna or property has been minimised and that participants are not encouraged to enter prohibited areas or break any rules of rogaining (*Appendix I - Australian Rogaining Association Technical Standards and Rules of Rogaining*). The marked location is not on a parallel feature. If the feature is one of many similar features (knolls or watercourses) in an area make doubly sure that the correct feature is taped.
- The control should not be a "bingo" control found only by good fortune. See *Section 8.1.1- Where to place the control* and *section 7.10.1 - "A" and "The"*.
- The control can be located at night without difficulty.
- Other considerations listed in *Sections 8.1 - Setting Control Sites* and *8.2 - Discussion on Some Control Locations.*

Vetters should walk the likely routes that competitors will use between the hash house and the inner-most controls. Keep in mind that these inner controls will be visited by: large packs of people at the start of the event; by competitors who are young or are of lesser fitness; and by competitors either rushing to get ahead of the pack or rushing back to avoid being late. If any hazards are found, then the control should be moved or the competitors informed in the Event Information Notes - *see Section 10.6- Event Information Notes*.

A control site should not be accepted just because it was found easily, as it may not necessarily be correct. If the vetters take a long time to verify a control position, then the control location may be too difficult. The vetters must be satisfied that each checkpoint is correct and this will require the same thoroughness as is required of the setters.

Any control sites in dispute, other than descriptive changes, or not located by the vetting team should be revisited by members of both the setting and vetting teams.

If the control site is too difficult, too vague or too physically hard to reach then it is a poor control site and should be abandoned.

Only with the prior agreement of setters may vetters move a badly located marker. The setters then have to "vet" any markers moved by vetters. Vetters should only move a control if they have a very good reason for doing so as this causes some extra work for all involved. If a control site is moved it must be done with extreme care as this could easily lead to an unfortunate mistake at the event. If you move a tape be very sure that the setters are aware of this. It is essential that the new location is agreed upon by the setting and vetting team, and that the marker is in an agreed position before the map is completed and controls are hung.

Keep the use of your motor vehicle to a minimum when vetting. A vehicle will deprive the vetter of the sense for the physical difficulty of the course, an aspect which the vetter should assess, and it is easy to be deceived when navigating by car. Parking up in the same location as the setting team near a control has resulted in incorrectly-located controls.

8.4.3 Reporting Back

The most reliable and effective way for the vetter to report back to the course setter is to present a set of written notes as a basis for discussion.

Table 4 – Example Vetter Comments

No	Feature	Location	Vetter's Comment
AA	The spur		OK
AB	The summit	Eastern part	OK. Nice view. Suggest high value control.
AC	The spur		Circle should be 100 m further east. See attached map for correct location.
AD	The watercourse junction		Control circle on taped location is wrong. Correct location believed to be 300 m upstream.
AE	A power pole. E45678	40 m @ 180 degrees	OK. Suggest using knoll to the SE instead of bearing control.

This should be followed by any remarks relevant to safety and to the course in general.

8.5 Satellite Phones

WARA has a set of satellite phones for each event. These will be brought to the event by the WARA Safety Officer and issued to Administration and the patrol cars. Satellite phones may also be used for setting and vetting in remote areas, and their use should be discussed prior with the Safety Officer. WARA also has UHF CB radios which may be useful for communication during setting and vetting, but are unreliable over distance.

8.6 GPS - Global Positioning Systems

Handheld GPS units are common and affordable, and WARA has a set of GPS units that can be loaned to setters if they do not own one. Setters should use GPS to verify all control locations once the control has been set. GPS is an essential but **additional** tool to **confirm** the location of a control siteI and should not be relied upon as the definitive method for locating a control site. You should first navigate to the proposed site; decide where you think it should be considering the factors listed in *Section 8.1 - Setting Control Sites*. Only after you have done this, check the GPS coordinates or mark a waypoint to be uploaded onto your map later.

Guidelines on how to use a GPS are included in Appendix F – GPS .

Be aware that the coordinates that you obtain from the OOMAPPER map for the control points may be incorrect as the base map may have been accidentally shifted or the datum could be wrong – use a couple of distinctive features such as road intersections to check the accuracy of the map data.

You can accurately improve your map using a GPS receiver. New tracks, road realignments, new buildings and new dams can be added to your map. OOMAPPER can interface directly with a number of GPS receivers and can import GPX files (a common GPS data format) downloaded from a GPS.

Inappropriate use of your GPS could lead to a disastrous control site. Just because your GPS says "X" marks the spot, it isn't necessarily a fair control site. It is quite possible that your GPS is correct when the map contours and other data near the control site are not. As an example, the GPS will be useful to show that you are on the correct spur, but you should position the control circle on your map in relation to the contours on your map.

Under no circumstances should vetters use GPS units to vet a control. They should be finding controls using the same methods as a participant. Remember – vetters need to judge whether the control site is fair, not just find the site marked by the setters.

9 Competition Map Production – The WARA Way

This section focuses on the standards that define a WARA rogaine. Due to Administration procedures, computer software and available controls you must abide by these standards. If you wish to deviate from these standards please seek advice and approval from the WARA committee well in advance of having your map printed.

9.1 Constraints of WARA Scoring System

The WARA event management software (*Pebbles*) has allocations for 100 controls, with the value of each control being

$$\left(\left(\frac{\text{Control Number}}{10}\right)_{\text{Rounded Down}}\right) * 10$$

That is to say, controls 10 to 19 must have the same value (10), so should controls 20 to 29 (20), and so on to controls 100 to 109 (100).

Although there are 100 possible controls, it is not necessary to use all of them.

9.2 Control Weighting

Control values must allocated in multiples of ten - 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100 points.

The setters allocate the values of controls after the course is fully set and vetted. The challenge is to set an event where the distribution of controls and their values is balanced in such a manner that there are no obvious route choices.

The vetters should review and comment on the values assigned to the controls by the setters. Vetters should avoid being involved with the initial allocation of control values, as this may be detrimental to their ability to view the course from a participant's perspective.

There are no strict rules governing the number of points that should be allocated to a particular checkpoint. You may weight the controls in any way you wish. Some alternatives are as follows.

- **Difficulty weighting**: This puts the emphasis on the difficulty of reaching a checkpoint from its neighbours. Thus, the top of a steep hill, an isolated location or a place that can be found only by skilful navigation may be given a high value. The final score will indicate the team's skill, speed and stamina.
- **Perimeter weighting**: This hinges on the thought that distance from the hash house is a factor in the difficulty of visiting a checkpoint. Inner controls are thus worth less while the outer controls are worth more. This method tends to prevent competitive teams from visiting the hash house during the event and inflates the scores of the higher ranking teams.
- **Central weighting**: This method places a very high value on some inner controls. This allows the competitive teams to find profitable routes in and out of the hash house during the event. It also tends to inflate the scores of the lower scoring teams.
- **Scenic weighting**: This gives higher value to locations of high scenic quality or historical interest. The intention is to lure teams to these places to enhance their enjoyment of the event.
- **Water drops**. Placing water drops at or near controls with higher values encourages participants to visit water drops. From a *duty of care* perspective this is important, especially in warm weather. All water drops must be at or within 100 m of a control.
- To encourage novice teams and those with children, a 100 point control is often placed reasonably close to the hash house.

Having decided the appropriate value for each checkpoint in the style that you prefer, you will need to make adjustments to correct any unwanted bias towards any part of the course.

