

Broadband Steering Group

Minutes of the Meeting held on the 22nd June 2023 @ 7:30 pm at Fernaig House

1 Present and Apologies

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

2 Approve and adopt previous minutes

The previous updates for April were proposed by Mary, seconded by Neil.
The content of last month's update (produced in lieu of minutes) was approved by all.
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 Bandwidth

Our statistics from the link from Creag Mhaol to Ardaneaskan west and various other links are proving rather difficult to interpret. It would appear that system software is reporting different results from different ends of the same set of links. We will set up more detailed monitoring to allow deeper investigation. **Action: Phil**
There is some evidence that the storm has caused some minor changes to signal strengths and connection speeds for some subscribers. As we will be upgrading the access points we do not propose to investigate further at this point. **Action: Phil**

3.2 False RADAR

The connection from Creag Mhaol to the Achmore gateway has been upgraded to 60 GHz. It has proven to be very difficult to "aim" the dishes. Just a slight deflection to the mounting has a marked effect on the signal strength and connection speed. This is due to the extremely narrow beam of the 60 GHz radios. It has therefore been decided that we will swap out the mount on The Hall for something that will flex less. In addition we will fabricate an intermediate mount that will allow us to make micro adjustments to the dish alignment. **Action: Phil**
Because of the poor alignment the link is only running at 65% of its potential. I.e. the speed is "only" 1 Gbps instead of the expected 1.62 Gbps. However this is still 10 times the speed of the old link and potentially it could be 15 times as fast if we can get better alignment of the dishes.

There have been no false RADAR events on this link even though it uses a 5GHz radio as backup?
Unfortunately the new 60 GHz units are not compatible with either of the monitoring packages we use and so we now have a third package in use. This is not ideal. **Action: Phil**

There have been a few of false RADAR events in the last month; now the Achmore gateway link has been upgraded it should be much easier to locate issues. **Action: Phil**

60GHz technology is moving ahead at record pace and it may be possible to replace other false RADAR "hotspots" with low costs 60GHz radios in the near future. At the moment the limitation is the cost and the length of the link.
The storm on the 13th June caused a series of power cuts in various locations at various times. There was a lightning strike in North Strome which damaged a SSE pole and burnt out a mains transformer. SSE responded very quickly bypassing the fault and providing a generator to restore the supply lost due to the burnt out transformer. A full repair replacing the pole and transformer was completed on the 16th. SSE did a magnificent job.

CMNet suffered no damage other than one subscriber's router needing a power supply replacing which was done the day after the storm.

3.3 Subscribers

Live subscribers	- 63
Waiting for activation	- 0
Waiting for subscriber's confirmation of details / deposits	- 0
Pending installations	- 0
Waiting for installations	- 8
Leavers since the last minutes	- 0
New joiners since the last minutes	- 0
Leavers since the last minutes	- 1
New joiners since the last minutes	- 1
Total	- 71

One new installation was completed this month.

One subscriber has moved out of the area and another moved in to take over their installation.

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

3.4 New equipment

The new support laptop has had all its software installed however more work is required to the email client to filter incoming messages. (CMNet's monitoring software can produce over 200 emails a day.) No progress this month.

Action: Phil

We will also add our monitoring software so it can be used as a backup for the server should that fail. No progress this month. **Action: Phil**

We have received a second delivery of equipment and now there is just one item outstanding. **Action: Phil**

4 Secretary's report

4.1 Risk register

No progress this month.

4.2 Long term support plan

We have adapted our software to work with the "AC Gen 2" units; we are looking at options to clone replacements devices remotely and in due course will look for volunteers at "remote" sites to hold spares. **Action: Phil**

4.3 Broadband in Achmore Hall

We were due to attend the June meeting of the Hall committee but this was cancelled as the Hall committee were not quorate. Neil will organise a meeting with the Hall committee for their 5th July meeting to define their requirements.

