

# **WAIKATO VHF GROUP Inc.**

## **Branch 81, NZART**

### **HISTORICAL NOTES of THE WAIKATO VHF GROUP**

By Ian Brown, ZL1TAT

#### **1963 to 1982**

On the 16th of June 1963, a meeting of interested VHF'ers from around the Waikato and Bay of Plenty was called at the Cambridge residence of ZL1RG. Attended by ten amateurs, this meeting moved that a VHF group to be known as "The Waikato VHF Group" be formed to serve the area south of Auckland. (Even then, we were keen to show Auckland there was life south of the Bombay Hills). Jack Rentoul ZL1RG and Eddie Amon ZL1ACL were elected first President and Secretary respectively. Subs were established at two shillings and sixpence, and the foundation group of ten decided to hold their second meeting three months later.

September 1963 saw the introduction of the "Technician class" amateur radio licence. This encouraged many new members to the VHF bands and swelled our membership accordingly. Numbers attending many of the early meetings were increased by regular attendances from fellow Auckland VHF'ers who travelled down to the meetings held in different locations around the Waikato. To maintain regular contact between group members, a weekly net was held each Sunday morning on the low end of 2 metres.

These early meetings were mainly social events, with little formal business being conducted. The first balance sheet, which showed a net income of £2.1.9 did little to reflect the activities of group members who were busy establishing the area on VHF maps. Because of the area represented, covering from Bombay in the north to Taupo in the south including the Bay of Plenty and northern King Country, a policy of holding meetings at different locations was adopted. Besides, there wasn't enough room in ZL1RG's shack to accommodate all of us any more!

During 1964, interest grew in a group project, and initial investigations were made into establishing a group owned radio beacon. This project was not to see any further progress for some time, due mainly to lack of finance. Our Sunday morning nets were shifted to Sunday evenings in 1965, and two years later the group's weekly news broadcast began.

By 1968 there was talk of establishing 2 metre repeaters in New Zealand. Membership enthusiasm for establishing a repeater in the Waikato area prompted a fund raising project to raise the necessary finance. Over the next few years, the Waikato VHF Group established a reputation for its project equipment, which included FM detector modules, SWR bridges, receiver pre-amps, FM Adaptors, kitset transistor FM transmitters and receivers. Bulk purchases and sale of FM channel crystals were also made in the fund raising endeavour. In May 1970, the Sunday night net was changed from AM on the bottom end of the band to 146MHz FM, with the news broadcast preceding.

By the time approval to establish 2 metre repeaters was granted in mid 1970, the group had raised sufficient finance to start construction of a channel "B" FM repeater. Equipment developed specifically for this by the group was first displayed to those attending our meeting in February 1971, when an application for a licence made. A site on the western side of the Kaimai range, east of Matamata, was readied. This repeater came into permanent operation from on the 14th December 1971, at which time it was only the second amateur FM repeater operating in New Zealand.

Also in 1971, the group launched the Waikato VHF Award, and an application was made for a beacon licence. Our first beacon, using a hybrid valve/transistor transmitter and optically encoded keyer came into service with the callsign ZL1VHW on 145.150MHz in April 1972.

Over Easter 1973, the Waikato VHF Group hosted the VHF Convention held in Hamilton, which was attended by some 102 VHF'ers from throughout the country. To improve its coverage, the 2 metre repeater was relocated to Mt. Te Aroha immediately prior to this event. This was a major boost to sales of the group's kitset repeater, which within a few years was installed in one out of every three FM repeater sites operating in New Zealand, and was the basis for many more stations.

At the 1973 AGM, it was moved that finance be made available to start construction of a second repeater, channel "C", for Mt. Edgecumbe in the eastern Bay of Plenty. This was commissioned in late 1973 using our original "Waikato" design repeater. A quarterly newsletter, which also doubled as a meeting notice, was instituted in November 1975.

In 1978, the group became an Incorporated Society. Also that year, the 2 metre beacon transmitter and keyer, now six years old, were replaced by all solid state designs. The station was relocated to its present central Hamilton site in December that year and joined by a 70cm beacon operating on 433.15MHz.

Our first lady president was elected in May 1979 when Sharyn Stowers, then ZL1TQV and later to become ZL1BIS took the chair for two years. Also in 1979, we commenced distribution of the electronics magazine "Elektor" as its New Zealand agent. This role continued through to 1986 when difficulties with the publisher forced us to abandon that venture.

