



## Auckland Branch

N Z Association of Radio Transmitters Inc.

# NEWSLETTER

March 2012



### General Meeting:

on 17th March 2012  
at 1200 hours  
at 24 Dingle Road,  
St Heliers  
(at sea level at the bottom  
of Fern Glen Road North).  
'Phone 575-6383 if lost.



### Agenda:

- BBQ
- Reports
- General business
- Fox Hunt in Dingle Dell (a practice event using 147.000 MHz).  
Bring your hand-held 2m rig, headphones, map and compass.

**The Inter-Branch Fox Hunt Competition has been moved back to 21st April at Dingle Dell. See last page for invitation.**



## From the Secretary, Wallace, ZL1WAL

**Jock White National Field Day:** We are grateful to Wes ZL3TE for stepping up to manage the team. Preparations to erect antennas were made the previous weekend. Japie ZL1JJN and James ZL1KNI were heard to say how appreciative they were for the work that Selwyn ZL1BRC and Gwynne ZL1AAR had made in previous years. I learnt much about CW contesting by sitting beside Wes, watching his operation, and hearing his explanations. In one ear he was listening to responses to his laptop generated CQ calls, while in the other ear he was listening up the band, using the second VFO, to pounce on other callers. Writelog checked for duplicate QSOs and other inconsistencies. We look forward to the publication of the results, for having won the Montgomery Cup last year, our pride is on the line.

**NZ Amateur Radio Day:** Last Saturday with the help of Ray ZL1AJR, I set up a station in front of the St Heliers Bay Library. It was fun using a catapult to select the best bough of a giant Himalayan Cedar tree to support a 20 / 10 m dipole. No hits were made on nearby parked cars or curious people. Propagation was poor on these bands, though we had more success on 40m with the help of a tuner. The National VHF system was more active. NZART's purpose of this event is to raise our profile and hopefully recruit new members. Many engaged us in their reminiscences about their relatives who had been Hams. We are likely to be examining two candidates; so this exercise was considered to be worthwhile.



**Fox Hunt:** We decided to put the Inter-Branch Competition back a month in order to avoid a clash with VHF members who are committed to a car rally in South Auckland. Nevertheless we shall still meet at my QTH at 24 Dingle Road for a practice Fox Hunt using 147.000 MHz. This newsletter contains construction details of a Yagi made from a tape measure. Or you could make a small loop for your hand-held. Alternatively, you can hold the set very close to your body to prevent signals from behind being received. Remember that the best way to get a bearing on the fox is by the null behind you. Read elsewhere about the Tips and Techniques while hunting. My vision is that this activity provides an opportunity for fellowship in an atmosphere of friendly rivalry.

### Access to the Clubroom:

- There is a new sign at the gate. It is best seen when approaching from the South as you turn left into the driveway.
- The key to the gate is inside a "rock" key-holder that is placed on the top of the metal gate post.
- Because the trench for the new phone-line is open, you should not drive the usual route in front of the offices.
- Instead, proceed straight ahead from the right-of-way and down the track directly towards the clubrooms.
- I have slashed the fennel so that your car's paint work will not be scratched.



Digging the trench for the phone line



Steve, ZL1FS



Japie, ZL1JJN

### Subscription: (Wearing my other hat as Treasurer):

The AGM set the subscription for 2012 at \$30.00. At your pleasure, and at great convenience to me, make a direct credit to our ASB Bank Account Number: **12-3047-0076823-00**.

The Membership Renewal form is on the home page of our web site [www.qsl.net/zl1aa/](http://www.qsl.net/zl1aa/) Fill it in, then hit the "Submit" button (top left corner). An email with this form attached, is sent to me. My thanks to those who have already paid.

# AUCKLAND BRANCH, NZART (inc.)

## Minutes of Committee Meeting

**Date / Time / Place:** Tuesday, 6<sup>th</sup> March at 1740 hours; Clubroom.

**Attendees:** George ZL1TUJ (Presiding), Wallace ZL1WAL, Ray ZL1AJR, Japie ZL1JJN, Wes ZL3TE, Gwynne ZL1AAR.

**Apologies:** Steve ZL1FS.

Sustained ZL1TUJ / ZL1JJN

**Minutes of the previous Committee meeting on Tues 7<sup>th</sup> February 2012; 1750 hours.**

Taken as read and approved ZL1WAL / ZL1AJR

### Correspondence In:

Newsletters from: Franklin; North Shore, Suburban  
Wes re JWFD planning  
Kiwi Bank confirming Term Investment  
State Insurance re amount of cover.