Action: Neil

4.4 Zen / Plusnet price increases

As our Plusnet contract will soon come to an end we will review the value for money of all ISPs. Now we have an ultra high speed link to Achmore Hall other options become available for capacity increases and any new contracts will take into account our options for long term upgrades. **Action: Mary**

5 Finance Director's Report

5.1 Monthly Statistics

Revenue for May

Brought forward

Balance		-£631.71		
Creditors			£19,258.92	
Debtors			£18,463.72	
Net				£795.20
Bank balance				£7,911.46

This month

Income	£595.73			
Expenditure	£121.38			
P&L		£474.35		
Creditors			£4.00	
Debtors			£284.00	
Net				-£280.00
Adjusted P&L				£194.35

Carried forward

Balance		-£157.36		
Creditors			£19,262.92	
Debtors			£18,747.72	
Net				£515.20
Bank balance				£8,105.81

May is the end of our third quarter and based on figures for the first nine months of the year we are expecting a shortfall of a few pounds in the full year results. This was expected as we have used this year's entire predicted surplus to take advantage of the government tax incentive to upgrade equipment. Therefore there will be no NJP refund this year.

5.2 Outstanding Expenses Claims

All claims are up to date.

5.3 *Last year's surplus*

There is one NJP rebate cheques that has not yet been cashed. **Action: Subscriber**

5.4 *Next year's tariff*

We are aware of pending increasing ISP charges which will affect the break even rates in the near future. The following figures have been calculated at the current rates.

The total number of gigabytes sold was 24,000, which makes the break even tariff for 3 fibre lines 224 GB per £1 and for 4 fibre lines 176 GB per £1.

5.5 *Outstanding subscribers' debt*

All accounts are up to date.

5.6 *Housekeeping*

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

5.7 *Payments for installations of subscriber's equipment*

All payments are up to date.

5.8 *Payment for missing equipment*

An invoice has been dispatched and has been paid for the missing equipment. **Completed**

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*

Aside from the severe storm detailed above there have been no problems this month.

7.1.1 *Issues raised by Subscribers*

7.1.1.1 *How can subscribers contact CMNet when the internet is down?*

We will investigate the options; ideally the CMNet support team needs to receive problem reports via email so our initial investigations will be whether voice mails can be forwarded via email. No progress this month.

7.1.1.2 *Fernaig*

No issues

7.1.1.3 *Achmore*

No issues

7.1.1.4 *The Glen*

No issues

7.1.1.5 *Braeintra*

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

7.1.1.6 *Craig*

We have asked a subscriber to check the line of sight for obstructions. **Action: Subscriber**

7.1.1.7 *Ardaneaskan East*

No problems reported since the access point had its frequency changed. **Completed**

7.1.1.8 *Ardaneaskan West*

No issues

7.1.1.9 *Leacanashie*

No issues

7.1.1.10 *North Strome*

One subscriber is having issues preventing the installation of a whole house Wi-Fi system. We paid a visit and ran scans of Wi-Fi signal strength at various locations and looked at various options. Phil will set up and test a Wi-Fi repeater as one of the options. **Action: Phil**

7.1.1.11 *Strome Ferry*

No issues

7.1.1.12 *Ardnarff*

Poor speeds between buildings have been traced to mains LAN extenders not connecting properly probably caused by “noise” on the mains power these will be replaced with radios to link the buildings. We delivered another bracket and fitting for the subscriber to install. **Action: Subscriber**

7.1.2 *Usage quotas*

The monthly total for May was 9.1 TB, the daily average was 295 GB, with a peak usage of 393 GB on Saturday 6th. CMNet peaks since operations started; highest average daily usage 345 GB, highest single days usage - 708 GB, highest monthly usage - 10.7 TB.

Two subscribers exceeded their quotas in May.