Avoid having courses with obvious route choices as it:

- causes a procession of rogainers who follow the same basic circuit. Teams will find controls by following other teams rather than by using their own navigation
- takes away an important aspect of rogaining, which is choosing an efficient route during course planning
- can lead to uneven usage of water drops, which may cause some water drops to run dry.

9.3 Map Standards

To obtain a computer base map of your area, **after** you have gained any necessary approvals in writing contact the Technical Officer and inform them of the boundaries of your map in eastings and northings. Data is purchased from Landgate (formerly Department of Land Information) and can take up to three weeks to be delivered.

All WARA setters are strongly advised to use OOMAPPER for creating their map. Setters of championship level events must use OOMAPPER.

The advantage of using OOMAPPER is that map information in the computer map file you receive will already conform to the WARA standards. The completed OOMAPPER file is also useful to setters in the future who

may use your event area. Setters who insist on using Microstation or other CAD packages should abide as closely as possible to the standards listed in *Appendix K - Map Standards and OOMAPPER.*

9.3.1 What should be on the map

A WARA rogaining map should be printed at a scale of 1:50,000. Occasionally maps are printed at 1:25,000 for small maps such as a 6 Hour event.

Every WARA map must have the following attributes.

- the words "Western Australian Rogaining Association Inc."
- the words "This map was produced using OOMAPPER. Data supplied by Landgate and used under copy licence 393/93". This is important. Data is obtained from Landgate at a discount because WARA are a non-profit organisation which does not on-sell maps. Change "OOMAPPER" to the drafting package you have used if appropriate
- the name and date of the event
- our web address which is wa.rogaine.asn.au
- a scale bar showing distances on the map
- a legend showing every map symbol used
- the rogaining logo
- a list of the landowners, including thanks to them
- the words "Possession of this map does not give right of entry to this area."
- if appropriate, write the name of any special events taking place at your rogaine, for example the "200X Paddy Pallin Schools Championships" or the "200X Junior Cadet Challenge"
- the names of the setters and vetters
- logos for LotteryWest and the Department of Sport and Recreation if applicable at the time of the event as they provide sponsorship.
- if your event has a sponsor (normally Mainpeak, Paddy Pallin or Mountain Designs) you should include their logo. The Technical Officer can provide logos
- the control locations are shown with circles and their control numbers. The control circle should be centred on the named feature. See *Sections 8.2.1- Offset Bearing Controls* and *8.2.2 - Farm Dams*
- the hash house location marked using a triangle
- the contour interval and scale should be written in words. e.g. 5m contour interval. Scale 1:50,000
- the magnetic north lines (normally 2° west of north) are printed with a spacing of 40 mm or 30 mm (2 kms or 1.5 kms)
- patrolled roads are shown using a grey line that is wider and in the background of the road
- the water drops marked are with a blue circle, which is smaller than the control circle, and indicated with a blue "W". Where the water drop is at the control site then the water drop circle can be omitted if it covers important map details. If the water drop is not at the control site then the water drop circle must be drawn
- all out-of-bounds areas are clearly indicated. See *Section 7.12 - Out-of-Bounds Areas.*

9.3.2 Map colours

WARA maps are normally drawn in five colours

The standard use of these colours is:

- Brown - contours
- Black - roads, buildings and fences
- Blue - magnetic north lines, watercourses and other water features
- Red- control circles and out-of-bounds

- Grey - Patrolled Roads and bare rock surfaces.

Other colours are sometimes used, such as magenta for control circles and numbers but this does not add greatly to the readability of the map. A light green solid fill can be used to effectively show plantation areas, especially where the outline of plantation is complex and the use of the "forest boundary" symbol would clutter the map. The fill should be very light so as not to hide contour detail. Do not use symbols, like little pine trees, to indicate land use. Some rogainers find these very hard to distinguish from other details on the map, particularly in poor light.

9.4 No Map Corrections!

It should be the goal of every setting and vetting team to produce a map that does not require any map corrections prior to the start of the event, although sometimes this is beyond their control. While setting and vetting be on the lookout for any map details that need correcting. New buildings or dams, and new major tracks can be added during the setting and vetting process using OOMAPPER or a similar drafting package. Similarly, demolished buildings, overgrown or missing tracks and vague watercourses can be easily removed from the map.

Aerial photographs and published maps can show many features not shown on your map. The Landgate aerial photography is updated much more frequently than the digital data (contours, roads, etc.) Even aerial photography available through sources such as Google Earth can be more current than the topo data.

9.5 What not to Include

The base map you receive may contain fences. These are a valuable aid to setters, particularly for navigating around farmers' paddocks. However, these fences are often mapped wrongly as farmers regularly rearrange their paddocks. Maps used by vetters and participants should not show internal fences. By all means show external fences where they adjoin forests. It would be normal to mark these boundaries using a "forest boundary" symbol or by shading as with a plantation.

Your base map may contain bare rock surfaces. Landgate data often includes areas incorrectly mapped as bare rock; these may in fact be large boulder fields or clearings.

It is recommended that you do not show internal fences or rock surfaces on the competition map as they are misleading. An experienced team will notice but quickly reject an incorrectly mapped rock surface or fence. However, an inexperienced team will make false assumptions and possibly wander off in the wrong direction. It should be the objective of the setters to assist the participants and not to mislead them.

9.6 Printing the Map

Setters should check with the Event Co-ordinator for the preferred printer. At the time of updating this manual it was PrintWest (Contact: Jonathon Aindow, 244 Leech Highway, Myaree, Western Australia, 6153, Ph. 0478 923 373, sales@printwest.com.au)

It does not hurt to drop the printer a line a week or so beforehand, to let them know the order is coming in, in case they have a busy work schedule. Just mention that it is a WARA order.

Maps are normally printed around the time of the close of entries as there will be a good estimate of the number of entries by this time. Contact the WARA Event Entries Officer for an estimate of entrants. Essentially, we need a map for every competitor, 20-30 for control collection, 10-20 for the map bank, and at least another 20 for potential extra teams on the day (most likely if the event is close to Perth or if there are late entries), for volunteers who want to go for a short walk and for a few competitors who like to take a clean map home. So add 60 to the number of competitors and round it up.

For control descriptions, we need about 30 less than the number of maps (you don't need them for control collection and only a couple for the map bank).

Below is a proforma email to send to PrintWest, with pdfs of the map and control descriptions attached. It is the responsibility of the setters to have the maps and control description sheets printed. Please check with Peter Trenamen to make sure that he is attending the event, otherwise you will need to arrange to collect the maps once they are printed.

To: sales@printwest.com.au

Attention: Jonathon Aindow

The next rogaine is due to be held on Saturday May 22. Can you please print

- 280 copies of the A3 map on 170 gsm paper
- 250 copies of the A4 control descriptions on 120 gsm paper

and deliver to Peter Trenamen of Group Support at 2/103 Campbell St, Belmont, by Friday May 21.

Please invoice the Western Australian Rogaining Association at Treasurer@wa.rogaine.asn.au

10 Event Final Preparation

10.1 Newsletter/Website Teaser

The setters are responsible for providing the enews editor/webmaster with a half page article describing the event. As well as adding a touch of humour, the article should contain the following:

- a factual description of the terrain and vegetation type (farm, grazed forest, wandoo, jarrah, etc.)
- the proportion of farmland
- the approximate travel time from Perth and Bunbury. Name the nearest town because as some members will wish to book motel-style accommodation, and also because to help teachers or cadet leaders who bring large groups on buses. It is not necessary to reveal the actual event site
- any warnings, historical notes or peculiarities about the event.

