



New Zealand Association of Radio Transmitters

ZL1AA - AUCKLAND BRANCH 02

AUGUST

2016



General meeting



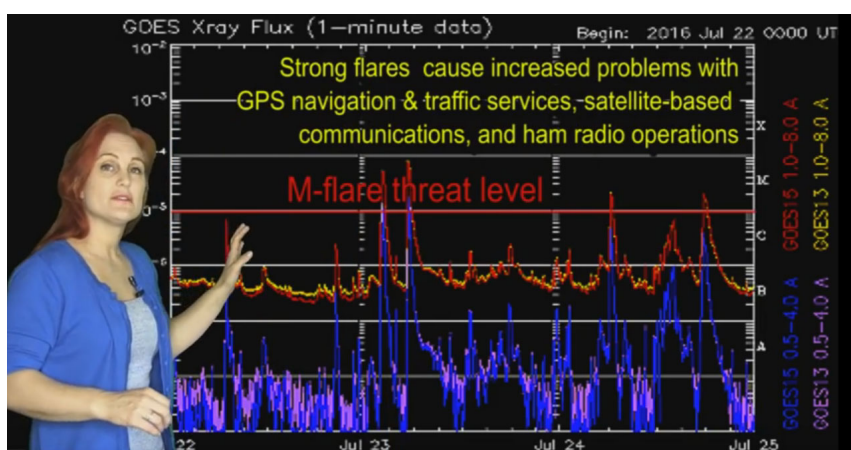
SATURDAY AUGUST 20 @ 13:30

~~Discussion Re: Constitutional Changes~~

Let us clean up the clubroom and its surroundings, weather permitting.

Club Room will be open at 10:30 AM
BBQ @ 1200

MAJOR SOLAR STORM 04-Aug-2016



See Details Page 8 - Video Link

~~SPECIAL GENERAL MEETING 16 JULY~~

ZL1AA
Auckland Branch 02
PO Box 18003
Glen Innes
Auckland 1743

www.qsl.net/zl1aa
ZL1AA@nzart.org.nz
Skype: ZL1AA_NZ

Club Officers

President

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ZL3TE@dxer.com
027 227-7779

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George Marr, ZL1TUJ
gmarr@ix.net.nz

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ZL1WAL@nzart.org.nz
(09) 575-6383

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Elected Members

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Logan Nicoll, ZL1LMN
chillistick@gmail.com
021 0271-5660

Jeff Lowe ZL1TOU

Lyndon Thompson ZL3DWF

ZL1AA Information:

Branch 02 Clubroom is located at
400 St Johns Road
Kohimarama, Auckland
(Off the beaten track / main road)

Google Earth:
36.869730s, 174.843860e

Clubroom is open every Saturday from
1030 hrs for members and guests to drop
by for coffee and a chat! .

General meetings are held on the third
Saturday of each month at 1330 hrs (except
Dec / Jan).

Committee meetings are held on the first
Tuesday of each month at 1930 hrs. ALL
paid members are welcome to attend.

Affiliations:
10-10 International
NZART
AMSAT-ZL

Club nets:
Wednesday:
145.775 MHz @ 1930 Ray, ZL1AJR NCO
Wednesday:
3.645 MHz @ 2000 Ray, ZL1AJR NCO

10-10 Down Under Chapter Net:
28.530 MHz 2230Z Fridays
(1030 NZST Saturdays)

Branch Contacts:

Gwynne Rowe, ZL1AAR
(09)-528-1177

Branch Examiners:

Steve Miller, ZL1FS
021 0226-4981

Wallace Bottomley, ZL1WAL
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(09)-528-1177

Station Trustees:

George Marr, ZL1TUJ
Wes Printz, ZL3TE

Branch Technical Advisers:

Simon Watt-Wyness, ZL1SWW
sww@eagle.co.nz

SUBSCRIPTIONS

❖ Subscription Rates:

Regular \$45 (discounted with a \$5.00 raffle ticket if paid by 31st March 2014)
Youth Rate \$20

❖ Post to PO Box 18003, Glen Innes, Auckland 1743, direct credit may be made into our bank account 12-3047-0076823-00, or pay the Treasurer or Secretary at the clubrooms.