7.1.3 *Possible virus infection*

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

7.1.4 *Planned upgrades of equipment*

7.1.4.1 *Fernaig*

The access point will be configured and installed now we have received stocks from our suppliers. **Action: Phil**

7.1.4.2 *Achmore*

The access point will be configured and installed now we have received stocks from our suppliers. **Action: Phil**

7.1.4.3 *The Glen*

A new unit has been configured to replace the dish on Creag Mhaol; it and a backup will be installed when weather permits. **Action: Phil.**

7.1.4.4 *Braeintra*

The access point will be configured and installed now we have received stocks from our suppliers. **Action: Phil**

7.1.4.5 *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**

7.1.4.6 *Ardaneaskan East*

The access point will be configured and installed now we have received stocks from our suppliers. **Action: Phil**

7.1.4.7 *Ardaneaskan West*

No issues

7.1.4.8 *Leacanashie*

The access point will be configured and installed now we have received stocks from our suppliers. **Action: Phil**

7.1.4.9 *North Strome*

The access point will be configured and installed now we have received stocks from our suppliers. **Action: Phil**

7.1.4.10 *Strome Ferry*

No issues

7.1.4.11 *Ardnarff*

No issues

7.1.5 *Backbone relays*

7.1.5.1 *Plockton*

We will check the installation and apply a second coat of paint to the school wall. **Action: Phil & Mary**

7.1.5.2 *Achmore*

The Plusnet router will be replaced with something more suitable. No progress this month. **Action: Phil**

The 60 GHz link is up and running. **Completed**

7.1.5.3 *Lohcarron*

No issues.

7.1.5.4 *Other relays*

No issues.

7.1.6 System monitoring servers

The MikroTik server (“The Dude”) is having its database rebuilt (again!) - The newly installed equipment has been set up but there is still more work to do. It appears that when the system is backed up the logs are cleared down thus making it difficult to trace yesterday’s problems. We will investigate backing up the logs!! **Action: Phil**

7.1.7 Documentation

Phil is part way through a document to list the options for automatic recovery of failures and loss of capacity. No progress this month. **Action: Phil**

7.1.8 Customer Contracts

Some contracts are outstanding, we will chase subscribers. **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 and simplify the configuration of backup units. **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

Nothing to report

7.3 Volume trial

7.3.1 Review of the trial

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

7.4 Terms of Reference

Deferred

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 Backbone development

8.2.1 New relays

8.2.1.1 Completed

No progress this month.

8.2.1.2 Next steps

The new relay automated recovery algorithms are being tested (some rather unexpectedly)

The buried mains power cables need to be permanently marked and documented. **Action: All**

8.2.1.2.1 Portchullin (raised beach)

The Portchullin enclosures will be upgraded. **Action: Phil**

Re-align the existing Portchullin Access Point

Install test equipment in Portchullin

8.2.1.2.2 Reraig

We are waiting for a subscriber to provide details of the land they own so we can determine where to install their relay.

Action: Subscriber

8.3 Testing

8.3.1 Management & accounting software

Nothing to report

8.4 Restoring power to the old TV repeater

8.4.1 Removal of old cable

No progress this month.

8.4.2 Protection of cable on the hill

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

8.4.3 Backup Generator

No progress this month.

8.5 ISPs

No issues

8.6 Implementations

8.6.1 Phase 3

8.6.1.1 Ardaneaskan East

All installations have been completed.

8.6.1.2 Ardnarff

One installation needs to be upgraded. **Action: Subscriber**

8.6.1.3 Strome Ferry

One installation is waiting to be scheduled. **Action: Subscriber**

8.6.1.4 North Strome

All installations have been completed.

One installation has been completed but is experiencing problems with one specific software package. We have been in touch with their IT department and the third party supplier and have run a series of tests. The test results are now with the third party supplier for their analysis. **Action: Third party, IT department, Phil**

8.6.1.5 Achmore

One installation is waiting to be scheduled. **Action: Subscriber**

8.6.1.6 Portchullin

New enclosures have been purchased to act as replacements for the corroded units. **Action: Phil**

8.6.1.7 Craig

All installations have been completed.