The newsletter editor and webmaster will normally require this information six weeks before the event.

10.2 The Pre-Event Meeting

The setters and vetters are expected to attend the pre-event meeting that is hosted by the WARA Volunteer Coordinator about two weeks before the event. At this meeting they will meet the Hash House and Administration volunteers who are critical to the success of the event.

You should have detailed directions to the event. These will be required by the truck driver, by the toilet hire company, and by the WARA Safety Officer / Camp Manager.

This meeting should also be attended by the truck driver. It is important that the setters discuss with the truck driver topics such as the event location, the expected time of arrival of the truck and the responsibility and placement of the direction and *no shooting* signs.

Discuss the layout of the hash house site with the volunteers, especially the truck driver. Have a sketch map of the hash house site prepared and provide this to the WARA Safety Officer and Camp Manager.

- Where will you put the hash house, Administration and First Aid tents?
- Where will the fire be (need to ensure that the fire is located such that the predominant wind direction is not towards the hash house/admin tent)?
- Toilets should be located pointing away from the hash house.
- Can access to the admin area be tapped off prior to the event so that during the event patrol cars have access to Admin?

If you intend to provide fruit at the water drops inform the hash house staff so they can order extra fruit.

You should decide on the date and venue for the post-event barbecue. See *Section 13.1 - The Post-Event Barbecue*.

You should provide emergency services contact details to the Camp Manager and Administration leader. *See Section 10.9 - Emergency Services*.

You should arrange whether you want diesel, petrol or both taken to the event to help with road patrols. S*ee Section 12.13- Extra Fuel.*

The Camp Manager will arrange the hire, payment, delivery and pick up of the hire toilets. Arrange the following:

- the delivery times for the toilets
- precise directions to the event. Don't assume that the direction signs will be in place.

10.3 Event Directions

This is the form letter that is available to be downloaded from the website by the team contact in the week prior to the event. The setter must give the Event Coordinator accurate instructions for getting to the hash house site, the expected driving time and any other instructions particular to the event. These details are required two weeks before the event. The directions will be copied and distributed by the pre-event Administration volunteers.

Clarity in giving these directions is essential. They should be sufficiently accurate for early arrivers (event volunteers, the equipment truck and possibly hire-toilet truck drivers) to get to the hash house site without the use of the rogaine direction signs. It is also possible that rogaine direction signs may be stolen or blown away. Provide carefully measured distances between all turns.

Take into account that some may be approaching the site from a different direction such as Bunbury. Or they might simply be taking the opportunity to investigate different roads/places they have not been before. Driving times should be exaggerated because the setters, who are familiar with the roads, take less time to travel to the site. A shortage of planning time before an event is a major frustration for participants.

The setters and vetters are also responsible for organising a venue for the post rogaine barbecue. This is usually held on the Friday night following the rogaine. This information is also required for the event directions.

10.4 Astronomical Data

Moon and sun rise and set times are important information for course planning and should be provided to the participants on their control description sheet.

You can obtain these rise and set times from the Geoscience Australia web page https://www.ga.gov.au/scientific-topics/astronomical. This web page links to web page *forms* that will calculate the astronomical event times based on place names (or latitude and longitude) and a date.

You can also obtain astronomical data for Perth from the Perth Observatory web page https://www.perthobservatory.com.au/sun-and-moon-tables. If your event is not extremely close to Perth, this information will be a few minutes out.

Be careful when reading the moon set times from these web pages. The Geoscience web page will show the rise and sets of the moon that occur on a calendar day. The Perth Observatory moon rise/set tables are based on the azimuth (highest elevation) for a transit of the moon, and the rise and fall times may be marked with *f* or *p* to indicate the rise or setting is on the following or previous day.

It is recommended that you use the Geoscience Australia site as you can obtain astronomical data for any location and the results are less confusing.

10.5 Control Description Sheet

After setting and vetting and the correction of any errors, the corrected control description list should be prepared for printing. A sample is given in *Appendix L - Sample Control Description Sheet*. It should contain the following information, all on one side of an A4 page:

- the control number, points value, feature and location, in that order
- the total number of controls used and total points
- the opening and closing times of the hash house
- the fruit drop times, if required
- astronomical data. See *Section 10.4 - Astronomical Data*

- a list of water drops
- a list of patrolled roads
- a safety bearing may be useful if there are no major linear features (major rivers, roads, train lines) on the map.

Producing the control description sheet should not be a major task. Simply use the control descriptions created and checked during the setting and vetting process. It is however worth having all members of the setting and vetting teams proof read the control descriptions before printing.

It is the setters' responsibility to have the control descriptions printed and brought to the event. WARA will pay for the cost of the printing. For a full event of 450 participants print 500 control description sheets. Ask the Volunteer Coordinator for an indication of the number of participants. You can print these at any local photocopy service or use your workplace photocopier, though it is preferred that the control descrby the main printer along with the map.

A copy of the control description sheet should be sent to the Control Logistics Team who prepare the controls and set up the event Administration computer *Pebbles*.

10.6 Event Information Notes

You must not rely on all participants hearing what is said at the pre-event briefing. Some of the participants will still be finishing their preparations or may be distracted. Any critical information that affects route planning or safety should be in printed form and given to participants at registration. These notes could contain information on points of interest, history or scenery, and must certainly warn participants about potential hazards and their locations. Dangerous cliffs, electric fences, mine shafts, dangerous farm animals and other known hazards should be identified.

You can list the patrolled roads on these notes, but they must also appear on the control description sheet.

It is the setters' responsibility to have this information available to be distributed, one form per team, at registration. Two hundred forms should be sufficient for a fully subscribed event. See advice on printing in *Section 10.5 - Control Description Sheet.*

Alternately, these notes may be printed on the reverse side of the Control Description Sheet.

10.7 Preparing the Controls

The Control Logistics Team (CLT) is responsible for preparing the controls and the Field Control Units (FCUs). Contact the Event Co-ordinator or Volunteer Co-ordinator to obtain the contact details for the CLT.

At least three weeks before the event you should contact the Control Logistics Team and provide them with the list of control numbers required for the event. Also indicate which controls need extra intention boards. Do not underestimate the time required to do this. You should allow the CLT at least two weeks to prepare the controls and FCUs and arrange to collect them at least a week before the event, in order to allow time to hang the controls.

It is the duty of the CLT to check the following:

- each control has a working FCU
- the pencil
    - ensure that each control has a pencil that is sharpened on both ends
    - tie the pencil to the control. Make a small notch around the circumference of the pencil between the two end with a hacksaw or knife. If the string is tied around this notch it will be harder for the pencil to slip off the string. Ensure that the string is sufficiently long to allow the pencil to write on all parts of the intention sheet
    - use soft (2B) pencils
    - dispose of pencils with shattered leads
    - use masking tape to stick the pencil on to the control such that it will be on the outside of the control once it is opened up. This will help prevent pencil breakages

    - do not use excessive amounts of masking tape. Use just enough to hold the pencil in place
- the intention sheet is well taped to the control. Use lots of masking tape and make sure the tape goes over the top and bottom edges and partly on to the back of the control. During the event the participants use these sheets to record their team number, time of visit and their next destination. This is necessary for safety purposes only. It is not used in settling disputes if a team has lost or has failed to punch their control card
- the intention sheet has a unique 4 digit code, to be used if the FCU fails to work. A list of the controls and associated codes is to be provided to Admin
- there is lots of cord, normally Venetian blind cord, for tying down the control securely.