Received ZL1WAL / ZL1TUJ

### Correspondence Out:

Auckland City Libraries giving update of Club info  
Wes re JWFD  
ASB password reset  
Suburban Newspapers re "What's on" column  
Vaughan Henderson asking for 2m Fox hunt gear  
Franklin Branch seeking permission to reprint article about their 80m sniffer project  
Letter to Selwyn Ross ZL1BRC confirming Honorary Life Membership  
Letter to Bob Murphy ZL1AFU confirming Honorary Life Membership.

Approved ZL1WAL / ZL1TUJ

### Finance:

The Treasurer presented the Year to date Finance report.

Received ZL1WAL / ZL1AAR

Payments requiring approval

Lawns	\$34.50	R Higgins
Gate key holder	\$9.90	Wallace Bottomley
Clean port-a-loo	\$35.00	Wallace Bottomley
Food JWFD	\$22.50	Steve Miller
String for phone line conduit	\$9.98	Steve Miller
Sign	\$166.75	Wes Printz
Post Box hire	\$145.00	NZ Post
Trench Digger hire	\$346.00	Ace Hire Ltd.

Approved ZL1WAL / ZL1TUJ

### General business:

#### Reports:

**AREC:** Training day 30<sup>th</sup> March with trip up north.

**Exams:** One candidate next weekend. Preference is given for Sundays when it is quiet.

**Almoner:** Selwyn Ross is allowed to drive within 5 km of his home, so he can reach the clubroom. Ross Scarborough is to receive radio-therapy treatment again for breast cancer.

**Web page:** Recommend to put our QSL card on [www.qrz.com/db/ZL1AA](http://www.qrz.com/db/ZL1AA) page and describe our activities (as in the Directory). The [www.qsl.net/ZL1AA](http://www.qsl.net/ZL1AA) home page should not be duplicated.

**Remotely operated station:** Establishing connection with Woosh is very slow caused by rogue PC scanning software starting up. Operator intervention (through impatience) stops the Startup process. It was recommended that some other server be used for Members' internet use. Ham Radio Deluxe has been sold to another developer who has released version 6 free for one year only. George said that James is considering "Italian" software which may be simpler.

**Phone line:** Steve started digging the trench but has suspended it until a more powerful machine is available from Scarbros. A second trench for the power cable is needed.

**Surveillance:** Camera required – George is testing a Logitech model.

**Equipment out on loan:** Members are asked to bring the loan book up to date with their borrowings.

**Nets:** Steve has obtained agreement from Branch 86 to use its repeater on Thursdays at 2000.

## Minutes (6th March continued)

### Reports: (continued)

- Roster:** Wallace checked into VHF Group net twice this month and with Franklin once.
- Maintenance:** Japie suggested painting the roof in April. Steve is to buy silver bitumix paint. The Maintenance book on the board table should be entered with matters requiring attention.
- Road sign:** Wes delivered the new sign and Wallace has put it on the Telephone Exchange wall which is more visible to traffic approaching from the south. Ross will affix it more securely.

### Jock White National Field Day Post Mortem

Wes ZL3TE gave a positive report expressing gratitude to all who took part (see Newsletter). It was remarked that new Branch Members came willing to operate. Non-licenced may operate. Gwynne presented the final logs ready for signature and submission to NZART. When the results are announced there will be a further analysis of our performance. Antennas were discussed. A November meeting will decide future options.

### Monthly (3<sup>rd</sup> Saturdays) General Meeting Program:

- 10<sup>th</sup> March NZ Amateur Radio Day at St Heliers Library (no charge. Use 15M and 20M only.)
- 17<sup>th</sup> March Fox hunt in Dingle Dell – Practice day. Start from 24 Dingle Road - Wallace's QTH.
- 21<sup>st</sup> April Fox hunt in Dingle Dell – Inter-Branch Competition. (This date was shifted because many VHF users will be engaged on a car rally in South Auckland).

### Other suggestions were:

Gwynne offered to show a 40 minute DVD of his son-in-law's recent trek from Waioeka to Taupo.  
Visit to Motat  
Visit to Coast Guard Communications Centre  
Include other Branches.