❖ A pro rata rate is offered to a new member joining part way through the year. The financial year runs from 1 December to 30 November

❖ Receipts will be distributed either in person at meetings or via mail/E-mail.

❖ Branch financial year currently runs from 1 December to 30 November.

❖ A current Membership Application / Renewal Form is required with all payments to assist with accurate record keeping. Available from the Secretary, or by download http://www.qsl.net/zl1aa/br02_mem_form.pdf

❖ All members' information is kept confidential unless approval is given for it to be released.

Newsletter material submissions are welcomed and appreciated by your editor. You may submit material in a variety of file formats: .TXT .DOC, or just plain old E-mail. Photos are accepted also. Please submit material via E-Mail to: ZL3TE@dxer.com I will use what I can with the space available at the time of newsletter editing.

Auckland Unitary Plan Update

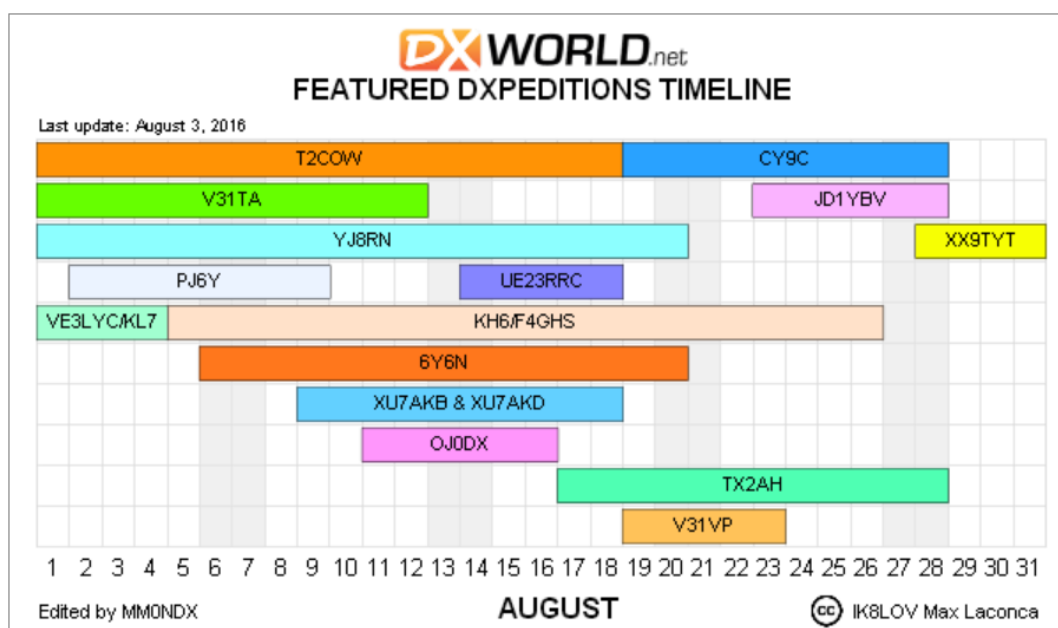
There is no further news concerning The Auckland Council Unitary Plan. In place of the Updates that have been circulated to Auckland Amateurs in the past, there will, from now on, be regular articles in Break In called **"District Plan Involvement Matters"** Which will cover all areas of New Zealand, not just Auckland. The first one was in the January/February 2016 Issue.

Any-one who wants these articles sent to them directly by email, Please contact me.

