Broadband Steering Group

Minutes of the Meeting held by Microsoft Teams video call on the 10th March 2021 @ 7:30 pm

1 Present and Apologies

Present: Phil Game, Mary MacBeth, Neil MacRae, Kath Smith

2 Approve and adopt previous minutes

The previous minutes for February, were proposed by Mary, seconded by Neil
Copies of previous minutes are on our website at:-
> http://www.stromeferry-and-achmore.co.uk/index.asp?pageid=433827

3 Chairman's report

3.1 COVID

Things are slowly starting to get back to normal and hopefully the current government restrictions will soon be lifted and we will be able to continue with installations.

3.2 Bandwidth

Plockton continues to perform well with spare capacity available however we are still experiencing poor performance through the Achmore gateway see 7.1. ...

3.3 False RADAR

There have been a few incidents of false RADAR events most were on the Creag Mhaol link to North Strome & Strome Ferry. We have disabled the overnight automatic reset to get a better picture of which frequencies are having problems. **Action: Phil**

3.4 New Backhaul Installation in Achmore Hall

3.5 Subscribers

Live subscribers	- 42
Waiting for installations / activation	- 3
Waiting for subscriber's confirmation of details	- 0
Pending installations	- 9

3.5.1 Waiting for new backbone relays

Waiting for installations	- 19
Leavers since the last minutes	- 0
New joiners since the last minutes	- 0
Leavers since the last minutes	- 0
New joiners since the last minutes	- 0
Total	**- 73**

We have had requests for connections in Lochcarron, Strathcarron and North Strome; once our existing commitments have been met we will see if these are feasible. **Action: Phil**

We have had an enquiry for a new connection and have been told by the subscriber that they do not have line of sight. We may review this when all other subscribers have been connected. **Action: Phil**

There are twelve subscribers whose connections to CMNet will be progressed as soon as COVID restrictions are lifted.

4 Secretary's report

4.1 Risk register

No progress this month.

4.2 Long term support plan

Software to automate the cloning of failed devices - little progress this month due to other priorities. **Action: Phil**

4.3 Access to the bank account

Mary will talk to our insurers in March as part of the renewal process and obtain their view of the changes at RBS. **Action: Mary**

Mary has obtained the forms required to register her as a bank signatory; this requires that all directors formally approve a resolution to appoint Mary. As the exact wording of the resolution is key it will be done through an email meeting. **Action: All**

4.4 Electricity account

Mary has spoken to SSE and agreed a new two year fixed term contract which will make sure we are not subject to any price hikes. **Completed**

All the current bills have been produced from estimates so we will obtain up to date meter readings. **Action: Mary**

5 Finance Director's Report

5.1 Monthly Statistics

Revenue for February:-

Brought forward				
Balance		**£844.06**		
Creditors			£6,584.94	
Debtors			£4,977.21	
Net				£1,607.73
Bank balance				**£9,729.87**
This month				
Income	£412.50			
Expenditure	£174.78			
P&L		**£237.72**		
Creditors			£47.60	
Debtors			£1.00	
Net				£46.60
Adjusted P&L				**£284.32**
Carried forward				
Balance		**£1,081.78**		
Creditors			£6,632.54	
Debtors			£4,978.21	
Net				£1,654.33
Bank balance				**£10,014.19**

February marks the completion of the first half of our financial year; the projected figures for the full year show a surplus of £2,300 i.e. an excess of £1,300 over our target of £1,000. Although it is still six months before we close the accounts there was some debate about how to return value to subscribers and the following options were raised:-

a) Reduce the New Joiner's Premium by a credit to all subscribers; this would automatically alter the end date of existing subscriber's contracts.

b) Reduce the monthly tariff, i.e. increase the number of GB bought per £1. It was agreed we should keep the current structure of a fixed price standing charge plus a variable charge depending on the GB used.

c) Buy devices for all CMNet subscribers to share e.g. mount a video camera on Creag Mhaol; buy a server for subscribers' backups etc.