The CLT also complete the following tasks.

- extra intentions board with FCUs are required for controls close to the hash house
- prepare the control file to be loaded into the event administration system *Pebbles*.

Bring the control repair kit with you to the event, and when hanging controls, just in case it is required.

10.8 Preparing for Control Collection

Control collection is an extremely important part of organising a rogaine. You are free to organise the control collection in any way you like. Although the method described below is only a suggestion, it is vitally important that control collection is organised such that:

- the water bottles are brought back quickly as these must be loaded onto the truck to be taken back to Perth. The truck driver has been working on the rogaine for up to three days, and it is unfair to make the driver wait for the water bottles after everything else is packed away
- you know who is collecting controls, when they left to collect them, what car they are driving and if they have returned
- suitable vehicles are used to collect controls.

It is not the responsibility of Administration to organise control collection. Administration will refer all control collectors to the setters. A setter should therefore be available near the Administration tent during event registration to organise control collection.

Here is what you could do:

- Group the controls into logical groups of 3 or 4 controls
- Consider how to collect these controls. Do you walk to them from the road? Do you need a four wheel drive? Do they require basic or more advanced navigation skills? Groups of controls that include water bottles should be straightforward and be brought back quickly. Try to minimise having control collectors drive across paddocks
- Make a master collection map with the collection groups circled
- Prepare maps for each control group. These maps should clearly show the controls for each group. Include any details or notes your feel necessary. For a farm event this map could include fences that have been deleted from the competition map. Highlight the best route and attack point to retrieve the control. **This information is not given out until after the event**.
- Prepare slips of paper that state something like “Thank you for volunteering to collect controls. You are responsible for collecting controls in Group NN. Before you depart to collect controls, your must see a setter and obtain a detailed map and advice on collecting controls. Controls should be brought back to the hash house. If you can’t collect your controls, please inform a setter”.
- Prepare a form as shown in **Error! Reference source not found.** that you will use to administer control c ollection.

Table 5 - Example Control Collection Form

Group	Controls	Requirements	Team Collecting	Name of Team Contact	Car Registration and Description	Time Departed	Collectors Returned
1	56, 23, 12	*2WD okay. Easy!*	*45*	*Rhys Challen*	*7IB –118. White Mazda hatchback*	*7:50am*	*9:00am*
2	54, 3, 69	Big walk. tricky navigation					

After a team has volunteered to collect controls when registering they should see a setter. The setter will decide what control group is suitable based on their experience and vehicle. Record the team number and contact person.

After the event, as teams are leaving to collect controls, provide them with the detailed map and instructions record "Car Registration and Description" and "Time Departed".

When the teams return, you can check they have retrieved all the controls and tick off the "Controls Collectors Returned".

Do not give out any details unless the team is going to leave immediately to collect controls. It is your *duty of care* to keep track of the control collectors.

A variation of this method is to use envelopes rather than a form. An A4 envelope is used to hold the detailed map for a control collection group. All the envelopes are kept by the setters, and the details of the team collecting the controls are written on the outside of the appropriate envelope.

It important that the control collector sees you write their name and team down and that you give them something saying that they are responsible for collecting a control group. They should then be less likely to leave the rogaine without helping.

Please read S*ection 12.17 - Collecting Controls*

10.9 Emergency Services

The WARA Safety Officer will develop the Emergency Management plan {Appendix D - Emergency Management Plan) for the event in conjunction with the setters. The setters are required to provide to the WARA Safety Officer:

- area of event (in square km)
- shire/s where the event is being held
- GPS co-ordinates of Hash House
- distance of patrolled roads
- access route
- number of water drops
- whether mobile phone coverage is available at the hash site.

If any emergency occurs, the injured participant can be taken quickly to the nearest medical facility. Prior to the event the WARA Safety Officer will advise the relevant emergency services that a rogaine is being held in their area. The full WARA Safety & Rescue Manual lists hospitals in the area. Note that a fire and dieback management plan may be requested

10.10 Truck Loading

If possible, be available to assist with the loading of the equipment truck. The truck is normally loaded around 4:30 pm on Thursday prior to the Autumn and Spring 12 Hour events and the two 24 Hour events. For the Upside Down and 6 Hour events the truck is loaded on either the Friday night or early Saturday morning, and it is unrealistic to expect you to be there.

The truck loading is an ideal opportunity to grab any equipment, water bottles or signs you may need before the equipment truck arrives at the event. The equipment is stored at the WARA equipment shed, (previously a block of change rooms), located at Hampton Square, West Morley. The car park is on the west side of the shed just north of the tennis courts.

11 Hanging Controls

Hang controls as late as possible, a few days or the weekend before the event. This reduces the chances of the controls being damaged or blown away by exposure to the weather. This also reduces the risk of the control being removed by passers-by.

Ideally controls should be hung around the trunk of a tree or post to minimise flapping in the wind (Figure 5). Controls hung in this manner are visible from all directions, and if the control falls it is unlikely to be blown away.

The FCU should be attached to the same tree, just below the control (Figure 5). The FCU is to be attached with the number at the top, which ensures that the button is on the right hand side (as you look at it) and the light is on the right hand side, and hence easily visible at night.

Figure 5 – Correct Way to Hang Controls and FCUs

When hanging controls in the field take the control repair kit, a good supply of spare 2B pencils, cord, masking tape, and intention sheets with you to do repairs.

When hanging the control, check that:

- the control and the attached intention sheet are numbered according to the checkpoint you are putting out
- a sharpened pencil is attached. Stick the pencil down with masking tape on the outside of the control to stop it flapping in the wind and breaking. Use enough tape to hold the pencil down, but not so much that it causes an undue delay to the first team arriving at the control
- the FCU is attached to the same tree, below the control
- the control is hung at the eye height of an adult, and within easy reach
- any extra intention boards with FCUs, if required, are positioned at least 3 m from the actual control. The intention board should be easily visible from the actual control, but be far enough away to reduce crowding.

Only the setters and vetters should hang the controls, **not** other well-meaning volunteers.

The person hanging the control should place it in exactly the same position as the control site marker and then remove the tapes/plates. Do not leave tape in the bush. If you can't find the setting control or find multiple tapes don't hang the control. Discuss the missing or confusing control site marker with the other setters and vetters. A

setter and a vetter should revisit the site together, resolve the problem and hang the control. Critical errors have occurred where controls have been moved and multiple marked locations have been retained.

Place Patrol Signs at the water drops to indicate when the water drop was last visited. Patrol cars need to have a marking pen.

12 At the Event Site

Now the fun starts!

12.1 Setting Up

For the normal 12 Hour and 24 Hour events, the setters and vetters should meet the equipment truck at the event site on the Friday before the event. The truck will arrive around noon, depending on where your event is located. For the 6 Hour and Upside Down events the truck will arrive on the Saturday.

The direction signs and *No Shooting* signs should be in place as soon as possible. These can be placed as you drop off water and hang any last-minute controls.