Douglas Birt
lglo@nzart.org.nz

Something to contemplate while CQing into a closed band

Researchers think that fiddler crabs attract mates by generating vibrations akin to sending Morse code. The characteristics of their code sending can indicate their size and stamina. (Brian, K1BRF)



Looking for something to do on the weekend? Need to fill some more DXCC Challenge slots? work new Countries, work new modes? Why not operate a short while in a contest. There are several to choose from. More Information can be found here:

<http://www.hornucopia.com/contestcal/weeklycont.php>

~~July 12-19~~

- ~~• Russian Radio Team Champ.: Jul 16~~
- ~~• Trans Tasman Low Bands chall: Jul 16~~
- ~~• DMC RTTY Contest: Jul 16 / 17~~
- ~~• Feld Hell Sprint: Jul 16~~
- ~~• NA QSO Party, RTTY: Jul 16 / 17~~
- ~~• CQ Worldwide VHF Contest: Jul 16 / 17~~

~~July 20-31~~

- ~~• NAQCC CW Sprint: Jul 21~~
- ~~• RSGB 80m Club Champ Data: Jul 21~~
- ~~• NCCC RTTY Sprint: Jul 22~~
- ~~• SKCC Sprint: Jul 27~~
- ~~• Phone Fray: Jul 27~~
- ~~• RSGB IOTA Contest: Jul 30 / 31~~

Every Month: NZART Official Broadcast: 3900 kHz LSB last Sunday of month at 2000hrs and at 2100hrs. (Also broadcast on the National Link and available on the NZART Website).

Auckland Branch 02, NZART (Inc.) Minutes of June General Meeting

D.



Current ZL1 SOTA Standings

Below is a chart taken from the SOTADATA web page showing Local ZL1 standings. Let's put a few more local calls on the list.

Position	Chaser Callsign	Activators Worked	Points	Avg. points per Expedition	View Log
1	ZL1BYZ	354	1615	4.56	View
2	ZL2AJ	112	396	3.54	View
3	ZL2ATH	43	118	2.74	View
4	ZL1PO	36	116	3.22	View
5	ZL2UN	24	46	1.92	View
6	ZL3TE	5	8	1.60	View
=6	ZL1KNI	3	8	2.67	View
8	ZL3DMC	4	7	1.75	View
9	ZL2JTD	2	3	1.50	View
10	ZL3TT	1	2	2.00	View
=10	ZL2DRV	1	2	2.00	View
12	ZL2KGF	1	1	1.00	View
=12	ZL2CCO	1	1	1.00	View

Auckland Branch 02, NZART (Inc.)

Minutes of ~~July~~ Committee Meeting

Date / Time / Place: Tuesday 2 August at 1945 hours / Clubroom

Attendees: Jeff Lowe ZL1TOU (presiding), Wallace ZL1WAL; Gwynne ZL1AAR, Japie ZL1JJN, Logan ZL1LMN, Lyndon ZL3DWF, Ray ZL1AJR and Mrs Nicoll,

Apologies: Wes ZL3TE, George ZL1TUJ (pro forma)

Sustained ZL1WAL / ZL1JJN

Minutes: of the previous Committee meeting on Tuesday 5th July 2016

Accepted ZL1WAL / ZL1JJN

Correspondence In:

- Newsletters: Franklin, North Shore, Papakura (by post); Hibiscus Coast; Auckland VHF Group (by e-mail)
- Branch reflector of Newsletters from North Canterbury, Hasting / Napier, Rotorua, Hamilton, Gippsland.
- Auckland Council – Statement for July
- Douglas Birt – Summary of Auckland Council Unitary Plan, This was read out at the meeting, 18m height is permitted for the main mast, and any number of other masts are allowed up to 10.6m in residential areas except heritage sites.
- Selwyn – Offer to provide tuition for operating the Remote station (now that it is reliable).
- Allan Hobbs ZL1AJH re progress with mods to our two 80m ARDF Tx. He has used a PLL rather than crystals.

Arising:

- Secretary will write a letter expressing appreciation to Douglas Birt for his untiring endeavour to represent Amateurs to the Independent Hearing Panel of the Auckland Council Unitary Plan.
- North Shore Branch 29 are running a Licence course on weekend of 13th -14th August
- North Shore want to borrow our ARDF 80m foxes and NZART receivers for JOTA in October.
- Correspondence Out:
- NZART: Asking for approval of our change to our constitution - Financial year ends "October" (instead of November)
- Invoices to Members whose subs are outstanding (and have not resigned)
- East and Bays Courier – requesting a notice in the "What's on" column.
- Vodafone – Complaint about their lack of service to process Direct Debit authority, and failure to converse

Arising: Vodafone forgave July charge of \$74.00 for having disconnected - contrary to their assurances.