### Membership drive:

NZ Amateur Day (10<sup>th</sup> March). Wallace is to coordinate.  
Site: In front of the St Heliers Bay Library (as per last year).  
Use 20 / 10 m dipole inverted V antenna supported by the Himalyan Cedar tree. Avoid 80m whip which was rarely heard last year.  
Set up CW operating desk then issue ZL1AA QSL cards (as a memento) when reflected by Gwynne.  
Use the new sign and display (last year's) collage of QSL cards.  
Suburban Newspapers will be given photos and caption for their "Happening" page.

### Antennas:

Alignment of beam. Deferred until Steve returns from Japan. Japie's van will be used as a platform. Gwynne said he would complete the 80m antenna project.  
It was reiterated that the Branch should erect the best possible antennas because these are generally not possible on Members' own suburban properties. Thus Members will be attracted to operate at the clubrooms, some using the Remotely Operated K3 Station.

### Library:

Gwynne will print file copies of our missing Branch newsletters. These are available on [www.qsl.net/zl1aa](http://www.qsl.net/zl1aa) > Newsletter page.  
Gwynne made a presentation of the latest volumes of ARRL Antenna and Handbook. He asked that they not be taken out on loan from the clubroom. They are magnificent hard backs and an asset.

**Computers:** A wireless internet link router (operating at 50 GHz) does not cause RFI.

**Newsletters:** Deadline this weekend 10<sup>th</sup> March. George will print 12 copies for other Branches and for sub paying Members not having e-mail.

**Budget** as presented at the AGM in December 2011 and circulated to the Committee last month:

Approved ZL1TUJ / ZL1AAR

**Meeting closed 22:30 with supper provided by Ray ZL1AJR**

# Jock White Field Day 2012

Field Day came and went before anyone could bat an eye. A lot of credit goes to Gwynne, ZL1AAR who without his notes and forethought, it would have been difficult. I stepped up at the beginning of February to help with FD after Gwynne had broken a leg. (I guess he took the old saying a bit too seriously, Hi Hi). Gwynne happily handed his notes over and the pre-planning began.

A site survey took place on Saturday, 18 February at 10:00 AM with Wallace ZL1WAL, Ray ZL1AJR, James ZL1KNI, Japie ZL1JNN, and Wes ZL3TE present. We discussed station locations, antennas, which ones to use, where to place them, how to mount them, etc. Quite a bit was accomplished by the time I had to depart a few hours later. The rest of the team stayed until 4:00 PM.

Saturday, 25 February arrives, and a group converged on the operating site to put everything into motion. The set up team of Wallace ZL1WAL, Giovanni ZL1BRA, Japie ZL1JJN, James ZL1KNI, Ray ZL1AJR, Paul ZL1AJY, Ian ZL2ATD and Wes ZL3TE all went to work. Tents went up, generator placed, AC Mains run to tents, and stations started to be assembled. It was all working to plan. Selwyn ZL1BRC and Steve ZL2FS stopped by for a while to observe and provide input, which is always appreciated.

The 80 M team had the usual suspects, Ray ZL1AJR, Ian ZL2ATD, Japie ZL1JJN, and Andrei ZL1TM., while over on 40 M, James ZL1KNI, Wallace ZL1WAL and Wes ZL3TE kept things going, with guest appearances by Ray ZL1AJR and Japie ZL1JJN, sneaking in a few SSB Sessions. I suspect they were checking up on us.

Both stations were very close in the number of contacts each made on SSB and CW. There are more Branch / Home stations on 80 M than on 40 M, and fewer stations operating CW this year. The antennas chosen worked very well, and were able to maintain consistent communications with all areas throughout the weekend. 80 M seemed to fall a little short in some areas, but we will hopefully address that next year.

Without giving too much away to the competition, we went with simple wire antennas, some that our HF Guru Selwyn ZL1BRC had made. He gave excellent advice about them. Rigs used were TS-870D on 80 CW; FT-1000MP on 80 SSB; IC-756 Pro II on 40M SSB; and FT-1000MP on 40 M CW. Computer logging was used to aid compile the results.

But, we could not have maintained our on-air presence without the support of Steve, ZL1FS and Christine, who kept the troops fed and watered.

After the festivities were done and the last station logged, it all came down. Oddly enough, it comes down easier than going up. The tear down crew consisted of the same set up crew with Andrei, ZL1TM, rounding out the lot.

