

REPORT TO NEWTON ST CYRES PARISH COUNCIL

Update on the Selection, Purchase and Use of Two-Way Radios for Community Resilience Teams – Part 3

Jock Campbell, May 2022

Introduction

Further to my reports to the Parish Council in November 2021 and April 2022 regarding radios for community resilience teams in the parish, I have carried out a further assessment of radio performance

Background

As discussed in my previous report, two-way radio is useful alternative to a mobile phone in a range of different emergency scenarios. Not only is it possible to communicate with a group of people instantaneously, a two-way radio allows communication in places where there is little or no mobile network coverage. For many first responders in emergency situations, radios are the best means of communication.

Radio Trials

Following trials with the PMR 446 radios borrowed from St Thomas' Resilience Group, I contacted Premier Communication Electronics (PCE) Ltd in Exeter and they briefed me on the options available given our needs and funds available. They also volunteered to assist us further with field trials of different radios.

On the 4th of May, Nick Gillon, Chris Southcott¹ and I met with Kerry O'Farrell from PCE at the Recreation Ground in Newton St Cyres. Kerry brought along five pairs of different commercial (licenced) radios for us to test. These were tested over a range of terrains and location through the Parish. The tests were between the remote location (see table below) and the recreation ground.

The results are as follow:

	Sherwood entrance at top of Crooklake hill	Dip by Crooklake brook	Halses at bottom of Marsh lane	Village hall	Langford main bridge nr Little Pynes House	Caravan park nr Jackmore crossing
Entel	Green	Red	Green	Green	Green	Green
Hytera	Green	Orange	Green	Green	Red	N/A
Kenwood	Green	Orange	Green	Green	Green	Green
Motorola UHF	Green	Orange	Green	Green	Green	Green
Motorola VHF	Green	Orange	Green	Green	Red	Green

Green= good reception, orange = intermittent reception, red= poor reception.

¹ Many thanks to Chris and Nick for spending their valuable time assisting with this assessment and for sharing their views and opinions.

The tests clearly showed the enormous quality increase from PMR446 radios to commercial radios. All the commercial radios performed much better than the PMR446 radios. Of the commercial radios the Kenwood and the Motorola UHF performed the best, with the Kenwood coming out slightly ahead in post-trials discussion.

Discussion

The PMR446 radios tested, did not give any useful coverage over more than a few hundred metres line of sight. All the commercial radios would provide good coverage for most locations and terrains and the Kenwood and Motorola UHF would provide the best coverage.

It is envisaged that the radios would be useful for several community activities such as flood response, road traffic accident response, snow roadblocks, road warden works, and The Revels and other community gatherings. The two best performing radio types would certainly cover all of these uses.

The purchase and running costs for 6 radios, for example, would include:

- Purchase of 6 radios (one-off cost)
- Purchase of 6 chargers (one-off cost) – allowing sets to be stored at different locations
- Engineering time to create new software programme with Ofcom assigned frequencies (one-off cost)
- Ofcom Simple UK Licence £110 every five years (£22/ year cost to Parish Council starting after 2027).

These costs could all be covered within the budget of the Devon Communities Together Trust grant of £1,500.

Action for the Parish Council

The Parish Council may now like to consider the following questions:

1. Would the Parish Council (PC) like to move ahead with the purchase of radios?
2. Is the PC willing to take on the cost of the licence renewal of £22/ year after 2027?
3. Would the PC like to purchase 6 radios or some other number?
4. Is the PC happy with the selection of the Kenwood radios?

If the answer to these questions is yes, then I can, with the PC's approval, move ahead to get a final quote for the required equipment and work with the Parish Clerk to submit a funding request to Devon Communities Together.