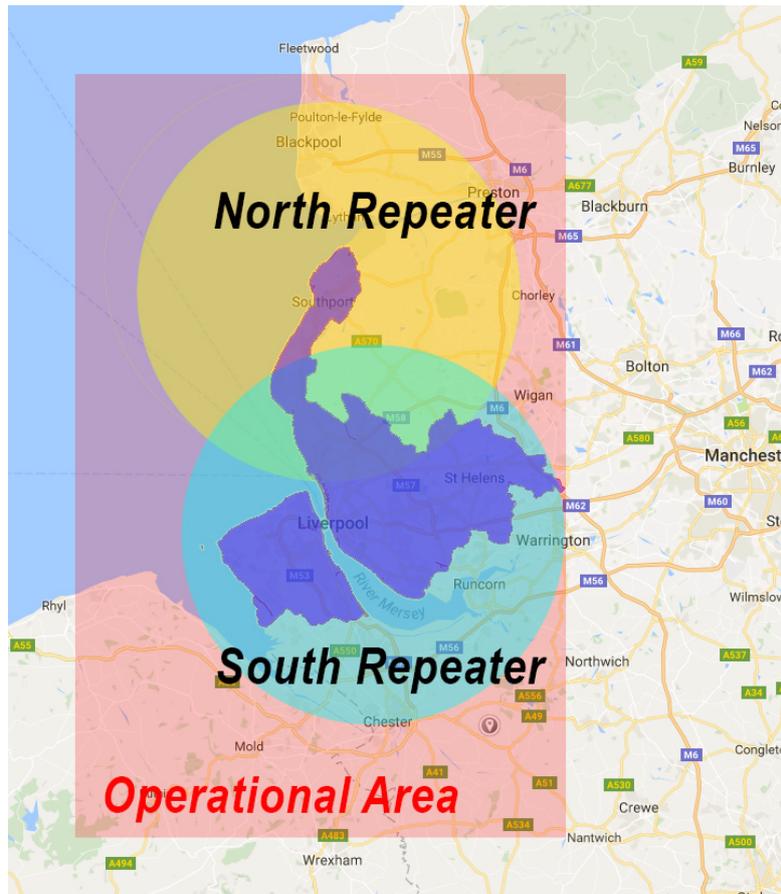


# RAYNET-Merseyside

## Shared Repeater Scheme (SRS)



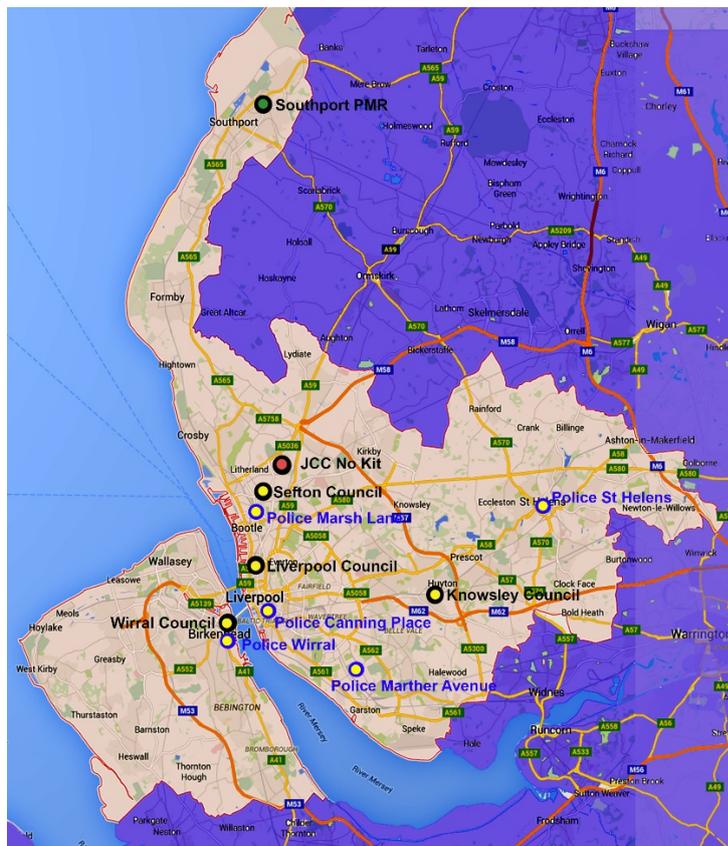
The shared repeater scheme is the result of consultation within the Merseyside RAYNET community, user services and local authorities. It is the way forward for RAYNET to provide a useful capability within the Merseyside Resilience volunteer community.

### RAYNET Present Situation

RAYNET has desk space allocated in Sefton, Liverpool, Wirral and Knowsley council offices. We formally had bases within Marsh Lane, Canning Place, Wirral St Helens and Marther Avenue Police stations. Each of these sites is or was equipped with an antenna on the roof which terminated on inside the building where a locked cabinet stored a radio transceiver along with some hand-held radios and documentation. The scheme, probably based on the cold war era communications model assumed that in a case of emergency these locations would have been manned by RAYNET members who would pass communications via message pads and amateur radio equipment. All very laudable but, in reality, RAYNET would probably not have been able to mount a 24/7 response for any length of time even if they could muster operators locally or from surrounding areas at all!

The drawbacks of the system were not only the issue of staffing but also that as they were operating on amateur radio equipment it was open to interference from other

amateurs and OFCOM licensing limitations. The amateur was to be the channel of communications rather than the facilitator! All of this made the RAYNET offering to modern resilience planning limited to say the least.