Everything is now in the hands of Gwynne, ZL1AAR to submit our logs. Initial results look good, VERY GOOD, so a Big Thanks to everyone involved. Let's start looking towards next year's Jock White Field Day on 23 / 24 Feb, 2013.

de Wes, W3SE / ZL3TE

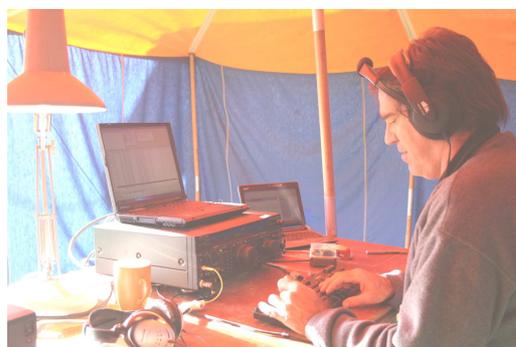


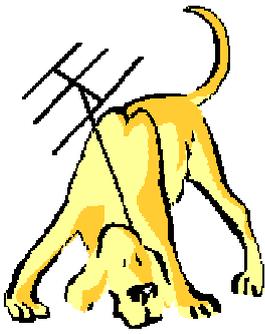
Wes, ZL3TE  
(CW 40 M)

Admiring the 40 M  
loop antenna.

Andrei ZL1TM  
(CW on 80 M)

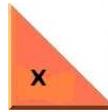
Ian ZL2ATD  
(SSB on 80M)





# The Fox Hunting page

By Wallace, ZL1WAL



## Techniques:

1. Go to a place that you can identify on the map.
2. Orient the map, that is, align it with some other feature that you can see, and is on the map.
3. Spend 5 minutes taking bearings of all of the foxes that you can hear.
4. Turn about face to get a null reception. Thus your back is the most accurate bearing to this fox.
5. Draw the bearing line on the map.
6. Name the line to correspond with the fox's code (e.g. "MOE") that identifies it.
7. Plot a similar bearing for the next fox's code that you hear (e.g. "MOI"); and so on.
8. Now go to a different position and take bearings as you did before.
9. The intersection of these bearings will determine the location of each fox's lair.
10. However, by going to a third position to take bearings, produces a cocked hat on the map and is a check on the accuracy of your previous bearings. Such triangulation is recommended.
11. Study the map carefully and plan a route that will take you to each lair, trying to arrive there when the fox is transmitting. Poor planning may cost up to 4 minutes waiting idly.
12. Be vigilant for the orange and white prism hanging at head height.
13. Think ahead about your exit and the direction you need to take.

## Tips:

14. Do not try to bush-bash towards a fox. Its transmission will stop after one minute and it will not resume until another four minutes have elapsed. Thus you will waste valuable time.
15. If you try to read your map while running / walking, you will not be able to see its fine details. Stop, plan ahead, and memorize land features that you expect to pass; then move swiftly.
16. Keep your thumb on the place on the map where you are, and orient the map as you go.
17. Do not stop at the fox, else you will betray its presence to other competitors who may be nearby. Keep moving, memorize and write down its code as you go on to the next fox.
18. Be aware that reception at 2m is line of sight. Land spurs may cause signal shadows, and hard surfaces will cause reflections, thus giving misleading bearings.
19. If it is wet, put your map in a clear plastic bag and use a felt tip pen.

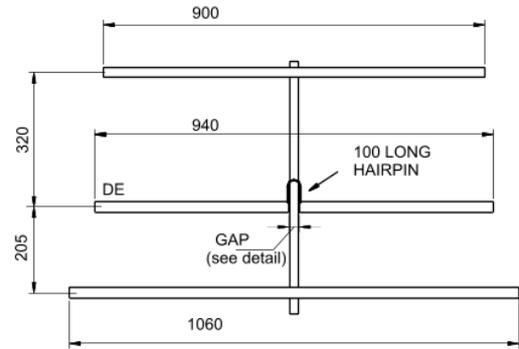
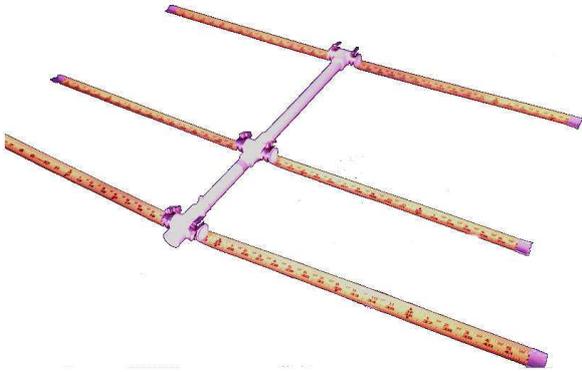
## Worked example:

	Time taken (mins)	$\Sigma$
1. Go 150 metres towards the centre of the map, and identify on the map the place where you stop. For example, the seat is marked X on the map.	4	4
2. Orient the map, that is, the lines up the map are magnetic north. Now listen.	3	7
3. Take a bearing and draw a line on the map and number it according to the code heard. This may take 1 minute.	1	8
4. Take a bearing for each of the other foxes that can be heard.	4	12
3. Advance a further 250 metres or until you identify the place where you stop, say, at a bridge where the path crosses a stream.	5	17
4. Take bearings as before. Perhaps only three foxes are heard.	5	22
5. Plan your route to visit the intersections of these lines, being the foxes' lairs.	4	26
6. Endeavour to arrive near each lair when that fox begins to transmit, else you will have to wait another five minutes. Allow 5 minutes to find each fox.	15	41
7. Move to higher ground and take more bearings to locate the other two foxes.	6	47
8. Plan your route carefully to reach these foxes when they are active.	10	57
9. Hasten to the Finish, taking say 4 minutes.	4	61
10. Your score will be: 5 foxes @ 20 points each = 100 less 1 minute late return @ 1 point each = <u>-1</u>		
<b>Total = 99 points</b>		

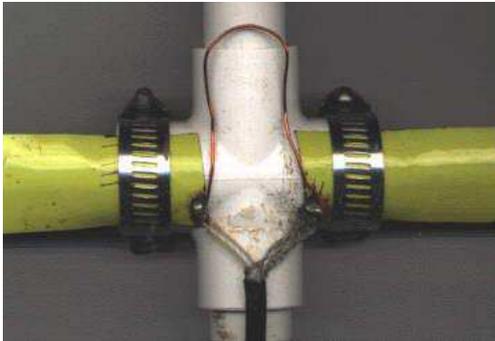
**Just like a round of golf, you will be challenged to do better next time.**

# Construction details for a Yagi DF antenna for your 2m hand-held radio

The following link [http://www.theleggios.net/wb2hol/projects/rdf/tape\\_bm.htm](http://www.theleggios.net/wb2hol/projects/rdf/tape_bm.htm) describes the construction of this Yagi for 145 Mhz. (NZART use 144.700; ARRL use 144.565). The elements are made from a cheap metal tape measure, chosen because it springs back into place after being bent. Thus movement through bushes is unimpeded, and it may be folded for



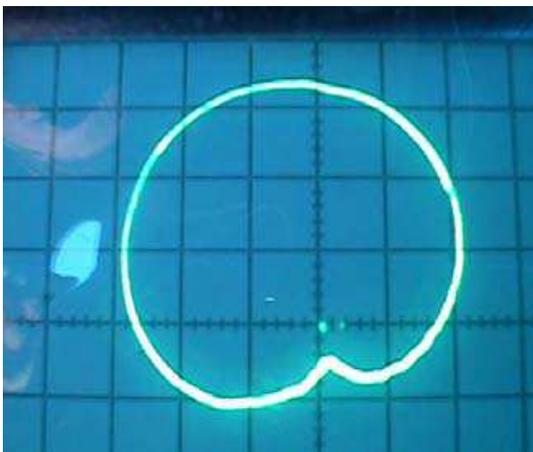
BEAM DIMENSIONS (mm)



The 5" length of wire loop provides sufficient reactance to cancel the capacitance effect of the antenna. Be sure to do the soldering before attaching to the PVC cross. The driven element can be held by hose clamps which allow some adjustment for tuning the gap (wider for the lower frequency of

Self-tapping screws or bolts and lock nuts may be used to affix the director and reflector with a saddle. Use a punch to make holes in the tape and enlarge them with a rat's tail file. Cut the tape with tin snips.

Seven turns of coax around the boom perform as an optional balun if it is to be connected to a handheld 2m radio.