Received and approved ZL1WAL / ZL1AAR

Finance:

- Finance Report (previously e-mailed as an Excel file) was tabled. Accepted ZL1WAL / ZL1AAR
- Expenses requiring approval:
 - o Stationary Wallace \$29.00
 - o Broadband Vodafone \$74.00
 - o Occupancy Auckland Council \$39.57 Approved ZL1WAL / ZL3DWF
- Treasurer will make an application to Pub Charity for a grant to pay for Coax and Control Cable for the Tower antenna and for Meshnet and Broadband cost to enable Members in retirement villages to access it.
- The funds (\$935) donated by Members towards the Fighting Fund are not likely to be needed for this purpose. Disposition will be considered at a future meeting after the Unitary Plan is ratified by Auckland Council.

General Business:

- Reports: (This heading includes a repository of all matters that have not progressed since their introduction)
- Previous Special General Meeting: Amendment to Constitution to end financial year in October instead of November (to allow more than one week to do Review before the AGM in December).was passed
- AREC: Japie presented three Flouro jackets given to our Branch for possible AREC activities.
- Visitors: None
- Exams: None
- QSL: No cards received.
- Nets: Now that the Remote station's 80m antenna coax has been replaced, it was reliable last week, Therefore more Members are asked to login to RCForb so as to participate in the net at 2000 hours on Wednesdays.
- Newsletter: The next edition will include the recommended Unitary Draft Plan as it pertains to Amateur Radio Configurations.
- Computers / network / phone line
 - o PC at Secretary's corner desk, file sharing - next job to be done.
 - o Consider mesh link to reduce our Broadband costs (\$900 p.a. being most of our Subscription income).
- Meter reading: 48532.6

(August Committee Meeting Minutes Continued on page 6)

- Maintenance
 - o Steps: No progress
 - o Electricity points on South side – no progress
- Remotely controlled station
- 80m antenna coax has been replaced. It is working reliably.
- Subcommittee has not met yet:
 - o Policy about usage / Membership categories.
 - o Overseas licencees
 - o Contesting
 - o Guidelines to operate Station
- Antennas:
- Tower:
 - o Wes is testing rotor and controller and microprocessor
 - o Plan B (to tilt the tower and affix rotator and boom – then test it) was favoured.
 - o Steve's scaffold will be used to attach the quad loops later.
- Resite / secure the mast at the north end of 40m dipole
- 80m dipole has had its coax replaced under the clubroom.
- **Licence to occupy:**
- Health & Safety – Steve has a portion of the manual under review. Wallace will offer to assist.
- Steve is undergoing a refresher First Aid Course.
- The Fire extinguisher should be recertified.
- Meeting with ACP to resolve ownership of building – not yet scheduled.
- **Future Events:**
 - o 20th August General Meeting
 - o Suggestions for entertainers / speakers for general meetings 2016?
 - o 20th August John Martin ZL1GWE about Intruder Monitoring Service
 - o 17th September Hannes ZL1LW about Meshnet
- Rules / Manuals:
- Rules Manual – not started
- Rescind rule requiring two Officers to be present for quorum at General Meetings Resolved ZL1AAR / ZL1WAL.
- Safety Manual. – under revision. Lyndon will provide "Exit" signs for both doors.
- Other business
- Thanks were given to Japie for taking away for electronic disposal - Monitors and PCs that were littering the room.

The meeting closed at 2050 hours with supper provided by Mrs Nicolls. ~~The Meeting concluded at 2150 hours with supper provided by Ray ZL1AJR and Mrs Nicholls~~

From The Chair ...

J
Until then, see who you can work on the bands.

73, Wes, ZL3TE



Auckland Unitary Plan Update

Updated 27 July 2016

The Independent Hearings Panel report is out. This Unitary Plan Update provides an initial outline of what the Panel recommends. Auckland Council can still change some aspects of the recommendations, but they have to have a very good reason for doing so.