We may decide to use a combination of the options listed above. The first step will be to review replacement equipment costs. **Action: Phil**

Plusnet payments have been transferred to CMNet **Completed**

The next and last step in the account clean up will be to pay Phil & Mary's expenses claims **Action Mary, Phil & Kath.**

5.2 Next year's tariff

The total number of gigabytes sold was 9,550. The break even tariff for 2 fibre lines is 112 GB per £1, for 3 fibre lines is 75 GB per £1 and for 4 fibre lines is 56 GB per £1.

5.3 Outstanding subscribers' debt

The outstanding debt is £8.

5.4 Housekeeping

Work continues to automate the reconciliation of payments; priority will be given to Zen & Plusnet. **Action: Phil**

5.5 Payments for installations of subscriber's equipment

All payments are up to date.

6 Internal auditor's report

It was agreed we would prepare a synopsis of our current practises, needs and areas of weakness to assist ourselves and the auditor. No progress this month. **Action: Phil**

6.1 Assets, bf, acquired, relinquished / written off, cf

No progress this month.

6.2 Liabilities

No progress this month.

6.3 Description of the Audit Trail

No progress this month.

7 Customer Relations

7.1 Production Environment

After reporting that the problems with the Achmore access point were resolved it decided to throw one more wobbly. **Resolved (maybe)**

One subscriber reported poor performance in Braeintra - this is down to obstructions in the line of sight of the subscriber's antenna. **Action: Subscriber**

Drop outs in Craig - we are still recording a few drop outs due to false RADAR. **Action: Phil**

Unable to access a website - One subscriber has reported they cannot access one specific website since we made the switch from Zen to Plusnet. We will replace the Achmore Hall router and then rerun the tests. No progress this month. **Action: Phil**

One subscriber reported poor performance in Achmore. The subscriber initially provided incomplete and misleading information and subsequently refused to provide further information. The additional information would have helped to solve their issue and may have shed light on the ongoing problems with the Achmore gateway. As a consequence of not receiving the additional data it was not possible to determine what was causing the problem for the subscriber however it seems more than likely that the problem was not with CMNet.

The attitude of this subscriber led to a general discussion about how to handle issues raised by subscribers who report problems and then refuse to work with us to find a resolution.

Our preferred approach is to work with subscribers; unlike the big ISPs we are happy to look at issues and to "cross the subscriber's router boundary". I.e. we will continue looking into problems even when we know that the performance of CMNet's network is not the issue. E.g. slow speeds caused by internal Wi-Fi dead spots, or connection problems caused by defective subscriber's equipment.

Problem determination can start with a subscriber submitting a few speed test results which we will use to check our system logs. Sometimes this is enough information and we can identify the problem and find a resolution. We may then ask the subscriber to confirm everything is working by running some additional tests.

However at times the system logs do not provide enough detailed information and this means that CMNet has to request further information from the subscriber. Prior to asking for more information a lot of time and effort will have been spent searching through the recorded data in the system management logs. So if a subscriber does not provide the additional information requested all this time will be wasted.

It was decided that subscribers who repeatedly report issues and then do not provide the information required to allow a proper analysis to be undertaken will have their problem determination restricted to network performance. I.e. for these subscribers we will not "cross the subscriber's router boundary" we will only investigate issues that have been shown to be directly related to the network. Furthermore we will not start look at a problem until we have been given all the relevant information. **Action: All**

There have been no further problems with the Plockton router since it was configured to reboot itself every night.

