



**AREC.info is the newsletter of Amateur Radio Emergency Communications, the public service arm of the New Zealand Association of Radio Transmitters. AREC.info is published monthly (except January).**



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**Cover:**

*Brook Hart of Invercargill received a PLB from Daniel Erickson of Southland AREC ahead of her kayaking Lake Wakatipu early next year to raise funds and awareness for Mental Health in New Zealand.*



**AREC Administration – Debbie and Annalise**  
[admin@arec.nz](mailto:admin@arec.nz), 04 939 2189

**Newsletter Editor - Soren Low, ZL1SKL**  
[newsletter@arec.nz](mailto:newsletter@arec.nz), 021 813 541

**Amateur Radio Emergency Communications**

**National Officers:**

**Chief Executive Officer**  
 Don Robertson, ZL2TYR  
[ceo@arec.nz](mailto:ceo@arec.nz), 021 654 085

**Regional Manager North**  
 Andrew Brill, ZL1COP  
[RMNth@arec.nz](mailto:RMNth@arec.nz), 022 354 6451

**Regional Manager Central**  
 Don Wallace, ZL2TLL  
[RMCent@arec.nz](mailto:RMCent@arec.nz), 027 444 5123

**Regional Manager South**  
 Lindsey Ross, ZL4KS  
[RMStth@arec.nz](mailto:RMStth@arec.nz), 021 116 1686

**Project Coordinator**  
 John Murphy, ZL2XJ  
[projects@arec.nz](mailto:projects@arec.nz), 021 0807 5075

**National Training Advisor**  
 Steve Davis, ZL2UCX  
[training@arec.nz](mailto:training@arec.nz), 027 436 1796

**Health & Safety Advisor**  
 Dave Wilkins, ZL1MR  
[hsw@arec.nz](mailto:hsw@arec.nz), 021 185 7903

**Treasurer – Evan Sayer**  
[Treasurer@arec.nz](mailto:Treasurer@arec.nz), 021 612 164

**District Managers:**

**Northland/Auckland – Richard Gamble**  
[DMAuckland@arec.nz](mailto:DMAuckland@arec.nz), 021 729 270

**Bay of Plenty – Karl Hunt**  
[DMBOP@arec.nz](mailto:DMBOP@arec.nz), 021 167 0477

**Central – Brian Purdie**  
[DMCentral@arec.nz](mailto:DMCentral@arec.nz), 027 321 4470

**Eastern – John Newson**  
[DMEastern@arec.nz](mailto:DMEastern@arec.nz), 027 230 3642

**Wellington – John Murphy**  
[DMWellington@arec.nz](mailto:DMWellington@arec.nz), 021 0807 5075

**Tasman – Paul Rennie**  
[DMTasman@arec.nz](mailto:DMTasman@arec.nz), 027 458 9740

**Canterbury – Don MacDonald**  
[DMCanterbury@arec.nz](mailto:DMCanterbury@arec.nz), 027 551 6683

**Southern – Lindsay Eunson**  
[DMSouthern@arec.nz](mailto:DMSouthern@arec.nz), 027 432 5136



*Above: AREC Tasman District Manager Paul Rennie ZL2RE thank Don for a successful District Meeting weekend at Murchison. Photo: Lindsey Ross ZL4KS.*

October has been a busy month for me, however it has been a bit different from the norm as I have spent some time on the road with three District Meetings in the South Island.

This has been a great opportunity to get out with our people – I always enjoy the opportunity to discuss issues and hear some of the great ideas you have.

Spending time out of the office is the best way to “keep it real”. While I have been involved in AREC for a long time, these days I spend more time in the background working with our national team, NZ SAR and our partner agencies attending to governance and management issues.

We had hoped to have completed all of the District Meetings this side of Christmas, however the COVID-19 situation means that this is not possible.

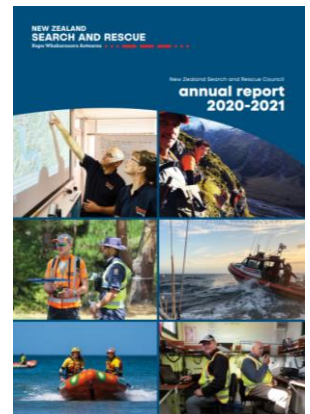
### NZ SAR Annual Report

The NZ SAR annual report 2020-2021 has just been published and includes a number of mentions and photos of AREC members. Paul ZL2RE and Graham ZL1BDS even managed to make the cover!