The progressive steps in our process:

The Draft Plan had no provision for Amateur radio Configurations (ARCs). Seven amateurs submitted, but with a range of different requirements.

The Proposed Plan initially allowed ARCs in all areas, but only with Restricted Discretionary Resource Consents.

After Mediation: The planners recommended the North Shore Provisions in Rural Zones and Large Lot Zones, and Restricted Discretionary Resource Consents in all other zones (e.g. Residential). That provided for one main support structure up to 15m, plus one other pole, and little else. We therefore went through the full Hearings Process in front of the Independent Hearings Panel.

The IHP Output Recommendations. We have had partial success. There is Permitted Status for Amateur Radio Configurations in all Zones except the Roding Zones. Configurations accepted are basically the same as Wellington – as outlined below:

Under Topic 42, Infrastructure: in Paragraph 6.5, the Panel outlined the Council position in the proposed Plan and made the following recommendation:

6.6. Panel recommendation and reasons 6.6.1. Amateur radio configurations

The Panel considers that the imposition of standards similar to those approved by the Environment Court in its decisions on Plan Change 74 to the Wellington City District Plan (*NZ Assn of Radio Transmitters and others v Wellington City Council* [2012] NZEnvC 8 (interim decision) and [2013] NZEnvC 38 (final decision)) will adequately address any adverse effects of amateur radio configuration activities. There is no evidence to show that the environment in Auckland is so different from that in Wellington to justify different controls for these activities. Therefore, the Panel recommends that these activities be provided for as permitted activities in all zones within specified standards. Where the activities fail to comply with the standards they are to be assessed as discretionary activities.

The Following Definitions are relevant:

Amateur radio configuration

Antenna, aerials and associated support structures which are owned and operated by licensed amateur radio operators.

Antenna

Any telecommunications, radio communications device including dish, aerials (any array of rods, wires and tubes) or panels, or broadcasting equipment that receives or transmits signals.

Includes the following ancillary components which are not subject to antenna size limits in the infrastructure rules:

Auckland Unitary Plan Independent hearings Panel Recommendation Version 22 July 2016 14

- radio frequency units or similar devices;
- lightning rods, shrouds and ancillary equipment, such as amplifiers, controller boxes and tilt motors; and
- Global Positioning System (GPS) antennas. Excludes:
 - supporting masts or other structures.

Height

Height is the vertical distance between the highest part of a building or structure and a reference point. The reference point outside the coastal marine area is ground level unless otherwise stated in a rule. The reference point inside the coastal marine area is mean sea level. Height rules or standards are always a maximum unless otherwise stated in a rule or standard.

The exclusions below apply both outside and inside the coastal marine area. Excludes:

(1) projections in the list (i) to (xv) below that do not exceed:

1. (a) 2m in width on any elevation; or

(Auckland Unitary Plan Update Continued on page 9)

MOVING UP TO WINDOWS 10

A brief History of Windows:-

1985	Windows 1	16 bit.	The first version
1987	Windows 2	16 bit	
1990	Windows 3	16 bit	
1992	Windows 3.1	16 bit	
1995	Windows 95	32 bit	
1998	Windows 98	32 bit	
2000	Windows ME	32 bit	AKA Windows 2000
2001	Windows XP	32 bit	
2007	Windows Vista	32 bit	
2009	Windows 7	32 bit	
2012	Windows 8	64 bit	no start button
2013	Windows 8.1	64 bit	return of start button
2015	Windows 10	64 bit	introduced 29 July

A Free download of Windows 10 was available for 1 year which ended on 29 July 2016, if Windows 7 or 8/8.1 was already installed on your P.C.

02 August, the Anniversary edition of Windows 10 was released. A free Upgrade (Thank You Gift) for those that took the step and moved to Win 10.

Jeff, ZL1TOU

Solar Storm Brings Aurora Around the World: Solar Storm Forecast 08-04-2016

A stealthy solar storm has hit Earth hard with an extra push from some fast solar wind. This is bringing aurora views all over the world, is causing HF radio propagation to drop, and causing errors and loss of lock in GPS devices, especially at high latitudes. Catch up with the details of the ongoing storm and see what else our sun has in store this week.