The setters and vetters should set up as much of the site as they can. They need not perform these tasks themselves, however they must ensure that they happen. Enlist the services of any rogainers who have arrived early. The following must be set up:

- the toilets (*Section 12.2 - Chemical* Hire Toilets)
- the hash house tent
- the Administration tent
- First Aid tent.

Setting up, erecting tents, placing direction signs, hanging any remaining controls and placing water drops makes this a very busy time for the setters and vetters. Don't underestimate how much work and time is required to set up the hash house site, so don't leave yourself too much work hanging controls at this stage. Have your entire setting and vetting team assist. *Many hands make light work.*

12.2 Chemical Hire Toilets

The toilets should be positioned some distance from the hash house and Administration area, but convenient to (and downwind of) the camping area. After the toilets have been delivered, they are no longer the responsibility of the setters and vetters. The Administration team is responsible for the maintenance of the toilets and hand-washing water.

Ensure that someone, possibly a setter, vetter or the Camp Manager, is available to meet the truck carrying the toilets to the hash house site. Have the doors face away from the central hash house area.

Verify that the phone number of the company responsible for toilet hire is available to the Camp Manager and/or Event Coordinator. It may be essential to contact the company in the event that the toilets are not delivered.

12.3 What to give Administration

The setters are responsible for handing the following essential items to the Administration leader:

- the event maps
- the control descriptions
- the event information notes, if these are needed.

12.4 Additional Maps and Aerial Photographs

As soon as registration opens on Saturday you should display any maps or aerial photographs the setters have used and judged useful for participants. This could include the following:

- published maps (sometimes old) from Landgate, Forestry or DCBA
- map corrections to the competition map if required. Have at least three copies of these on tables borrowed from the Hash House
- aerial photos from Google, Bing, NearMap or similar internet-based satellite photo sources.

In June 2008 the WARA committee disallowed the displaying of orienteering maps that are within the rogaine map area. It was felt that the detailed orienteering maps would give a competitive edge to regular orienteers.

You should mark the hash house site and the boundaries of your competition map on the published maps and photos to assist participants. Tell Administration to advise teams that there are map corrections and where they can view the corrections. Novice teams may not know about the extra information that is available.

If rain is likely the trestle tables can be placed in the hash house tent.

12.5 Hash House Site Familiarisation

Take some time to look around the hash house site so you will immediately know where things and people are when you need them. Where is the first aid box? Where is the stretcher? Where is the fire extinguisher? Who is the first aid officer for the event? Who else has first aid training? Where are the satellite phones?

12.6 Novice Briefing

Setters and vetters should make themselves available to assist at the informal novice briefing at which first-time rogainers are given advice on setting compass bearings, route choice and reading contours. The briefings are started halfway between the registration opening time and the start of the event. So, for the Upside Down at 6:30 pm, March 6 Hour at 2:00 pm, April and October 12 Hours at 8:30 am, and the June and August 24 Hour at 10:00 am.

12.7 Event Briefing

Participants gather 15 minutes before the start for a briefing. This will give the opportunity for any final advice, to acknowledge landholders, and to make reminders about a few of the rules.

General announcements are made by the president.

The setters must make event-specific announcements, which are mostly a repeat of what was written in the event information notes (*Section 10.6 - Event Information Notes*). Any last minute advice and details should be provided.

It is extremely important to inform the participants of any map corrections. Don't assume the participants have seen any corrections. Make regular announcements that corrections are required and place the corrections at an obvious location near Administration.

Make sure regular announcements are made indicating how much time is left before the start.

You could perform a whistle check. It is worth ensuring that all participants are carrying one, and that they know the procedures to signal a distress call, and what to do if they hear a distress call.

12.8 Start Time

Make every effort to ensure that your watch is set to the real time. A few hours prior to the event starting, use a GPS or the start of the ABC news to set your watch and the master clock in Admin.

If you have finished the speeches before the start time do **not** let the teams off early simply because you have run out of things to say. This has happened in the past and it causes absolute confusion for the competitors.

The event begins with the blowing of the air horn.

12.9 The Hash House Fire

The only permitted fire at an event is the central hash house fire. This keeps participants warm while resting near the hash tent and adds to the atmosphere of the event. Obtain enough wood in advance to last the whole night. Do not burn your timber supply on the Friday night before the event.

If conditions are particularly windy or dry, then you should not have a hash house fire due to the risk of the fire spreading out of control. For this reason, hash house fires are not normally permitted for the Upside Down and 6 Hour events. Do not have a hash house fire if there is a fire ban active in the region of your event.

12.10 Maintaining Water Drops

The setters and vetters are the best people to look after the water drops because they know the correct locations and the easiest ways by which to approach each location.

A water drop should initially have at least 80 litres, which is most easily handled in eight 10 litre containers. Small funnels are available from the equipment truck. Make sure there is at least one funnel at each water drop, as this will reduce the volume of water wasted through spillage.

Water consumption is very high on warm or hot days in the afternoon period so you may have to visit water drops more frequently. Large groups of participants can move through a water drop and drain the water supply very quickly.

Within the last hours of an event, as you patrol the water drops you should retrieve most of the water bottles. Use your judgement based on the weather and the proximity of the water drop to the hash house as to how many water bottles to leave. To prevent problems caused by the spillage from or breakage of a water bottle, you should always leave at least two full water bottles.

Underestimating the consumption of water can have serious consequences for participants.

When visiting each water drop, take a photo of the intention sheet on the control. This will facilitate the search process should a team go missing. If a team is identified as missing, the intention sheets at each water drop can be checked immediately, without having to send a patrol car to the water drop. This will focus the search effort int eh area the missing team/s was/were last known to be.

12.11 Patrolling Roads

Event maps must show a network of patrolled roads. The purpose of these is to provide a location for sick or injured entrants to be collected from if they are unable to walk back to the hash house.

The patrolled roads could be simply the roads you use to visit the water drops. Patrolling roads is time-consuming. Make sure that you pick a patrolled road network that is easy to drive around using roads that are readily identifiable by the competitors. Don't have too many patrolled roads, or you will spend the whole rogaine driving around.

The event map must show all patrolled roads using a grey shading, and they can be optionally included on the control description sheet. It is imperative that you patrol these roads and water drops every few hours regardless of the time or weather conditions as a seriously injured participant may be waiting for you. While patrolling in areas where competitors are likely to cross the road you should drive slowly with the windows down in case a participant calls or whistles.

When patrolling roads, make sure your car is fitted with the green flashing lights. These work from power supplied from your cigarette lighter socket. The intention of the flashing lights is to give rogainers, particularly juniors, confidence that an event official is driving the car they are waving down. Each patrol car should also have a red-on-white ROGAINE sign displayed prominently in either the front or rear windows and be equipped with a carry stretcher (in a white box) and a satellite phone.

When returning from a patrol, the setters/vetters should report back to Admin and advise anything of note, such as whether:

- any water drops are being hit hard
- any rogainers have been offered a lift and declined (sometimes they will try and make it back to hash on foot, but later on decide to give up and get a lift – the next patrol in that area should look out for them)
- any rogainers are reporting having issues with any particular control (potential for missing or misplaced control), or if an FCU appears to be missing or malfunctioning. Setters may be asked to replace a malfunctioning FCU during an event (see *Section 12.14 - Correcting Missing or Misplaced Controls*)
- there are any potential hazards e.g. smoke in the distance may indicate a fire hazard, the presence of shooters or motor bike riders.