## RAYNET in Merseyside

Merseyside is broken down into three areas Sefton covering Southport down to Crosby, Liverpool north of the Mersey and Wirral groups. Each group operates autonomously and provide comms support for many local events requiring area wide communisations like walks and marathons where operators man checkpoints working with stewards feeding information back to a control point. We work with the user services including the police, Red cross and St John. RAYNET structure is that each group in the area is collectively coordinated by a County group which in turn affiliated to the National RAYNET zone and the UK structure. Total membership is around 25 operators varying in skills from keen amateur to some serious technical wiz kids work in comms and IT.

Membership of RAYNET is both dwindling and aging. Amateur Radio has not been the subject of hobby interest that it once was. Although radio now is that basis of all mobile communications and broadcast media, amateur radio is bizarrely seeming as old hat from a bygone era from the Tony Hancock (it's not raining here also) days. RAYNET provides an interesting opportunity for volunteers to use their technical skills which these days are very much about data networks as well as traditional radio communications.

## **Future of RAYNET in Resilience.**

Merseyside's contribution to resilience will in future be led by the County Group which incorporates the individual group controllers. Direct membership to the County Group will open to the more highly skilled members with both technical and operational competence. County members covered by BPSS checks and we are now requesting DBS checks to support the individual's credentials.

To build that membership we are inviting guest speakers from other volunteer and user agencies to speak at our meeting where we are inviting all other services to join with us so we can understand their needs and demonstrate our offering.

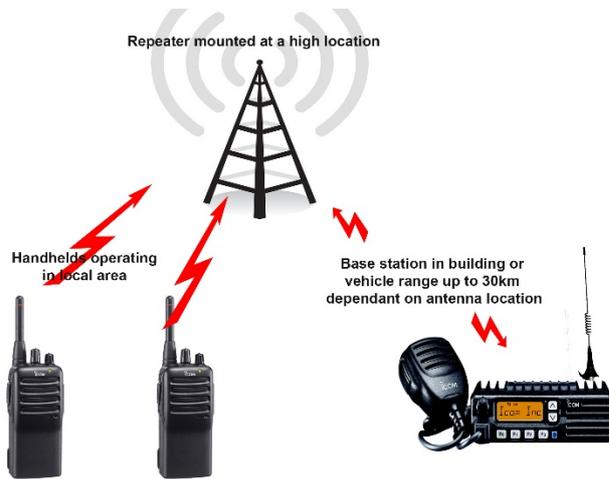
## **RAYNET'S role in Resilience.**

Radio communication has been our offering in the past and will continue so in the future. However, we will no longer be the channel of communication but the facilitators. Our role in resilience is no longer to pass messages but to provide a layer of infrastructure for others to use as the need. What we see is a network system that can allow any user to pick up a radio and pass a message across Merseyside separated from other users and infrastructure failures that can and will occur with internet and mobile phone based systems. What we have is a single channel radio system that can link across wide areas using repeaters operating outside the amateur bands on OFCOM allocated frequencies. Mounted at high points a repeater rebroadcasts any signals it receives so that a wider area can be covered. An operator in a Liverpool office can immediately inform all staff on the channel with updates and pass or receive information. The same as we already have at sea with marine radio and used effectively in other areas like the Ribbel Valley with their EARL system which was original Lancashire ambulance radio network.

Instead of dedicated RAYNET operators in police stations and council offices as we have presently installed each location will have a simple radio which the Emergency Planning Officer can use. The scheme will invite the other volunteer user services to include the RAYNET channel into their comms structure. Low Land Rescue for example will have one channel on their radios programed into the repeater scheme which they can use themselves on a wide area operation or link back to base or another agency like Red Cross with whom they may be working. The frequency is in the same band as the costal rangers and coastguard who can add the channel to their scheme.

## **Interoperability**

The ability of one agency to speak to another. Airwave and the upcoming ESN will be the preserve of the professional blue light services but this is not within the financial grasp of the volunteer sector. The SRS provides a link by which all volunteer agencies can work together on a single channel to enable cooperation at the individual level or between control centres and MRF members. Events like the Southport Air show can communicate directly with all agencies simply by requesting the SRS channel to be added to their scheme. The Three Queens event in Liverpool would certainly have benefited from the scheme.



## Equipment

The nodes or repeaters are in static locations maintained by RAYNET and are permanently switched on so it is always available for use without the need for a RAYNET operative to be present. Each site is secure and supported by a UPS designed to give continued operation in the event of power failure.

RAYNET will assist other agencies to include the allocated frequencies on their own equipment and or provide equipment from a RAYNET maintained stockpile. Equipment can be pre-booked for an event, picked up or delivered depending on urgency.

All the equipment is commercial PRM licensable kit operating on dedicated OFCOM allocated frequencies.

The North and South repeaters will operate on VHF whilst we expect to also have a UHF repeater node in Liverpool that will give good penetration into the built-up areas.

## Who gets to use SRS

Any agency relating to resilience in Merseyside including large event managers. Each user will be given a permit to operate having first agreed to some basic terms and conditions.

## Funding

The present system is being funded by individual RAYNET members but as the scheme is taken up will be seeking to raise funds by donations from its work providing support to events, grants and gifts.

## Is it operational?

Yes, the North repeater is up and running we hope to have the South repeater running in February pending the confirmation from OFCOM on frequencies and confirmation of the site lease. Both the North and South site have been offered free of charge in return for assistance from our volunteers.

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