<https://www.youtube.com/watch?v=zHL5JgOcE7c&feature=youtu.be>

A stealthy solar storm has hit Earth hard with an extra push from some fast solar wind. This is bringing aurora views all over the world, is causing HF radio propagation to drop, and causing errors and loss of lock in GPS devices, especially at high latitudes. Catch up with the details of the ongoing storm and see what else our sun has in store this week.

For daily and often hourly updates (during active times) visit me on Twitter: <https://twitter.com/TamithaSkov>

For a more in-depth look at the data and images highlighted in this video see these links below.

Solar Imaging and Analysis:
SDO: sdo.gsfc.nasa.gov/data/
Helioviewer: helioviewer.org/
STEREO-EUVI + SDO-AIA 360° Heliographic Maps:
tcrb.nrl.navy.mil/~iuu/maps360...

Flare Analysis: lmsal.com/solarsoft/latest...
Computer Aided CME Tracking CACTUS:
sidc.oma.be/cactus/out/lat...
GOES Xray: swpc.noaa.gov/rt_plots/xra...
SOHO: sohodata.nascom.nasa.gov/
Stereo: stereo.gsfc.nasa.gov/
NOAA Sunspot Classifications:
swpc.noaa.gov/ftpd/rt/latest/
GONG: gong2.nso.edu/dailyimages/
GONG Magnetic Maps: gong.nso.edu/data/magmap/
LMSAL Heliophysics Events HEK lmsal.com/isolsearch

Solar Wind:
NOAA/SWPC: swpc.noaa.gov
ACE Solar Wind: swpc.noaa.gov/ace/ace_rtsw...
Wang-Sheeley-Arge Solar Wind Prediction Model:
swpc.noaa.gov/ws/
NASA ENLIL Model: isw.gsfc.nasa.gov:8080/lswaSy...
NOAA ENLIL Model: swpc.noaa.gov/wsa-enlil/

Magnetosphere, Ionosphere, Atmosphere:
GOES Magnetometer: swpc.noaa.gov/rt_plots/mag...
Ionosphere D-Region Absorption (DRAP) model:
swpc.noaa.gov/drap/
Auroral Oval Ovation Products:
helios.swpc.noaa.gov/ovation/
POES Auroral Global Maps: swpc.noaa.gov/pmap/
Global 3-hr Kp index: swpc.noaa.gov/rt_plots/kp_...
Wing Kp index prediction:
swpc.noaa.gov/wingkp/index...
USGS Ground Magnetometers:
geomag.usgs.gov/realtime/

Multi-Purpose Space Environment Sites:
SOLARHAM: solarham.net/index.htm
Spaceweather: spaceweather.com
SOLARIMG: solarimg.org/artis/
iSWA: isw.gsfc.nasa.gov/iswa/iSWA.html

Definition of Geomagnetic Storm, Radiation Storm, and Radio Blackout Levels:
swpc.noaa.gov/NOAA_scales/

None of this would be possible without the hard work and dedication of those who have provided all of this data for public use.

Images c/o NASA/ESA/CSA (most notably the superb SDO, SOHO, ACE, STEREO, CCMC, JPL & DSN teams, amazing professionals, hobbyists, institutions, organizations, agencies and amateurs such as those at the USAF/HAARP, NICT, NOAA, USGS, Environment Canada, Natural Resources Canada, Intellicast, Catatania, rice.edu, wisc.edu, sonoma.edu, ucalgary.ca, rssi.ru, ohio-state.edu, solen.info, and more. Thanks for making Space Weather part of our every day dialogue.

2. (b) 1.5m above the maximum permitted activity height or the daylighting standard for the site, whichever is the lesser:

- (i) lift wells;
- (ii) lift towers;
- (iii) elevator and stair bulkheads;
- (iv) roof water tanks;
- (v) solar panels;
- (vi) solar hot water heating systems;
- (vii) wind turbines;
- (viii) cooling towers and air-conditioning units;
- (ix) cranes;
- (x) derricks;
- (xi) cargo stacking and lifting devices;
- (xii) conveyors;
- (xiii) machinery rooms;
- (xiv) guy wires; or
- (xv) chain link or other open or transparent fences.