There are often two patrol cars in operation and on 24 Hour and Upside Down events, some of the setters/vetters will sleep. Passing this information on to Admin will facilitate the transfer of info to the other setters/vetters.

12.12 Port Drops

Provision of alcohol to minors is illegal under current WA legislation. Leaving bottles of port (or other alcohol) at a control or water drop "for the consumption of competitors" contravenes this legislation, as well as requirements of sponsors and grantees

WARA receives substantial funding from the WA Department of Sport and Recreation and has agreed to abide by their policies on the supervision of minors. To conform with both this and the existing legislation, the provision of Port Drops, or other alcohol while patrolling, is not permitted.

12.13 Extra Fuel

The equipment officer will bring four jerry cans (40 litres unleaded, 40 litres Diesel) of extra fuel to the event to assist with road patrols and maintaining water drops. This will reduce the need for you to bring your own fuel and to purchase fuel during the event. Inform the Volunteer Coordinator at the pre-event meeting whether you need diesel or petrol.

12.14 Correcting Missing or Misplaced Controls

A missing or misplaced control is an unfortunate situation that will disadvantage teams who have fruitlessly searched for that control. For the safety of participants and so as not to spoil the event for all participants, when several experienced teams have reported that a control is missing or badly misplaced a setter or vetter should investigate **immediately,** and rectify the situation if need be.

The CLT will provide several spare control boards. Use one of these to replace the missing/misplaced control, and note the unique four digit code associated – without an FCU the competitors should note this code and provide it to Admin as evidence that they visited the control.

Although this is an Administration matter it is worth noting that WARA policy is that teams who were unable to find the missing or misplaced control should be awarded the points for that control, but no extra time allowance is given.

12.15 Timing horns

The truck horn or air horn (available from Administration) should be sounded 10 minutes before the end of the event; 5 minutes before the end of the event; the end of the event; and at the end of the 30 minute penalty period if required. Be very accurate when you sound the horns.

12.16 Announcement of Results

After Administration has produced the results, they should be read by the setters in ascending order. The position, team number, team members, and score should be announced. Announce any award winners. This procedure is time consuming, but it is in keeping with the philosophy that the efforts of all participants deserve recognition regardless of their objectives or abilities.

Reading out 450 names and scores is a difficult task for one person. Share the job around among setting and vetting team.

This ceremony also provides the opportunity to introduce and publicly thank the people who have helped in the hash house and Administration as well as any landowners who may be present. Invite the farmers to congratulate or announce the winners. You can also present the farmers with a WARA windcheater, or a framed copy of the map.

12.17 Collecting Controls

No controls should be collected until all teams have returned safely. This is important as a lost team can use controls to relocate themselves. Administration will advise when all teams have returned.

At most events the majority, if not all, the controls can be collected immediately after the finish of the event or the next morning for normal 12 hour events. However, it may be necessary to return to the site the following weekend to pick up the remainder.

Coordinating control collection is not Administration's responsibility. A method of organising control collection is described in *Section 10.8 - Preparing for Control Collection*. The setters must be involved in the control collection process in the following ways.

- A setter must be available during event registration to allocate control collection groups.
- A setter must be available at the close of the event, or the following day for an Autumn or Spring 12 Hour event, to assist control collectors. They should record who has gone to collect controls, when they departed to collect controls and their vehicle make and number plate. This will be important information should the control collection team become lost or fail to return.
- At least two setters or vetters should remain at the hash house site until all control collectors have returned safely. This can be a long wait!

Setters should avoid, wherever possible, leaving controls on the course after the event, as this will adversely affect both controls and subsequent events.

12.18 Disputes

In all disputes, there is no alternative but to try to establish the truth and to penalise a team in accordance with the rules of rogaining (*Appendix I - Australian Rogaining Association Technical Standards and Rules of Rogaining*) if an offence has been committed. The basis for disqualification from an event will be a breach of the rules concerned with safety, cheating or behaviour likely to bring the sport into disrepute.

Disputes could be a protest about a team's own score, or a protest against another team for breaching the rules of rogaining. In the case of a dispute this should be referred to a jury convened for the purpose of resolving it. All participants and officials should be guided by a sense of fair play.

The jury should have been established by the committee and includes:

- the WARA representative of the Australian Rogaining Association's Technical Subcommittee
- Australian Rogaining Association representatives
- selected WARA committee members.

Organisers of the event - setters, vetters and knowledgeable Administration or hash house volunteers, can supplement the jury.

Anyone who would benefit from a decision of the jury or might reasonably be perceived as benefiting from such a decision should be disqualified from the jury

For Australian Championship events there is a requirement for a formal jury to be decided upon before the start of the event.

12.19 Searching for Overdue Teams

If a team has not returned within an hour of the event finishing, or if there is concern about a team or control collectors, follow carefully the steps in *Appendix H - Safety Manual Extract.*

12.20 Cleaning up

The setters and vetters are normally the last to leave the event site. Before doing so they should make sure all control collectors have returned safely. They should also ensure that:

- the fire is extinguished, covered with dirt and made reasonably level
- hire toilets have been collected if need be
- the site is clean and free of litter
- all gates are closed and locked as required.

13 After the Event

No, you haven't quite finished yet.

13.1 The Post-Event Barbecue

The event setters or vetters are responsible for hosting the post-event barbecue. This is normally held on the Friday night following the rogaine. They are responsible for providing the venue and tea or coffee. Guests are responsible for bringing their own food and drinks. If the host does not have a sufficiently large barbecue, a hash house barbecue can be provided. Contact the Volunteer Coordinator if this is required.

Post-event barbecues held in winter will require a large under-cover area.

The venue for the post-event barbecue should be decided upon at the pre-event meeting. If you are unable to find anyone from your setting and vetting team to host the barbecue then WARA may be able to find an alternate venue.

13.2 Archiving Event Information

A lot of work was required to determine the landowners, gain approval, and set and vet your event. This is especially true for events with significant amounts of farmland. To assist setters who may revisit your area it would be helpful if you would return any useful information to the committee. This would include copies of the finished map, council contacts, copies of correspondence with Department of Water and DCBA, control descriptions, aerial photographs, lists of farmers and their phone numbers, a map of the farmers' property boundaries. Just imagine if you were provided this information when you started your event. What a great head start!

Provide electronic (Word, Excel and OOMAPPER) files to the WARA Map Librarian. Any spare paper copies of the map should be sent with the truck to be files in the map library in the WARA shed.

