

Broadband Steering Group

Minutes of the Meeting held on the 15th July 2024 @ 5:00 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 minutes for June 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

In the past month most time was spent avoiding the rain and drizzle. This delayed installations / upgrades but did mean more time was spent on our systems software.

3.1 Bandwidth

The Plockton gateway is still offline as we are taking the opportunity to bring the Plockton router's configuration up to the same standard as Lochcarron and Achmore. Our systems software is being updated to allow the "edge" routers (i.e. those interfacing directly to the internet) to be configured automatically. Plockton and Lochcarron are complete.

Achmore is using different hardware and so will take a little longer. We will schedule a visit to replace reconfigured Plockton hardware. **Action: Phil**

Since the last report there have been a few more failures of the Lochcarron line recorded in our monitoring software each for a few minutes; again none have lasted long enough for us to analyse the fault so for the moment we believe they are down to Openreach.

Work continues to reduce the number of emails produced by the system. **Action: Phil**

3.2 False RADAR

There were 7 false RADAR events recorded since the last progress report. Again the highest number (five) was on the link between Strome High and Strome Low relays.

The Strome High and Low link is scheduled to be replaced by the new 60 GHz radios which will eliminate the FR events.

This upgrade will also free up more frequencies in the 5 GHz range which will give us more choice for the remaining 5 GHz radios. Most of the access points on Creag Mhaol are scheduled to be upgraded to units which will automatically map frequency channels to help better manage our frequency usage. **Action: Phil**

3.3 Subscribers

Live subscribers	- 70
Waiting for activation	- 0
Waiting for subscriber's confirmation of details / deposits	- 0
Pending installations	- 0
Waiting for installations	- 12
Leavers since the last minutes	- 0
New joiners since the last minutes	- 0
Total	- 82

One new installation was completed this month; this completes the installations scheduled for the current relays. We will now concentrate on maintenance tasks on Creag Mhaol to upgrade equipment - weather permitting.

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 ISPs

Nothing to report

4 Secretary's report

4.1 Risk register

No progress this month.

4.2 Long term support plan

We have adapted our software to allow the automatic cloning of subscribers' routers, subscribers' antenna, subscribers' access points and backbone access points. Edge routers are being worked on now. **Action: Phil**

In due course we will look for volunteers at "remote" sites who can hold and configure spare equipment. **Action: Phil**

4.3 *Broadband in Achmore Hall*

The Hall router will be switched for an AirRouter so that the hall committee can take control of the WiFi password.

Action: Phil

5 Finance Director's Report

Revenue for June

Brought forward

Balance	£2,024.90		
Creditors		£1,975.41	
Debtors		£1,874.74	
Net			£100.67
Bank balance			£10,042.64

This month

Income	£581.50		
Expenditure	£780.28		
P&L	-£198.78		
Creditors		£100.50	
Debtors		£230.50	
Net			-£130.00
Adjusted P&L			-£328.78

Carried forward

Balance	£1,826.12		
Creditors		£2,075.91	
Debtors		£2,105.24	
Net			-£29.33
Bank balance			£9,713.86

5.1 *Possible Attempted Fraud*

Our bank statement for June showed an unauthorised direct debit payment of ~ £330. Kath did a thorough audit of all our direct debits and then contacted RBS to report the erroneous debit. RBS have refunded the amount and are treating the payment as an attempted fraud.

5.2 *Outstanding Expenses Claims*

There are a few outstanding claims for small amounts yet to be submitted by Phil. **Action: Phil**

5.3 *Next year's tariff*

The total number of bytes sold was 27,000 GB; which makes the break-even tariff for 4 fibre lines 194 GB per £1 and for 5 fibre lines 155 GB per £1.

This year we expect to make a surplus of ~ £2,500.

There was some debate as to how to use the money and it was decided that we should continue with a program to upgrade the steel enclosures. Some have already been replaced but most are now showing signs of rusting. As the plastic units appear to be causing some problems for the electronics it was decided that we would look for stainless steel units; marine grade if possible. **Action: Phil**

Mary was concerned that the cabinets holding the electricity meters were also likely to need an upgrade in the near future and that this might take some time to organise as electricians and SSE would be involved. We therefore decided that we would fabricate a "hood" (probably from aluminium sheeting) to be used in an emergency to waterproof any cabinet that needed urgent action.

Phil also pointed out that the ancient laptop (Windows Vista - circa ~ 2008) used as our server was beginning to show its age and complaining about disk faults. It was agreed we would look for a basic mini PC to act as a replacement.

The support laptop will be configured to act as a backup for the current / new server PC.

We then looked at the options for next year's tariff and whether it should be reduced. As can be seen from the figures above the breakeven point has now increased to ~ £1 per 200 GB rather than 150 GB. However a few quick calculations and an estimate of the cost of stainless steel cabinets made it clear that we would probably need a healthy surplus next year to continue to upgrade the cabinets. The variable part of the tariff will remain at £1 per 150 GB.