Oscilloscope measurement of performance showing the -50 db notch at the back of the Yagi. Tests showed that its reflector could be inches from the fox yet nothing is heard.



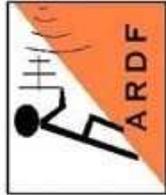
The main design objective is to allow the elements to be folded. See how cleverly this is done for transporting it and storing it.

Cover the sharp tips with tape to avoid injury. Here, a purpose-built receiver has been attached to the boom.



# Dingle Dell

St Heliers, Auckland, New Zealand



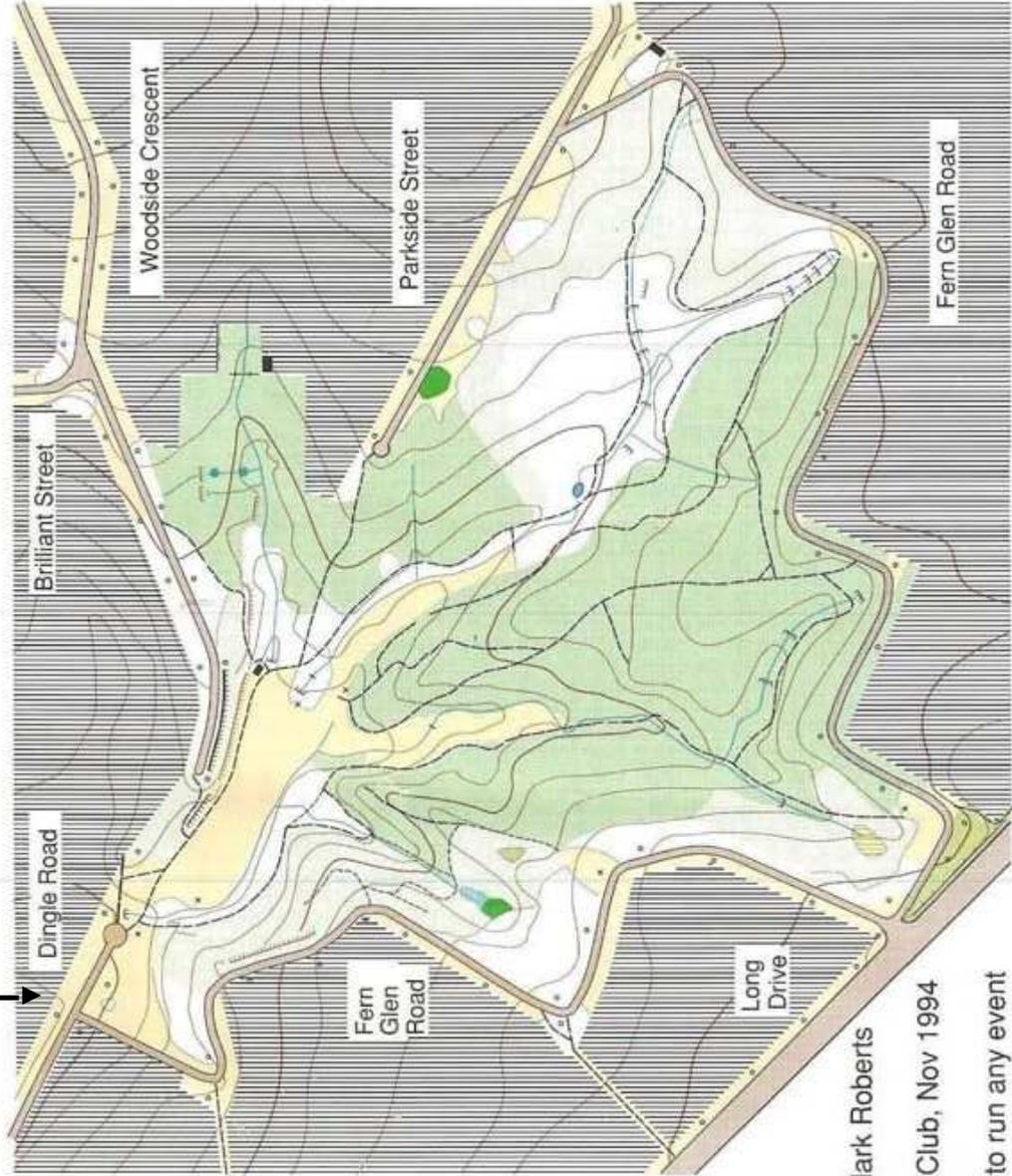
-  Lamppost or power pole
-  Building, man-made object
-  Sealed road
-  Footpath
-  Passable cliff
-  Crossable stream; lake
-  Waterfall; bridge
-  Watercourse
-  Earth bank
-  Index contour, contour
-  Form line, slope line
-  Depression, pit
-  Open land
-  Open with undergrowth, slow run
-  Open with undergrowth, walk
-  Forest, run
-  Forest, slow run
-  Forest, walk
-  Forest, fight; hedge; thicket
-  Vegetation boundary