For those who are not too familiar of where we fit in the Search & Rescue landscape, the annual report provides a great introduction of the sector as well as providing some great detail about the types and locations of incidents. You can find a copy here <https://nzsar.govt.nz/assets/Downloadable-Files/NZSAR-AR-2021-For-Website-6.10.21.pdf>

It is also a reminder to remember to complete activity reports. We provide this information to NZ SAR on a regular basis so it is important that we capture the true effort you are putting in please.

[https://tinyurl.im/AREC\\_ACTIVITY\\_REPORTS](https://tinyurl.im/AREC_ACTIVITY_REPORTS)



### COVID-19

Without wanting to state the obvious, COVID-19 is a real threat to our communities and it is important that we continue to follow the rules and protocols that apply where we live. If you are called out to assist, please ensure you can do this safely. It is okay to say “no” if attending may put yourself or others at risk. AREC’s COVID-19 guidance is online at [arec.nz](http://arec.nz)

### This your newsletter!

I really enjoy reading about AREC activities and our people in the pages of this newsletter. If there are things going on in your area, consider taking a few photos and sending some notes through to [newsletter@arec.nz](mailto:newsletter@arec.nz) for inclusion.

Until next month, stay safe!

**Don, ZL2TYR**

Chief Executive Officer, AREC



The first three weekends in October have been a busy time for AREC CEO Don ZL2TYR, Training Officer Steve ZL2UCZ, Project Co Ordinator John Murphy, ZL2XJ and Regional Manager South Lindsey ZL4KS with the start of the district training for AREC District Managers, Group Leaders, their Deputies, and some Group members who also joined in.



*Above:* Group photo at the entrance to the Otago Branch Club Rooms

*Photo:* Lindsey Ross ZL4KS

“The purpose of these meetings is to get Group leaders on-board with where we are heading” said Don Robertson ZL2TYR, AREC CEO. “We have spent a lot of time developing our direction at a national level, and engaging locally is where we need to focus our efforts – this is where the rubber meets the road in AREC” he adds.

During October, three sessions were held across the South Island. The first was in Dunedin at the Otago Branch clubrooms on the 2<sup>nd</sup> and 3<sup>rd</sup>. 14 attended from around the district.

The second session was held at Murchison on the 9<sup>th</sup> and 10<sup>th</sup> with six members attending from Marlborough, Nelson and Westland.

The final session was at the Christchurch Branch clubrooms on the 16<sup>th</sup> and 17<sup>th</sup>, with seven members attending from Canterbury and Ashburton.

The sessions took about a day and a half each, with plenty of time for questions and discussion. “We were grateful that people could take a weekend out to spend with us” said Lindsey Ross, AREC Regional Manager South, “this affirms the commitment that our members have for AREC”

## Agenda

1. Housekeeping, safety, and evacuation information
2. Introductions
3. National AREC Update
4. NZART Constitution Section 9 AREC explained
5. AREC Rules
6. AREC Strategy Overview
7. AREC Organisational Structure and Officers leadership job roles
8. Volunteer (membership) Strategy and plans
9. AREC Training
10. AREC Membership System (Friendly Manager)
11. AREC Microsoft 365, SharePoint and Teams
12. Health, Safety and Wellbeing strategy, policy and Training
13. AREC policies, processes and standard operating procedures
14. Wrap up and finish



Above: Don ZL2TYR covering off the primary objectives of AREC.

Photos: Lindsey Ross ZL4KS

Below: Social distancing in front the Christchurch Branch AREC communications vehicles



Above: The Tasman Team at Murchison.

Photo: Stewart Robinson ZL2STR

An important part of each weekend was to spend time in a less formal setting socialising and getting to know our leaders.

This was often the time when some good discussions took place and we were able to enjoy each other's company as a leadership team.



“I would like to thank all of those who gave up their weekends to make these sessions” adds Don. “We had some great discussions and I am pleased to see the calibre of people we have in our organisation.”

Further District Meetings will be scheduled around the country over coming months, noting that there has been some disruption to the schedule due to COVID-19 related challenges.