8.6.2 Phase 4 - Further investigations / backbone development required.

8.6.2.1 Ardaneaskan West

8.6.2.2 Reraig

8.6.2.3 Lochcarron

8.6.2.4 Strathcarron

8.7 Company Logo

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

8.8 General Data Protection Regulation (Data Protection Act)

We will review our GDPR policy. **Action: Mary**

9 Director's training session

9.1 Configuring Ubiquiti and MikroTik equipment

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

10 AoB

There was a brief discussion about how to treat installation transfers when new equipment has just been installed and it was decided to adapt the policy already in place for equipment bought using the CBS grant money and to pro rata the outstanding charges / costs. **Completed**

From June 2022 CMNet has received a series of emails from an individual disputing an entry in the CMNet minutes of the 27th June which documented that they had reneged on a commitment to join CMNet and had wasted public money. After this individual's first complaint in 2022 CMNet addressed all the points they raised and stated that as far as CMNet was concerned the matter was closed and there would be no further response.

In March 2023 CMNet received the latest email from this individual stating that as CMNet had not given them "**proof**" of CMNet's case they will assume they were right and CMNet was wrong. The directors of CMNet are not prepared to allow misinformation to be disseminated, therefore the directors have decided to detail the facts - which are as follows:-

*CMNet obtained funding through the Community Broadband Scheme (CBS), unlike the major ISPs (BT etc) CMNet's funding was to connect **individual** households. This required CMNet to produce a business plan showing the equipment required to build a system, including the kit to be installed in and on each subscriber's property; i.e. antenna, internal router, brackets, cables etc. The payment process designed by CBS resulted in CMNet having to purchase this equipment in advance, only receiving payment from CBS on production of invoices.*

When CBS notified CMNet of the date that the funding window would close CMNet wrote to this individual (amongst others) and explained the situation and asked them to confirm that they still wanted to join CMNet so we could buy equipment for their personal installation. CMNet's email stated explicitly that £150 of public money would be wasted

should they change their mind and renege on their commitment. This individual replied that they did want to remain on the list of subscribers wanting a connection and so kit was purchased for their installation in part using grant money.

As reported in the minutes of 27th June 2022 they subsequently did renege on this commitment and as a consequence wasted public money and CMNet director's time.

If this individual had not asked to remain on the CMNet connection list, no kit would have been bought for their property and CMNet would not have made a grant claim to CBS; instead that money would have remained with CBS and could have been used elsewhere.

A few subscribers decided to take their name off the connection list when CMNet asked for confirmation at the time the grant window was closing. Some of these have subsequently changed their minds and asked to join CMNet and so these households have had to contribute towards the equipment needed; as it was not bought using grant money.

In addition it is worth noting the following:-

- The vast majority of households that agreed to join CMNet when the end date for grant submissions was published kept their word and honoured their commitment.*
- £150 is the amount claimed through CBS for equipment to be installed on **one** property.*
- The average cost of equipment per subscriber was £750 once the relays are taken into account. The actual cost per subscriber is higher where the number of subscribers per relay is low and the number of relays required to reach one of our internet gateways is high.*
- To maximise the number of subscribers that could be connected with the limited grant money from CBS all the CMNet directors agreed to work for nothing.*
- On receiving commitments from subscribers the CMNet directors embarked upon months of unpaid effort to design, build and manage the system.*
- Had directors been paid for their time (even at minimum wage rates) the sums obtained from CBS would be insignificant in relation to the total cost of the scheme.*

For comparison:-

- The average cost for BT to install a fibre cabinet is ~ £90,000 largely government funded - this **does not** include subscriber's equipment. The new BT Openreach cabinet in Achmore still leaves most of the households in the area unable to obtain the Scottish government's goal of a minimum of 24 Mbps.*
- The average cost per subscriber of the R100 program to provide everyone else in Scotland with 24+ Mbps is ~ £6,000*

The directors consider that the effort required producing this statement a poor use of our (unpaid) time which would be better spent extending and developing CMNet. However we think it is important that subscribers are made aware of the facts. The directors of CMNet consider this matter closed. **Completed**

11 Next meeting

Monday 17th July

The meeting finished at 9:45 pm