The problems with the Achmore line's poor performance persist. As reported in last month's minutes all subscribers were switched away from Achmore and routed through Plockton on the 9th February, the line was tested repeatedly and although speeds were not back to normal it was felt they had improved enough by the 20th February to start to use the line again. However it became clear that speeds were still erratic and at times very poor. As a consequence all subscribers were routed through Plockton to allow us to perform an exclusive test of the Achmore line capacity for 24 hours from 1pm on the 3rd March. This was done using a Raspberry Pi micro computer to run an OOKLA speed test every 15 minutes. The results were very poor with 60% of the results below the agreed service level of 70.9 Mbps; the worst result was just 11.77 Mbps. It was decided to configure another RPi so a test could be run in Plockton to get a direct comparison of performance. At the moment Plusnet are suggesting that their next step will be to send out an engineer. However we are resisting this as there is a high chance we will be hit with a bill if the engineer tests all the

kit and finds everything is order. This is a possibility as the problem is intermittent and is producing satisfactory results 40% of the time. **Action: Phil**

We continue to hold the Lochcarron gateway in reserve should there be a need to increase capacity.

The MikroTik server ("The Dude") is having its database rebuilt. On the 1st March there were problems with the overnight accounting software which were caused by the software's inability to send emails. Some duplicate emails were sent out whilst rerunning the failed overnight programs. It looks like the excessive email production was caused by the rebuilding of "The Dude" which had resulted in too many emails being produced exceeding the Gmail daily quota and resulting in the temporary blocking of the account. The rebuild will continue, at a slower pace and with caution. **Action: Phil**

Phil is part way through a document to list the options for automatic recovery of failures and loss of capacity. **Action: Phil**

7.1.1 Usage quotas

The monthly total for February was 6.4 TB. The daily average was 229 GB (a new record), with a peak usage of 273 GB on Sunday 28th.

CMNet peaks since operations started; highest average daily usage 229 GB, highest single days usage - 367 GB, highest monthly usage - 7.1 TB.

Three subscribers exceeded their quota in February and have had their quotas increased.

7.1.2 Possible virus infection

No new instances of the Ubiquiti virus were detected; we will continue to run scans. **Action: Phil**

7.1.3 Installation of equipment

7.1.3.1 Achmore

Nothing to report

7.1.3.2 Ardaneaskan East

One subscriber's connection is under test. **Action: Phil**

7.1.3.3 Ardaneaskan West

Nothing to report

7.1.3.4 Ardnarff

Nothing to report

7.1.3.5 Braeintra

Nothing to report

7.1.3.6 Craig

We are investigating a report of drop outs. We will review the situation when we have more experience of low level links over water or other options become available. **Action: Phil**

7.1.3.7 North Strome

The North Strome installation will be completed at the first opportunity once the COVID restrictions are lifted. **Action: Phil**

7.1.3.8 Strome Ferry

The North Strome relay will be completed at the first opportunity once the COVID restrictions are lifted. **Action: Phil**

The Strome Ferry installation will be completed at the first opportunity once the COVID restrictions are lifted. **Action: Phil**

We will install a further low level test site in Strome Ferry once the COVID restrictions are lifted. **Action: Phil**

7.1.3.9 Other installations

Nothing to report

7.1.4 Customer Contracts

We will check that all changes to customer contracts and charges are now correct. **Action: Phil**

7.2 Changes for next month

7.2.1 Additional Management tools / reports

Management Reporting Software upgrades. No progress this month. **Action: Phil**

Software to check the configuration of equipment - this is being upgraded to increase the automation when configuring new devices. **Action: Phil**

7.2.2 Potential personal safety issue

The new naming standard has been used for all the new installations. **Action: Phil**

7.2.3 Additional equipment for subscribers

No requests outstanding.

