

Broadband Steering Group

Minutes of the Meeting held by Microsoft Teams video call on the 10th February 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 January, were proposed by Neil, seconded by Kath

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

The government's COVID restrictions are still in place and so new installations are suspended for the moment.

3.2 Bandwidth

January was another record month both for total usage and also for peak usage in 24 hours see 7.1.1 for more details. We are now looking at our options to increase capacity see 8.2 for more details.

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 continue to log the events and build up a dataset. **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
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 - this software is being enhanced to automatically configure the router used to access the unit to be cloned with a view to automating the function from start to finish. **Action: Phil**

4.3 Access to the bank account

Mary has spoken to our insurers and explained the changes at RBS we will need to talk to them again before we decide what to do. **Action: Mary**

Kath informed everyone that paper copies of RBS statements will cost £36 a year.

RBS are still sending out documents (mostly adverts) to people who are no longer bank signatories despite our repeated requests for them to stop. Mary suggested she is made a bank signatory so she can have the authority to take up issues like this directly with the bank. To continue to separate expenditure from bank account access our internal procedures will make sure Mary will not have access to cheque books or online banking. On this basis all agreed Mary should become a bank signatory. **Action: Mary & Kath**

4.4 Electricity account

Our fixed price contract with SSE came to an end December. Mary has started to look at the best tariff for us but has discovered that the SSE website has been completely redesigned. So finding the best tariff for us will take a little longer than anticipated. **Action: Mary**

5 Finance Director's Report

5.1 Monthly Statistics

Revenue for January:-

Brought forward

Balance	£556.34		
Creditors		£6,534.19	
Debtors		£3,294.21	
Net			£3,239.98
Bank balance			£11,074.40

This month

Income	£412.50		
Expenditure	£124.78		
P&L	£287.72		
Creditors		£50.75	
Debtors		£1,683.00	
Net			-£1,632.25
Adjusted P&L			-£1,344.53

Carried forward

Balance	£844.06		
Creditors		£6,584.94	
Debtors		£4,977.21	
Net			£1,607.73
Bank balance			£9,729.87

The next step in the account clean up will be to get Plusnet payments transferred to CMNet **Action Phil & Kath.**

5.2 Next year's tariff

The total number of gigabytes sold was 9,400. The break even tariff for 2 fibre lines is 110 GB per £1, for 3 fibre lines is 74 GB per £1 and for 4 fibre lines is 55 GB per £1.

5.3 Outstanding subscribers' debt

The outstanding debt is £3.

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

There have been no more problems with the Achmore access point. **Resolved**

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. This change is pending the changes to the dish at Plockton so we can make the router change without interrupting the service. No progress this month. **Action: Phil**

The Plockton router went offline on the 16th January; within a few hours subscribers were rerouted through Achmore. The router appeared to have failed and was replaced on the 19th January. Subsequent testing showed no problems with the router; apparently turning it off and then on again resolved the problem.

Achmore line failure - we became aware of a problem late on the 30th January; within a couple of hours subscribers were rerouted through the Plockton line. The Achmore line fault was due to an Openreach problem and it continued to suffer from dropouts and poor capacity for several days. It was scheduled to be brought back online late on the 2nd Feb however...

The replacement router in Plockton went offline on the 2nd, during the day. The Achmore line was brought into service and all subscribers rerouted through Achmore. The symptoms of the second Plockton failure were the same as those seen three weeks earlier even though the hardware and software had both been upgraded. The router resisted all efforts to get it to come back online and allow us access to its logs. Eventually it was powered off and on again on the 5th Feb and started working again without further intervention. Unfortunately the loss of the unit's logs means we have no information about the cause of the problems. As a precaution the unit has been reconfigured to reboot itself automatically every day pending further investigation of the problem.

In the past few days there has been a recurrence of the Achmore line problem; speeds have been very erratic and at times so poor OOKLA is unable to record any speed test results. All subscribers have been routed through Plockton. We continue to hold the Lochcarron gateway in reserve should there be a need to increase capacity.

The MikroTik server ("The Dude") has had several failures due to database corruption, causing the database to have to be rebuilt. It now looks like the problem was due to a failing USB memory stick, which has been replaced. It will take some effort to rebuild the full functionality of the system. Unfortunately the only way to backup the database is to close the system, which clears down the logs. As the logs are amongst the most important functions of "The Dude" regular automated backups have to be sacrificed.

The recent problems in Achmore and Plockton have brought forward the need for remote computing facilities in our gateways and work has started to configure Raspberry Pi micro computers to install at each gateway site directly connected to our edge routers, i.e. the routers that handle the connection to our ISPs. This will make it much easier to test the performance of the ISP's network independently from the CMNet network. At the moment this is only possible in a very limited way using the MikroTik routers as there is just one MikroTik speed test site and it limits the duration and number of tests that can be run in any 24 hour period. **Action: Phil**

There was some debate as to whether we should automate the rerouting of traffic if a gateway fails or capacity drops to make a gateway unusable (as is the case with the Achmore link at the moment). We will look at what is possible and then debate the pros and cons in due course. **Action: Phil**

7.1.1 Usage quotas

The monthly total for January was 7.1 TB (a new record). The daily average was 228 GB; with a peak usage of 367 GB on Friday 1st (another new record).

CMNet peaks since operations started; highest average daily usage 228 GB, highest single days usage - 367 GB, highest monthly usage - 7.1 TB.

Five subscribers exceeded their quota in January 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*

Mary suggested we set up a WhatsApp group to keep subscribers informed and to allow them to report problems. Initially this will be restricted to directors until we see how it works in practise. **Action: Mary**

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

The current link has been tested and will not sustain throughput over 80 Mbps; therefore any increase in backhaul must be preceded by an upgrade to the radios.

We will install a Raspberry Pi micro computer 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**

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

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 suspend 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 10th March 7:30 probably via Microsoft Teams

The meeting was held by Microsoft Teams video conference and finished at 20:20