In January 1980, plans to establish a 70cm repeater were commenced. Using recycled commercial equipment, this '860 station went on air in Hamilton in March 1982, and was relocated to Te Aroha in July. Our 1297.15MHz beacon was commissioned just before Christmas 1980, joining the other two beacons on the Hamilton site in time for the DX season.

Up till now, all 2 metre repeaters in New Zealand had operated using a +/-15kHz deviation specification with a 700kHz Rx/Tx offset. The NZART moved to adopt the commercial 30F3 standard using a 600kHz offset, and this change was implemented in November 1981. At the August 1981 meeting, a motion in favour of obtaining NZART branch status was adopted. This move to upgrade our affiliation status held since 1966 was however to take another four years to realise.

### **Interesting Historical Information (Milestones)** by Gavin W Petrie, ZL1GWP

#### **1963**

16 June - ten radio amateurs met at Cambridge and set up 'The Waikato VHF Group'.

The first Chairman was Jack Rentoul (ZL1RG) and the first Secretary was Eddie Amon (ZL1ACL). A sub was set at two shillings and sixpence. A weekly net was established and held each Sunday morning, at the low end of the 2 metre band.

#### **1964**

The first AGM was held at Ron Buckley's QTH. The first balance sheet showed a net income of £2.1.9.

Investigations were made into establishing a Group owned radio beacon.

#### **1965**

The Sunday morning net was shifted to a Sunday evening.

**1967**

A 'weekly news broadcast' was added to the Group's Sunday evening net.

**1968**

Fund raising project (FM receiving adaptor) commenced, to raise money for a 2m repeater.

**1969**

Decided at the October meeting to produce an SWR bridge as a fundraising project.

**1970**

The Sunday evening net changed from AM to FM.

Approval was given midyear for 2m repeaters to be established. By this time the Group had raised sufficient finance for the construction of an FM repeater.

**1971**

In Feb. an application was made for a repeater license. Chan 'B' (Rx 146.35 MHz/Tx145.65 MHz) was allocated in October.

A site on the western side of the Kaimai range, east of Matamata, at Omahine Rd. was established.

The Waikato VHF Award was launched.

In Nov. an application was made for a 2m beacon license.

Chan 'B' repeater came into permanent operation on 14th Dec., initially from trustee ZL1TAT's QTH at Hinuera.

**1972**

First beacon was put into service on 145.15 MHz in April with a callsign of ZL1VHW, at the Omahine Rd site.

**1973**

The 2m, Chan 'B' repeater was relocated to Mt. Te Aroha on 7 April, resulting in substantially improved coverage, which now included the Bay of Plenty.

"Waikato FM Repeater" printed circuit board kits were made available as a fund raising project. Sales occurred around NZ and Australia.

The Group hosted the VHF Convention in Hamilton over Easter.

Construction of a second repeater was started, on channel 'C' for Mt. Edgecumbe in the eastern Bay of Plenty.

**1975**

Mt. Edgecumbe repeater channel 'C' commissioned 2<sup>nd</sup> March.

The quarterly newsletter was instituted in Nov.

Group members participated in VHF field day at Mt Ranginui.

**1978**

The Group became an Incorporated Society. No. 212737.

## **1979**

The original 2m beacon hybrid transmitter and keyer were replaced by all solid state designs. The 2m beacon was relocated to the Hamilton Central Telephone Exchange roof in January and was joined by a 70cm beacon on 433.150 MHz at the same time.

First lady President, Sharyn Stowers, ZL1TQV, later to become ZL1BIS, took the Chair for 2 years.

The Group commenced distribution of the electronics magazine 'Elector', as its New Zealand agents.

## **1980**

In Jan. plans were put in motion to establish a 70cm repeater.

## **1981**

A beacon on 1297.150 MHz was installed at the Hamilton Central Telephone Exchange site and commissioned in January.

At the AGM in Aug. a motion in favour of obtaining branch status was adopted. However this took four years to realise. Des Hamblyn ZL1HP was elected President. The subs were increased from \$2.50 to \$5.00, being the first increase since the establishment of the club.

In Nov. the 2m band plan changed from 700KHz to 600KHz offset for FM repeaters. This included changing Channel 'B' on Mt. Te Aroha to the new allocation of 146.95 MHz (Tx).