## Brook takes on the 'Tipu

Our cover photo this month shows Brooke Hart receiving a PLB from Southland Branch 37 AREC Deputy Group Leader Daniel Erickson ZL4DE.

Brooke has decided to kayak Lake Wakatipu early next year in hopes to raise funds and awareness for Mental Health in New Zealand. Mental Health is a topic close to home for her as she suffers from major depression and social anxiety.

Brooke has experienced first-hand how difficult life is physically and mentally when you're struggling with your mental state. She is hoping to reduce the stigma around this topic as well as encourage and help those to improve their mental state.

“AREC wanted to make sure Brooke was safe during her training sessions and for the kayak mission on Lake Wakatipu, we have also offered to provide VHF communications during the expedition and track her progress on Sartrack” said Daniel.



“The PLB was supplied by John Munro at Locator Beacons NZ who gave us a discount for the cause,” said Daniel. Their website is [www.locatorbeacons.co.nz](http://www.locatorbeacons.co.nz)

Check-out Brooke's Facebook page:  
<https://www.facebook.com/brooketakesonthetipu>



### Brooke Takes on the 'Tipu

Hi all, I'm Brooke and I am planning to kayak Lake Wakatipu in 2022. I am doing this to raise funds

## Meet the Team

*This column is to introduce you to the real AREC, that is the individuals that share a common interest and passion that make up our organisation.*



This month we feature recently appointed AREC District Manager Canterbury, Don McDonald ZL3DMC.

Having an interest in electronics since a young age, Don started to think about Amateur Radio when he was living in Wanganui in 1977. “We didn’t have all of the resources we have now” says Don, “in fact, I didn’t know there was a reasonably sized club in town.” Instead, he thought about doing the correspondence course but life got in the way.

He continued to dabble with electronics, including “fixing the children’s toys”.

30-years later, Don met a guy at a party. “He had his ticket and we talked about how the licensing had changed. It was then I thought “Let’s do it!” said Don. After doing a bit of study, and “doing the online practise exams over and over”, he got licensed in 2008.

As a member of the North Canterbury Branch, he was quickly introduced to AREC by Group Leader Geoff Gillman ZL3QR. “Geoff got me involved in all sorts of events including the Coast to Coast, jet boating, and equestrian events.” A highlight was the Silver Fern rally where he travelled around the South Island providing communication. “They would give you a location and you had to work out how to get your message back to base. We used HF, Fleetlink, the National System and even IRLP through a local repeater – it was a great way to learn” Don recalls.

Don became more involved in AREC, moving from operating to organising and coordinating events.

When not doing AREC activities, he enjoys DX’ing. “I grew up listening to short-wave stations and have really enjoyed seeing who I can work from my modest suburban station. I am really looking forward to the next few years as we come out of the bottom of the cycle.”

Thinking about the future, he talks to the Maori proverb “He aha te mea nui o te ao (what is the most important thing in the world?) He tangata, he tangata, he tangata – (it is the people, it is the people, it is the people). This is true of AREC, we need to keep our people interested and challenged and continue to bring new ones into the fold.”

AREC CEO Don Robertson adds “I am thrilled that Don has taken up the challenge of Canterbury District Manager. He has a great background in both Amateur Radio and AREC and am confident he will go a great job of supporting our Groups in his area”.



NZ Safety Blackwoods now have a range of men's and women's soft shell jackets available, various styles and prices with the AREC logo on the breast.

There is also a Hi Vis softshell with the logo on both back and front. View the options in the AREC catalogue on the NZ Safety Blackwoods website at <https://nzsafetyblackwoods.co.nz/>

Login Using your e-mail address go to My Account and select My Catalogue from the navigation bar on the left of the page.

A reminder when ordering – please fill in the field marked **Add Customer Number** with your callsign in UPPER CASE.

Just the callsign. Nothing else.

- Not your name
- Not your name and callsign
- Not anything else
- JUST your CALLSIGN please 😊

This makes it easier for us to use the Search function to locate your order details if anything goes wrong. Otherwise, we have to manually scroll through all the orders to find yours.