14 Setters' and Vetters' Expenses

14.1 Fuel and material expenses

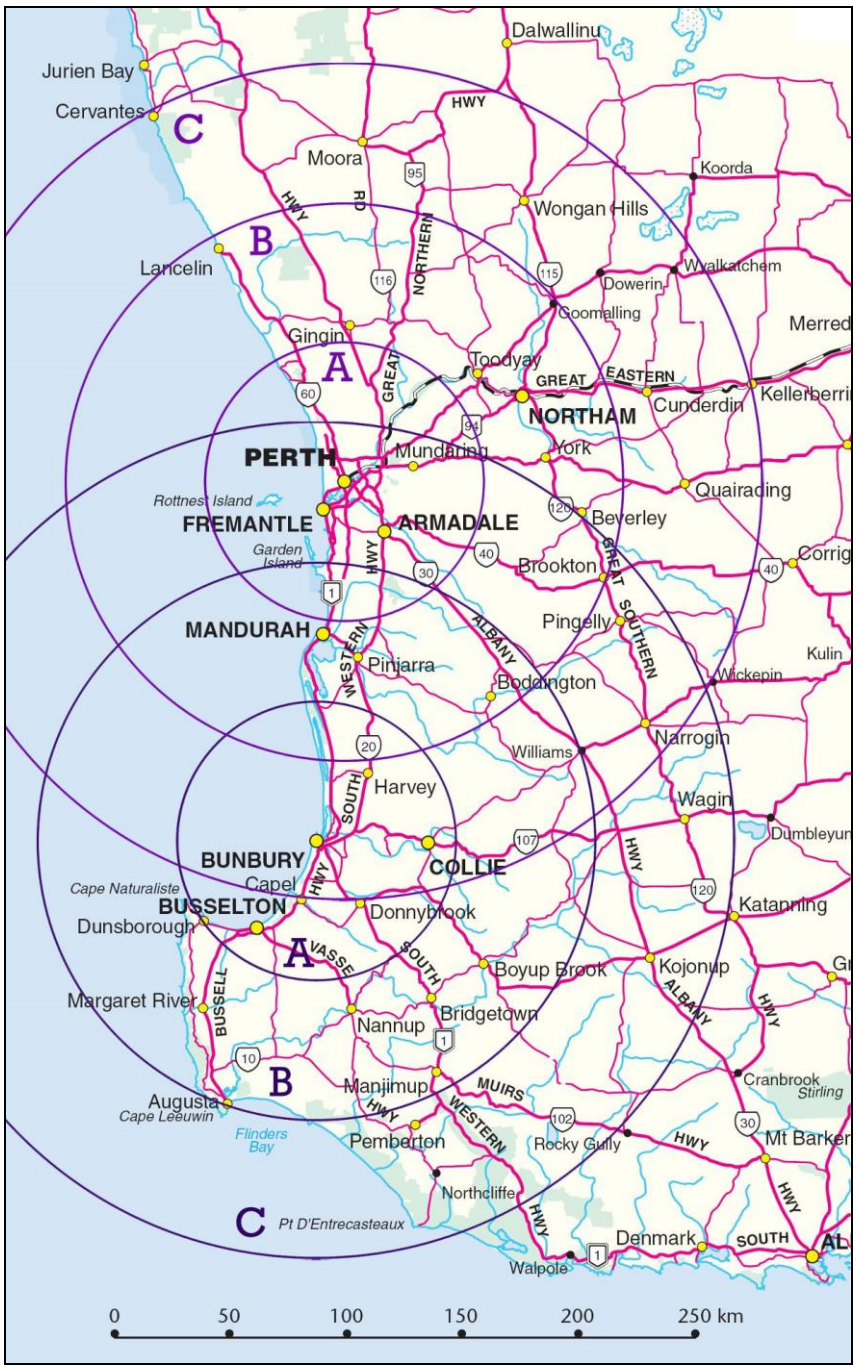
An allowance is paid to setters and vetters to help offset costs incurred in organising and running the rogaine. The allowance, which varies according to how far setters and vetters have to travel from home, consists of a standard travel component and an expenses component. The allowances shown in the table below are ceilings on expenses that can be claimed. Please be honest when making your claim.

The travel component varies according to which zone the hash house site of the rogaine falls into. The zones are shown in *Figure 6 - Fuel Expense Zone Map* and are based on distances of 60, 120 and 180 km from Perth and Bunbury. The Zone C total allowance of $1500 will apply for rogaines greater than 180 km away unless there has been a prior agreement reached with the committee for a higher amount. If you feel that your fuel expenses will not be covered by these limits due to some special circumstances please advise the treasurer as soon as possible, preferably while the event is being set.

Table 6 – Expense Claim Allowances

ZONE	Travel component	Expenses component	Total allowance
A	Up to $900	$150	$1050
B	Up to $1200	$150	$1350
C	Up to $1500	$150	$1650

Figure 6 - Fuel Expense Zone Map



These standard amounts will be paid on request by the treasurer and receipts for petrol or mileage readings are not required. The travel component amount can be divided in any way that the setters and vetters desire. The treasurer will rely on advice from the setters on this matter.

The expenses component of the allowance is limited to a combined total of $150 for the setters and vetters. Receipts will be required for expense claims. The expenses component includes items to plan and set the event as well as items to prepare the controls. This includes aerial photographs, pencils, marking pens, masking tape, telephone calls, postage, stationery, surveying tape, maps and so on.

If you feel you will exceed these limits, please advise the committee as soon as possible. The committee will fully compensate setters and vetters if there are valid reasons for exceeding the limits described.

All materials paid for by WARA, especially maps and aerial photographs, should be returned to the committee for future use.

The following expenses are paid for by WARA and are not included in the setter's expenses component.

- The purchase of digital mapping data if required.
- The printing of the event map.
- Any other printing for the event – such as control descriptions and event information notes.

Expense claims should be made as soon as possible using the expense claim form in *Appendix M - Expense Claim Form*.

14.2 Vehicle Damage Compensation

WARA appreciates that setters and vetters use their own vehicles to prepare and run events. As their vehicle is licensed in the name of the driver or that of some other entity, the vehicle is not and legally cannot be covered by any of WARA's insurance policies. WARA are not obliged to pay for any damage to the vehicle. However, the committee wishes to assist volunteers in the event of an accident. Discretionary payments can be made according to the following guidelines:

- WARA may contribute towards repairs for damage incurred to the vehicle at any stage of setting the rogaine: driving to or from the site; setting or vetting the event; in the process of hanging controls; or while patrolling roads. The amount paid would be part or all of your car insurance excess, up to a limit of $800.
- The driver need not be the vehicle owner and may be another setter or vetter of the event. WARA expects that the driver to: have been using the vehicle responsibly; should not be at fault; should be licensed to drive that class of vehicle; should not be under the influence of alcohol, of drugs of any sort nor sleep-deprived; should not be using the vehicle for a purpose for which it wasn't designed.
- WARA will not cover mechanical failures or wear and tear items such as scratches caused by driving down narrow overgrown tracks.
- Owners of damaged vehicles will need to write to the committee to claim compensation. Please provide all relevant details of the accident and the amount being claimed for.

15 Other Reading

The International Rogaining Federation publishes *Organising a Rogaine* which was written by Rod Costigan (first published 1992; second edition 1996). This book is intended for those considering organising a rogaine where there is no existing rogaining association, hence its subject matter is very broad. Copies are now available without charge to persons or groups considering organising a rogaine in a new area. This can be downloaded from http://www.greenstock.com.au/rogaining/manual.

The lack of localised content and details of WARA procedures are sufficient reasons for WARA to have developed its own “Setting and Vetting Bible”. However, *Organising a Rogaine* is an excellent book that covers all aspects of organising a rogaine. WARA setters and vetters may borrow a copy from the WARA committee.

16 Novelty Rogaine

16.1 Introduction

The novelty rogaine, also known as a Metro March, takes place within an urban area and designed as a “fun” event for families. There are no controls, rather a series of locations about which questions are asked. Being urban, many of the safety procedures in place for bush events are not relevant. Competitors can take mobile phones with them and can easily return to the hash site using public transport if required. This section provides a brief description of how to set a novelty event. Note, it is not meant to be comprehensive or rigorous – every event is different and may require different procedures.