## **1982**

The 70cm repeater went air in March, initially from a site on Newcastle Rd., in Hamilton, using 438.600 MHz.

In July the 70cm repeater was relocated to Mt. Te Aroha.

During Oct. a link was established between the 2 metre repeater on Te Aroha 146.950 MHz and Auckland 690 for joint Sunday 'Nets'.

## **1983**

On Dec. 10, a 2 metre repeater (146.975 MHz) was established at Tairua to cover the eastern side of the Coromandel peninsula.

## **1985**

During Easter we hosted our 2nd VHF Convention in Hamilton.

## **1986**

NZART Branch (81) status finally obtained.

At the June AGM a motion was adopted changing the Group's financial year from 31 March to 31 December.

## **1987**

During January, commercial Tait equipment was installed for the 2 metre repeater, 695 (146.950 MHz) Te Aroha. The original repeater, which had been in service since 1973, was honourably retired.

In July the committee agreed to the linking of Te Aroha 146.950 MHz and Tairua 146.975 MHz, via UHF link, on a restricted basis.

## **1989**

In July the link between Te Aroha 146.950 MHz and Tairua 146.975 MHz became operational on a permanent basis.

## **1990**

Whakatane, Branch 51, were offered and accepted, ownership of the Edgecumbe 2 metre (146.700 MHz) repeater.

## **1991**

On the 6 April the Group assisted Rotorua, Branch 33, to establish a new National System node (439.750 MHz) at Takaurunga on the Kaimai Range, adjacent to the Telecom microwave site.

Decision made in June to establish a Data Repeater at the new Kaimai site.

During Aug. an application was made to FMTAG to establish a Data repeater at the Kaimai site.

Approval received in Dec. to establish a Data repeater on 145.400 MHz.

## **1992**

In March all beacon frequencies were changed to fit in with the new band plan.

In Dec. an application was made to FMTAG to have the ownership of the OTO Digipeater on Rangitoto vested in the WVHF Grp.

Also in Dec. application was made to FMTAG re the establishment of a 2GHz and a 10 GHz beacon on the Telecom site at Te Uku.

## **1993**

On 14 March, at the AGM, Des Hamblyn was made an 'honourary life member' of the Group.

In April approval received vesting ownership of the OTO digipeater in the Waikato VHF Group. (ZL1IS-1)

Data Repeater installed and operational on 2 metres (145.400 MHz) at the Kaimai site.

A packet modem kit (based on ZL1AI's Jan/Feb Break-in article) made available at \$15.00 plus \$2.50 postage.

In August approval given for the establishment of 2 GHz beacon on the Telecom site at Te Uku.

During Nov. the 70cm repeater (438.600 MHz) on Mt. Te Aroha changed to 438.400 MHz. using new Tait equipment.

## **1994**

Interest shown in the establishment of an ATV repeater, (possibly on a Kaimai Range site).

## **1995**

On Jan. 6<sup>th</sup> a 2 GHz (2424.256 MHz) beacon was commissioned on the Telecom site at Te Uku.

In July the Constitution was amended to correct some sections that had become out of date and others to satisfy new requirements by the Inland Revenue Department.

## **1996**

On 15 August new Motorola equipment was installed at Tairua for 146.975 MHz. The UHF link between Te Aroha (146.950 MHz) and Tairua (146.975 MHz) was decommissioned.

## **1997**

Rotorua Amateur Radio Club, Branch 33, transferred the operating license for Kaimai National System ULS to the Waikato VHF Group.

At the AGM in early March Des Hamblyn (ZL1HP) relinquished his position as President after 16 years of outstanding service to the Waikato VHF Group. Noel Rowe (ZL3GR) was elected as President.

At the November General meeting at the Waihi Club Rooms, Tom Bevan ZL1THG was made a 'honourary life member' of the Group.

ATV license (Chan 39) transferred to Hamilton Branch 12

An application was made to FMTAG for a 2m repeater frequency to be used at a proposed site near Raglan and for a 70cm link with Te Aroha.

## **1998**

On Feb. 27<sup>th</sup> a 2 meter repeater (145.675 MHz) was established on a site near Raglan.

October saw the Group give approval for the 70cm (438.400 MHz) repeater at Te Aroha to be designated for voice primary use, and with data as a secondary use. A voice announcement to be made before any data transmission takes place outside the 2300Hrs to 0600Hrs time slot.