Anyone who has misplaced the instructions for activating the online account can request a copy from Andy ZL1COP at [RMNth@arec.nz](mailto:RMNth@arec.nz)



## A brief history of the Pfizer-BioNTech Covid-19 vaccine

Covid-19 is currently causing us all sorts of grief across Aotearoa so I figure a bit of history about our current vaccine may be interesting technical reading, especially for those of us currently in lockdown. Also, not a bad idea for electrically focussed people like ourselves to read about biology every now and then. By the way those outside the lockdown Covid-19 is heading your way, again! So don't forget to get your jabs – as one T shirt said 'Don't be a dick, get the prick'.

The Pfizer-BioNTech vaccine (Cominarty Covid-19 vaccine) is currently the only vaccine being rolled out in New Zealand. It has an interesting and long history from the original discoveries back in 1987 related to the core functional unit (mRNA encapsulated in a nano lipid particle) through to the current vaccine.

It is only that long history of research and the incremental better understanding of cell-biology that allowed BioNTech to rapidly create the vaccine in 2020. They were simply building on the work of the thousands of researchers who were involved over the years, and like all science efforts multiple dead-ends were investigated before a viable process was finally discovered. The following link is to an article in Nature magazine for those who are interested in that sort of thing, plus there are links below to additional information about cell biology - <https://www.nature.com/articles/d41586-021-02483-w>.

The mechanism of action for the vaccine is really quite simple in concept. After the vaccine is injected into your deltoid muscle the mRNA travels into the muscle cells. It can only do this because it is protected in a nano-lipid particle (very small fat capsule) that can fuse with the cell wall and transmit the mRNA into the cell. Once in the cell the mRNA travels to a cellular body called a ribosome where it acts like a piece of punched tape and tells the ribosome to manufacture a piece of protein.



As the protein is manufactured by the ribosome the mRNA gets destroyed so eventually all you have left is the small protein fragments and no mRNA remains. In other words, the vaccine self-destructs as it does its work.

That protein fragment is a duplicate of part of the SARS-Cov-2 virus (COVID-19 or CV-19) spike protein. It is this protein fragment that then triggers the immune response within the body to attack anything that looks like the spike protein. So if you get exposed to the CV-19 virus your body is pre-warned and can deal to the foreign protein invader by blocking the spike proteins thereby blunting the CV-19 attack. If the CV-19 vaccine spike protein mutates sufficiently then they may have to create another mRNA vaccine that replicates the changed protein layout. At the moment the Delta variant appears to have the same, or close enough similar, spike protein structure as the original Alpha variant.

BTW the virus 'spike protein' is the porcupine-spike looking structure on the surface of the virus. It allows the virus to target and attach itself to cells within the respiratory system (lungs). The virus can fuse with the cell walls, inject its own package of RNA and then take over the ribosome protein manufacturing machinery to make more viruses. That's how the CV-19 viruses spread and why the virus is so virulent as it is always getting blown out of you every time an infected person breathes. You breathe in the contaminated air and next thing the virus is high-jacking your ribosomes to make more viruses and you becomes the carrier.

So in summary, the vaccine is simply small pieces of mRNA (in an inert carrier solution) that can trigger the body's natural defence mechanisms before you get infected, setting up the correct mechanism to defend the body if you ever get exposed to the CV-19 virus.

For a detailed description of the different types of RNA and the mechanism of how cells build proteins, here are a couple of links:

Description of types of RNA: <https://www.news-medical.net/life-sciences/Types-of-RNA-mRNA-rRNA-and-tRNA.aspx> ;

and how does a cell translate DNA to form a protein: <https://www.nature.com/scitable/topicpage/translation-dna-to-mrna-to-protein-393/>

I find this whole subject quite fascinating and it certainly brought back a whole lot of memories of hours in university lectures as I studied biology and genetics back in the day!

And a reminder - if you have any feedback from the frontline that may help others please or have an incident, near miss or injury to report please email the details with your contact number to HSW@arec.nz

*David Wilkins ZL1MR*  
AREC Health & Safety Advisor



### Health and Safety is the responsibility of us all

Remember to:

**STOP** – In your mind you need to be constantly pausing and evaluating no matter the task or the location.

**THINK** – You need to think about what you see. Identify Hazards and associated Risk (the chance of it going wrong)

**PLAN** – Talk to others, compare notes, make a plan

**COMMUNICATE** – Brief the plan and plan to brief others as they arrive.

**ACT** – Execute the plan, monitor and review progress.