16.2 Site Selection

The great thing about a novelty event is that it is not hours away in the bush – it could be your home suburb or somewhere nearby. So it is not a big job to go and scout out the area. As there is only one novelty event each year and the area required is not that large, it is unlikely that any area you pick has been used recently. However, to find out where recent events have been, download the Metrogaines Googleearth KMZ file from at

http://wa.rogaine.asn.au/index.php/information/11-list-of-waras-bush-rogaines. This will tell you where the previous and the associated hash sites have been. You can download the maps for any previous event from WARA's megamap archive at https://wa.rogaine.asn.au/index.php/component/content/article/5-other-info/676-wara-mega-map-archive.

As a guide, you probably need to delineate an area of about 20 sq km for an event, say 4 km by 5 km. a keen competitor may travel between 30 and 40 km on a novelty event, but they do have to follow the roads, so there is no straightline course. 20 sq km is plenty of room for 60 controls at more than 0.5 km between them, so no team will get them all.

The next step is to find an area that interests you. A lot of novelty events have a theme; it might be historical, it might be nautical, or it could be festive. So pick an area that has plenty of features that suit your theme. Remember – it does not have to be in Perth directly – previous events have been in Bunbury, Mandurah and in the Perth hills.

Once you have picked a general area, start looking for a hash site. This is the most critical part of planning a novelty event. Factors to consider include:

- Shade – being held in November, there is a strong possibility that it will be hot. So you need an area that has plenty of shade for competitors to rest in both before and after the event. WARA can supply gazebos for the admin/hash teams but not for everyone else
- Parking – some recent events have has up to 300 people attend, which means up to 200 cars. And if the hash site is a park, there will be other users, and hence other cars. There are very few suburban parks that have that much parking. Yes, people can park on the road verge, but if that is the bulk of the parking, cars will have to park a long way away. And if there are any sporting fields nearby, there will be cars associated with Saturday morning sport.
    - It is possible to have a hash close to a major suburban shopping centre, but check these out at midday on a Saturday before assuming that there will be enough parking there.
    - There are some ovals that are opened up for parking when events are held nearby. Talk to the local council and see if any of these are suitable for you
- Toilets – we do not bring in portaloos for novelty events, so make sure that the hash site has public toilets that will be open at the time of the event.
- Power – while not a lot of power is needed for a novelty event, we do need some to power the loud speakers and for the laptops. Many park facilities will have power available but you will need to talk to the local council to get permission to access it
- Permission to hold the event – you cannot just rock up to a park and hold an event for 300 people for 6 hours – you will need to get permission from the Local Council to set up for the event. They will have their own viewpoint as to which are the best sites. There will normally be a small charge to hold the event, but this will cover access to power and to parking, so is well worth it.

So, the best thing to do is to come up with a couple of potential hash sites and then talk to the local council. They will know what are the best sites and will be able to give you good advice.

16.3 Preparing the Map

Once you have a hash site locked in, you will have a good idea as to the potential map limits. Try to make them major roads/freeways so that it is obvious where the map edges area. Now you need to get the map data. For bush events we will often re-use data from previous events; the topography does not change, just the condition of the tracks. But a metro event is different. Road do change and so does land use. So we need to access the most recent data for each event. Luckily, metro data is available to be downloaded from the internet at no charge from Openstreetmap.org, provided that this site is acknowledged on the final map.

All WARA setters are strongly advised to use OOMAPPER for creating their map. The advantage of using OOMAPPER is that map information in the computer map file you receive will already conform to the WARA standards and instructions on how to use it are included in *Appendix K - Map Standards and OOMAPPER*

It is an easy task to download the map data yourself and load it into OOMapper. However, there needs to be a fair bit of cleaning of the data before it can be used as a rogaine. WARA has a set of standard line types based

on experience at previous events, and there is a lot of extra information that has to be deleted. The line types do not always translate cleanly. The map Librarian will be able to do all of this for you, and give you a map ready to start setting.

The standard scale for a novelty event map is 1:20,000. This will fit onto an A3 map with plenty of room for artwork around the edges (if you want to add artwork, use the background map option (Section 4.8 in Appendix K). The control circles will be 120 m across at this scale

16.4 Setting and Vetting

Unlike a bush event, there is no way to armchair a novelty event. You have to get out there and walk/drive around to find appropriate control sites. Remember that you are not hanging controls: you are selecting sites where you will be asking a question and expecting a single answer. And it should be an obvious answer - this is a fun event and we are not trying to trick anyone.

When selecting a control, make sure that it is:

- **permanent**: you may be setting in August and the event is in November. Things change over time. For example, don't ask for the colour of the roses in a garden bed (they may not be in flower) or what is in a shop window
- **public:** the clue should be easily obvious from the road. Remember that there could be several hundred people walking past and peering into someone's house, so don't ask the colour of the front doorunles it is really obvious
- **location unique:** make sure that there is only one possible control. Look around and make sure that there isn't a similar location close by (on one event the clue was about a plaque on the corner of a building, but there was another plaque on the same building about 15 m along, and you saw that one first coming from the other direction)
- **simple question:** there is not a lot of room on the question sheets so the question has to be simple (what colour is the door on the shed? Who erected the statue? What is the name of the building?)
- **answer unique:** make sure that there is only one possible answer to the question and that it is simple (there is not a lot of room for answers on the question sheet)
- **easily accessible:** it should be possible to find the control and determine the answer without having to get off the public access areas (i.e. no scrambling through bushes, climbing walls, etc.). Some teams will have elderly people, others will have strollers.

Do not use a GPS to seta novelty event. Due to the process required to download data from openstreetmap.org, there is no guarantee that the map produced will be located spatially accurately enough to use GPS co-ordinates. Besides, it is a lot easier to locate yourself in a suburban environment.

16.5 Preparing for the event

For printing the map, refer to Section 9.6. Remember that you are only giving one set of questions to each team, so you do not need one per team member.

16.5.1 Safety

There is no need to advise the local emergency services that an event is being held in the area. It is a suburban environment and competitors are allowed mobile phones, so they can call for help whenever they want to. And it is difficult to get lost when you can catch public transport or just ask for directions.

APPENDIX A - GOVERNMENT CONTACTS

APPENDIX B – DEPARTMENT OF WATER CATCHMENT MAP

APPENDIX C - DCBA APPLICATION FORM

APPENDIX D - EMERGENCY MANAGEMENT PLAN EXAMPLE

APPENDIX E - TRAFFIC MANAGEMENT PLAN TEMPLATE

APPENDIX F – GPS USERS MANUAL

APPENDIX G - LANDHOLDER RECORD SHEET

APPENDIX H - SAFETY MANUAL EXTRACT

Sections 1 and 2 of Safety Manual only. Section 3 is first aid.

APPENDIX I - AUSTRALIAN ROGAINING ASSOCIATION TECHNICAL STANDARDS AND RULES OF ROGAINING

APPENDIX J - AUSTRALIAN ROGAINING ASSOCIATION ENVIRONMENTAL GUIDELINES

APPENDIX K - MAP STANDARDS AND OOMAPPER

APPENDIX L - SAMPLE CONTROL DESCRIPTION SHEET

APPENDIX M - EXPENSE CLAIM FORM

APPENDIX N - ACCIDENT REPORT FORM