## **1999**

On the 9 September the death of Des Hamblyn (ZL1HP) was recorded with regret. Des was a foundation member of the Group. One of his major contributions was the running of the Sunday night News and Net for many years.

## **2000**

In October interim approval was received from FMTAG for the use of 439.100 MHz at the proposed Karapiro National System site.

## **2001**

On 15 December an extension to the National System (439.150 MHz) was installed on Mt Putauaki (Edgecumbe) for the Kawerau Amateur Radio and Hobbies Club. Technical assistance to assemble and install was provided by the Group.

Late in the year an initial run of 25 'Sound Card' kits, for interfacing to a transceiver for digital modes, were produced, to coincide with a "Break-In" article by Ron Badman.

## **2002**

At the January Committee meeting approval was given for the manufacture of a further 25 'Sound Card' kits.

At Kaimai on 2<sup>nd</sup> Feb. the equipment for 439.750MHz was updated with Tait series 300 and a secondhand replacement tower was installed on the same base as the original one. The data repeater (145.400 MHz) antenna was replaced with a temporary folded dipole so as the original could be refurbished.

On 10<sup>th</sup> Feb. new 550 ampere hour batteries were installed and the refurbished data repeater antenna was re-installed on the tower at Kaimai.

In September the Group hosted an APRS Forum at the Hamilton Branch 12 Club rooms, which was led by Alan Wallace, ZL1AMW.

The Motorola GM300 Equipment at Tairua, which had not stood up to periods of high use, was swapped for Tait 300.

## 2003

Decision made to replace tower at Kaimai due to poor condition of existing tower.

The Group organized the Technology Convention at Easter, 19-20 April, at the Hamilton Astronomical Society Club Rooms.

The equipment destined for the Waikato National System site was installed in a site near the southern boundary of Hamilton, as a temporary measure. The equipment will remain at this site until the building space is required.

In June the Group hosted another APRS Forum at the Hamilton Branch 12 Club rooms, which was again led by Alan Wallace, ZL1AMW.

## 2004



Kenwood TK-705D

Kenwood TK-705D 2 metre transceiver donated to the Group, by Ross Grindrod, (ZL3DC) for loan to members, new to amateur radio.

Initial discussions held regarding the installation of an IRLP (Internet Radio Linking Project) system in the Waikato.

## 2005

In early January an IRLP system was installed on Te Aroha (146.950 MHz), for a trial period of 12 months.

In October the National System nodes (Kaimai and Hamilton) were changed to the new National System Frequency plan. Kaimai now on 434.850 MHz (Tx) and Hamilton on 439.975 MHz (Tx).

## 2006

After a long delay, (approximately 9 months), the Waikato, Bay of Plenty arm of the National System, was reconnected at Klondyke, on 25 April 2006.

The AGM unanimously agreed that the IRLP node continue to operate on 695 for the foreseeable future.

## 2007

In August the Kenwood TR3200 linking equipment for the IRLP node was replaced with [Icom F210s transceivers](#) and the hard drive on the node computer was upgraded.

Manufacture of the new tower for Kaimai was completed.

## 2008

At the AGM in late March, Noel Rowe (ZL3GR) relinquished his position as President after 10 years of excellent service to the Waikato VHF Group. Alan Wallace (ZL1AMW) was elected as President.

## 2009

A working bee at Kaimai on 6 & 7 February saw the tower and antennas replaced. The hut foundations and floor were also replaced the same day.

The 12cm (2424.256 MHz) beacon was installed at Kaimai on 7 February.

The Waikato VHF Group in conjunction with Hamilton Branch 12, organized the Technology Convention at Easter, (11-12 April), at the Chartwell Scout Hall, Chartwell, Hamilton.

The OTO Digipeater on 144.650 MHz, was upgraded on 5 June, with Tait T355/T356 equipment.

## 2010

During February the (145.675 MHz) Raglan repeater was permanently removed from the site near Raglan, due to the construction of a power generation wind farm in the vicinity. To be re-installed at the Telecom site at Te Uku.

On 24th April the (145.675 MHz) Raglan repeater was installed at the Telecom site above Te Uku, with the latest [Icom FR5000](#) equipment.

On 15<sup>th</sup> October, '840 was turned off due to lack of use and expiry of licence.

## 2011

March – 146.950 MHz repeater was established at Te Weraiti along with a 70cm link to Raglan (Te Uku) prior to going live, when the 146.950 MHz repeater at Mt. Te Aroha is turned off mid-year.