Phil is to price all of the above ready for a final decision at next month's meeting. **Action: Phil**

5.4 *Outstanding subscribers' debt*

All accounts are up to date.

5.5 *Housekeeping*

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

5.6 *Payments for installations of subscriber's equipment*

All payments are up to date.

5.7 *Subscriber Payment Errors*

One cheque is outstanding and that will be dispatched in due course. **Action: Kath**

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 was a planned power cut on the 9th July from 09:30 to 15:30.

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

Phil's proposal to formalise subscribers' problem reports is being held back for the moment pending our investigations regarding sending emails when the network is down. **Action: Phil**

7.1.1.2 *Strome High Relay*

No issues

7.1.1.3 *Fernaig*

No issues

7.1.1.4 *Achmore*

One subscriber reported a loss of service after the SSE planned power outage. This turned out to be their AirRouter being reset to factory defaults probably by the power cut. Its configuration was restored. **Completed**

7.1.1.5 *The Glen*

No issues

7.1.1.6 *Braeintra*

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

One subscriber reported drop outs and poor performance - this was down to obstructions in the line of sight of the subscriber's antenna. The subscriber found a new location for their antenna and cleared the line of sight for the new location. When we relocated their external antenna we took the opportunity to upgrade it to one of the new AC gen 2 units. Speed tests showed their connection is back to normal. **Completed**

One subscriber reported drop outs when using secondary access points. The mains LAN extenders have been replaced and we will review the situation when we have a few weeks' data. **Action: Subscriber, Phil**

7.1.1.7 *Craig*

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

One subscriber reported timeouts when accessing two specific websites. Tests showed that the issue was not related to the performance of CMNet but instead was an external issue. **Completed**

7.1.1.8 *Ardaneaskan East*

No issues

7.1.1.9 *Ardaneaskan West*

No issues

7.1.1.10 *Leacanashie*

On Tuesday the 9th during the planned SSE a subscriber reported their system was down and that they had not been notified of any SSE maintenance work. After checking that the SSE maintenance email had been sent from CMNet and the entries in the CMNet Google Group distribution list the subscriber was contacted and asked to check their emails again. It turned out that they had in fact received our email about the SSE work. **Completed**

7.1.1.11 *North Strome*

The primary North Strome access point based on Creag Mhaol failed and will be replaced. **Action: Phil**

7.1.1.12 *Strome Ferry*

No issues

7.1.1.13 *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 June was 11.1 TB, the daily average was 371 GB, with a peak usage of 538 GB on Monday 29th. CMNet peaks since operations started; highest average daily usage 367 GB, highest single days usage - 708 GB, highest monthly usage - 11.4 TB.

One subscriber exceeded their quota in June.

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**
After the recent outage we will reconfigure and replace the hardware. **Action: Phil & Mary**

7.1.5.2 *Achmore*

The 60 GHz dish mount will be upgraded. **Action: Phil**

An operating system upgrade to the Raspberry Pi corrupted the micro SD card, the unit has been recovered the operating systems upgrade has been installed and the unit is being configured so it can be replaced. It turns out that the new OS is not compatible with Remote Desktop and so the OS will have to be downgraded to an earlier version **Action: Phil**

We met with Jackie from the hall committee to discuss the possible need to relocate our equipment due to work planned to the hall's heating system. We investigated a few options and explained that it would not be possible to physically move the existing cabinet. Rather we would need to have a second cabinet in place in the "new" location complete with a power supply to keep disruption of the system to the minimum. To move the internet connections we would need to contact Zen (our ISP) who would then instruct Openreach. In the past this has led to confusion with very short notice of cancellations and equally short notice of rescheduled installations as communications between Zen and Openreach have been poor in the past. To mitigate we would want Openreach to move our internet connections one at a time. This way we can be sure the "new" location was working satisfactorily before removing the "old". However this may be difficult for Openreach as currently both lines are in the same physical cable. Testing of the "new" location would take at least a week and during this time to "old" and "new locations would need to be linked by Ethernet cables. Once the "new" location was fully operational we would be able to dismantle the "old" location and free up the space.

Subsequently Jackie decided to put a hold on further work preparing for the move whilst the heating contractor was consulted. **Action: Jackie**

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. The schedule to backup the logs has been altered to keep several days worth of data.

Action: Phil

In the long term AirControl will be replaced by the new Ubiquiti monitoring software. **Action: Phil**

The AirControl database has grown too large for the server PC and is being cleaned up to free up disk space. **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*

One contract is outstanding; we have chased the relevant subscriber. **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**

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

Nothing to report

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.

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.

8.6.1.8 Leacanashie

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

8.6.2.5 Balnacra

8.7 Company Logo

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

8.8 General Data Protection Regulation (Data Protection Act)

Nothing to report

9 Director's training session

9.1 Configuring Ubiquiti and MikroTik equipment

Refresher training will be scheduled as required.

10 AoB

Nothing to report

11 Next meeting

Monday 19th August at 7:30 pm

The meeting finished at 6:45 pm