Scale 1:2,500  
 metres 50 100 150 200 250 300  
 Contour interval 3 metres

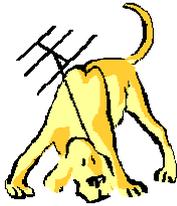
This map was created with funding assistance from Auckland City Council

Magnetic North



24 Dingle Road

Basemap by Wallace Bottomley 1979  
 Fieldwork by Wallace Bottomley, Andy Brewis, Mark Roberts  
 Cartography by Mark Roberts using OCAD 5  
 Published and copyright by Central Orienteering Club, Nov 1994  
 Contacts 302 0506, 849 6562, 624 1513  
 Possession of this map does not confer the right to run any event  
 Contact Auckland City Council Parks & Reserves for permission



# Invitation

## Inter-Branch ARDF

### 2m competition

24 Dingle Road, St Heliers, (at sea level); phone 575-6383 if you get lost.  
Saturday, 21st March 2012 **Note: change of date.**  
BBQ at noon followed by a briefing at 1 pm.

### What to expect:

- In Dingle Dell Reserve there will be five foxes hiding (hi hi) somewhere in its 16 acres of bush and streams. However they will be easier to find than at last year's event. The paths are gravelled and stepped in places, and the streams are bridged; so it is not muddy underfoot.
- Print the map of Dingle Dell; Familiarize yourself with the map's orienteering legend, and / or visit the area beforehand. You will see that runners have no real advantage over the rest of us.
- Some NZART sniffers are available for hire; or bring your own 2m hand-held rig and see construction details of a yagi antenna previously published on our web page at: [www.qsl.net/zl1aa](http://www.qsl.net/zl1aa) > Newsletter > 2011 > March > page 6. Alternatively, you can hold your hand-held set closely against your body to shield RF entering from behind. The null is the direction to the fox. Bring a compass, headphones, felt-tip pen, map and \$5.00 entry fee.
- Competitors start individually at 5 minute intervals (after the Starter writes the start time, in unique coloured ink, onto the "clip card" that is used to record foxes found).
- Each fox broadcasts its identity in slow Morse code on 147.000 Mhz: MOE, MOI, MOS, MOH, and MO5 for one minute each in rotation. That is, each fox is silent for four minutes until its turn to transmit again.
- Each fox appears at eye level, as an orange and white prism-shaped flag on which is written a unique code. As you find each fox, record its code thus scoring 20 points.
- Time allowed: 1 hour. One point will be deducted for each minute late in returning. As you finish we shall record your elapsed time, check the codes and compute your score.



### 2012 CONTEST CALENDAR de Selwyn ZLIBRC

For international contests there is a formidable list published by WA7BNM (<http://hornucopia.com/contestcal/contestcal.html>). The following is an extract that lists a few those events which may be of practical interest to us.

Each contest will have its own set of rules which you will need to follow.

#### SELECTED INTERNATIONAL CONTESTS 2012

17 MARCH	10 – 10 MOBILE CONTEST
24 – 25 MARCH	CQ WW WPX SSB CONTEST
5 – 6 MAY	10 – 10 CW SPRING CONTEST
26 – 27 MAY	CQ WW WPX CW CONTEST
23 – 24 JUNE	ARRL FIELD DAY
14 – 5 AUGUST	10 – 10 SUMMER SSB CONTEST
1 – 2 SEPTEMBER	ALL ASIA PHONE CONTEST
6 – 7 OCTOBER	OCEANIA DX SSB CONTEST
27 – 28 OCTOBER	CQ WW SSB CONTEST
24 – 25 NOVEMBER	CQ WW CW CONTEST

Please see also the Contest pages of Break-In, for links to VK-ZL contests.