May – Te Aroha 146.950 MHz repeater was turned off and all equipment removed. Te Weraiti 146.950 MHz repeater was then activated.

June – Linking matrix installed at Te Uku, enabling Te Weraiti 146.950 MHz and Te Uku 145.675 MHz to be linked. IRLP node installed on Te Uku 145.675 MHz.

September – Equipment for the 2m Tairua Repeater ('6975 MHz) was transferred to the Mercury Bay Branch, 85.

## 2012

21 November – 145.575 MHz repeater was established at Maungakawa, north east of Huntly, along with the 70cm linking equipment, enabling it to be linked to Te Uku. We now have 3 repeaters on the WaiPlenty 2m network.

## 2013

The 50<sup>th</sup> Anniversary of the Group was celebrated at the AGM on 24<sup>th</sup> March.

## 2014

22 November – 145.475 MHz repeater was established (Waihi North) on a private property approximately 8km east-north-east of Waihi, along with the 70cm linking equipment, enabling it to be linked to Te Weraiti. This now completes the 4 repeater WaiPlenty 2m Network, which replaces the old Te Aroha '695 repeater.

## 2015

A Digital Mobile Radio (DMR) repeater was installed on ?? ?? 2015 on the top of the PWC building in central Hamilton.

## 2016



31 December 2016 - about Thursday 29 December the radio equipment for the 145.675 MHz repeater, along with numerous other commercial radios, was stolen from the Chorus building.

## **2017**

19 March 2017 - At the AGM today Alan Wallace, who has been the President since the 2008 AGM, announced that he would not be standing again. Alan was thanked for his contribution to the Group over the 9 years. Phil King ZL1PK was elected as the new president.

To date (19 March 2017) the equipment that was stolen has not been found, after the Police and other parties have been involved in trying to locate it.

25 October 2017 - the 144.65MHz APRS/Digi repeater at Rangitoto (Rx on 144.65 and 144.575MHz) was shut down.

## **2018**

Stolen Te Uku radio repeater equipment recovered from a storage locker in Hamilton.

## **2019**

29 September 2019 - the 145.400 MHz data repeater was decommissioned.

# Waikato VHF Group

## PRESIDENT

1963 ~ 196_	<i>Jack Rentoul</i>	ZL1RG
196_ ~ 1969	<i>Des Hamblyn</i>	ZL1HP
1969 ~ 1976	Ian Brown	ZL1TAT
1976 ~ 1979	Rodney Rowe	ZL1TFX
1979 ~ 1980	Sharyn Stowers	ZL1TQV / ZL1BIS
1980 ~ 1981	Noel Maginnity	ZL1TNT
1981 ~ 1996	Des Hamblyn	ZL1HP
1997 ~ 2008	Noel Rowe	ZL3GR
2008 ~ 2017	Alan Wallace	ZL1AMW
2017 ~	Phil King	ZL1PK

## SECRETARY

1963 ~ 1971	<i>Eddie Amon</i>	ZL1ACL
1971 ~ 1972	Ian Perkins	ZL1BFH
1972 ~ 1975	Rodney Rowe	ZL1TFX
1975 ~ 1981	Derek Cleland	ZL1IY
1981 ~ 1983	Ian Ogden	ZL1UAY
1983 ~ 1986	Kevin Smith	ZL1BC
1986 ~	Gavin Petrie	ZL1UAB/ZL1GWP

## TREASURER

1963 ~ 1971	<i>Eddie Amon</i>	ZL1ACL
1972 ~ 1975	Rodney Rowe	ZL1TFX
1975 ~ 1981	Derek Cleland	ZL1IY
1981 ~ 1982	Ian Ogden	ZL1UAY
1982 ~ 1983	Kevin Smith	ZL1BC
1983 ~ 1986	Colin McEwan	ZL2TFK
1986 ~	Ian Brown	ZL1TAT

## **HONOURARY LIFE MEMBERS**

1976	John (Jack) Rentoul	ZL1RG
1977	Ian Brown	ZL1TAT
1981	Noel Maginnity	ZL1TNT
1993	Des Hamblyn	ZL1HP
1997	Tom Bevan	ZL1THG
2003	Ron Badman	ZL1AI
2011	Russell Richardson	ZL1RWR

Updated - 21 November 2017