(2) steeples, spires, minarets and similar structures on places of worship that do not exceed 2m in width on any elevation or 4m above the maximum permitted activity height for the site;

(3) chimneys that do not exceed 1.1m in width on any elevation or that exceed 1.5m above the permitted activity height for the site;

(4) flagpoles, masts, lighting poles, aerials or antennas that do not exceed: (a) one third of the maximum permitted activity height for the site; or (b) 300mm in diameter; or (c) the footprint of the building.

Height in relation to boundary

The height of a building relative to its distance from the boundary of a site. The allowable height increases as the distance from the boundary increases up to the maximum height allowed.

Mast

Means either the primary structure that antennae, dishes, and aerials are fixed to or an HF vertical antenna. The mast may be a guyed pole mast, a self-supporting pole mast, a guyed lattice mast, or a self-supporting lattice mast.

Includes:

- any poles subsidiary to the primary mast.

The Activity Table. This sets the specific rules that apply to Amateur Radio:

(A45)	Amateur radio configurations	Permitted in all zones except Road
(A46)	Amateur radio configurations that do not comply with Standards	Discretionary in all zones

And the Rules are E26.2.5.3. Specific activities within zones in Table E26.2.3.1

Amateur Radio Configurations

(25) Amateur radio configuration activities must comply with the following standards:

- (a) no limit to the number of supporting structures less than 102mm in diameter. Where guy wires are used, these must not exceed 10mm in diameter;
- (b) a maximum of one supporting structure greater than 102mm. The maximum height of the supporting structure shall be the relevant building height. The maximum horizontal diameter of the pole or supporting structure is 800mm. The minimum setback from any boundary is 1.5m. Any guys used to support the pole must not exceed 10mm in diameter;
- (c) dish antennas located less than 5m above ground have a maximum horizontal diameter of 4m and a minimum boundary setback of 1m. Dish antennas situated more than 5m above ground have a maximum diameter of 1.2m;
- (d) the maximum height of antennas mounted on buildings using a supporting structure less than 102mm diameter shall be 18m in the residential zones, and 18m or the relevant permitted or actual building height plus 5m (whichever is greatest) in all other zones;
- (e) all antennas must be designed and operated in compliance with New Zealand Standard NZS 2772 : Part

1 : 1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300 GHz at all times and in all places to which the public has access; and

f) no amateur radio configuration may be located on a site that is, or contains, a scheduled historic heritage a recognise this by permitting certain amateur radio configurations for use by licensed amateur radio operators.

What is all this Saying?

My interpretation is that:

- **in Residential Zones you may erect an unlimited number of poles (less than 102mm in Diameter) at Zone Height (8.0 metres) plus 1/3rd (Total 10.66m)**
- **You may have one Main Mast, with a diameter of up to 800mm to a height of 10.66m**
- **The maximum height of antennas mounted on buildings using a supporting structure of less than 102mm may be 18m high in residential zones.**
- **Dishes of up to 4m Diameter must be mounted on pedestals of 5m height (or less). Above 4m the maximum dish size is 1.2m diameter.**
- **Radio Frequency Radiation Standards must be observed.**
- **You can't put anything on historic heritage sites.**

What next?

There is nothing else we can do, unless someone can identify a Point of Law which has been breached. The outcome is not ideal, but it is a lot better than what the Planners wanted in the initial Plans.

The main deficiency is that there does not seem to be any dispensation for "Height in relation to boundary". We are allowed 2.5m on the boundary, rising at 45o up to a maximum of Zone Height plus 1/3rd.

The main benefit is that the recommendations don't seem to restrict what is on top of the main support structure. In other places, reference is made to HF Aerials, so the Panel does seem to know they exist.

Douglas Birt,
ZL1BFS
Local Government Liaison Officer