7.3 Volume trial

7.3.1 Review of the trial

No progress this month. **Action: Phil**

7.4 Terms of Reference

Deferred

7.5 Problem reporting procedure

A trial WhatsApp group has been set up by Mary - testing has started amongst directors. **Action: All**

8 General topics

8.1 Documentation

8.1.1 Creag Mhaol

We have received a draft lease agreement from our solicitors; we have yet to go through this in detail. We will need to reconfirm all the GPS coordinates of the relays before we can proceed; priority will be given to completing the set up of the relays on Creag Mhaol. No progress this month. **Action: Phil**

8.2 Existing Relays

8.2.1 Plockton

After a few weeks have elapsed we will check the installation and apply a second coat of paint to the school wall. **Action: Phil & Mary**

A Raspberry Pi micro computer has been configured and installed to facilitate gateway line speed tests. **Action: Phil**

8.2.2 Achmore

The Plusnet router will be replaced with something more suitable. **Action: Phil**

The test the full potential of this link the current router in Achmore Hall will need to be upgraded to support 1 Gbps Ethernet ports; we have a suitable router "in stock". **Action: Phil**

A Raspberry Pi micro computer has been configured, installed and used to run automated gateway line speed tests. The results were very poor. **Action: Phil, Plusnet**

8.2.3 Lochcarron

Link capacity testing is required. **Action: Phil**

We will install a Raspberry Pi micro computer to facilitate gateway line speed tests. **Action: Phil**

8.2.4 Other relays

No issues.

8.3 Backbone development

8.3.1 New relays

8.3.1.1 Completed

No progress this month.

8.3.1.2 Next steps

The new relay automated recovery algorithms are being tested
Re-align the existing Portchullin Access Point
Add an additional Portchullin Access Point
The buried mains power cables need to be permanently marked and documented.
Install one subscriber's test equipment in Portchullin
Action: All

8.3.2 The Glen

One access point will be upgraded to see if that will reduce the noise levels. No progress this month. **Action: Phil**

8.3.3 Ardaneaskan East

Some configuration changes are pending. **Action: Phil**

8.3.4 Leacanashie

Nothing to report

8.3.5 Portchullin (raised beach)

The Portchullin access points will be upgraded. **Action: Phil**

8.3.6 Craig

We will review the link when other work is complete. **Action: Phil**

8.3.7 North Strome

Nothing to report

8.3.8   Strome Ferry

Nothing to report

8.3.9   Ardnarff

Nothing to report

8.3.10   Reraig

We have surveyed various locations for a relay to provide an access point for Reraig. Access will almost certainly require a much higher relay than we have built so far. We will return to the relay investigation and build once the current relays are active. **Action: Phil**

8.4   Testing

8.4.1   Management & accounting software

The subscriber usage email will be enhanced to give the specific amount of data used to allow subscribers to better manage their quotas. No progress this month. **Action: Phil**

8.5   Restoring power to the old TV repeater

8.5.1   Removal of old cable

No progress this month.

8.5.2   Protection of cable on the hill

All the cable on the hill has been buried but the routes still need to be marked.

8.5.3   Backup Generator

No progress this month.

8.6   ISPs

No issues

8.7   Implementations

8.7.1   Phase 3 - Relays and creation of access points for the remainder of residents and connect trial subscribers.

All work at subscriber's premises has been suspended pending the relaxation of the government's COVID restrictions.

8.7.1.1   Ardaneaskan East

We are part way through the firmware updates and configuration of the new subscribers' equipment. **Action: Phil**

8.7.1.2   Strome Ferry

Waiting on the upgrade of the North Strome relay

8.7.1.3   Leacanashie

Ready to start installations

8.7.1.4   North Strome

Ready to start installations

8.7.1.5   Achmore

Ready to start installations

8.7.1.6   Portchullin

Installations pending Portchullin raised beach enclosure test.

8.7.2   Phase 4 - Further investigations / backbone development required.

8.7.2.1   Ardaneaskan West

8.7.2.2   Reraig

8.7.2.3   Lochcarron

8.7.2.4   Strathcarron

8.8   Company Logo

No progress this month. **Action: All**

8.9   General Data Protection Regulation (Data Protection Act)

Nothing to report this month

9   Director's training session

9.1   Configuring Ubiquiti and MikroTik equipment

We will organise another training session for all directors

10   Next meeting

Date of next meeting Wednesday 14th April 7:30 probably via Microsoft Teams
The meeting was held by Microsoft Teams video conference and finished at 20:40