

# Broadband Steering Group

Minutes of the Meeting held on the 18<sup>th</sup> March 2024 @ 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 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

No progress this month rationalising all the different Pro Formas due to other commitments. **Action: Phil**

### 3.1 Bandwidth

We have installed an additional line in Achmore and moved all the traffic away from the Lochcarron line ready for its migration from Plusnet. The stats from this new configuration are highlighting some possible bottlenecks in other parts of the system; further investigation will be required once the Lochcarron line has been transferred. **Action: Phil**

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

### 3.2 False RADAR

There were 18 false RADAR events recorded since the last meeting. The majority of FR events have again been on the link between Strome High and Strome Low relays which is no longer in use whilst traffic has been re-routed away from Lochcarron.

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 usage to help better manage our frequency usage. **Action: Phil**

### 3.3 Subscribers

Live subscribers	- 64
Waiting for activation	- 0
Waiting for subscriber's confirmation of details / deposits	- 0
Pending installations	- 0
Waiting for installations	- 13
Leavers since the last minutes	- 0
New joiners since the last minutes	- 0
<b>Total</b>	<b>- 76</b>

No new installations were completed this month as all efforts were spent preparing to migrate the Plusnet lines and preparing the HMRC and Companies House returns. **Action: Phil, Mary**

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

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

The support laptop has had our device cloning software installed so that damaged subscribers' kit can easily be replaced.

**Completed**

No progress on the order for new equipment due to other commitments. **Action: Phil**

### 3.5 ISPs

#### 3.5.1 Install an additional line in the Achmore gateway

Mary ordered an additional line for Achmore from Spitfire but when the contract came through it stated that we would have to have prior written permission before reselling the service; although this had already been agreed over the phone. Mary therefore went back to Spitfire to get the approval in writing and waited and waited and waited. In the end we gave up and ordered through Zen, which went through in a few minutes on the phone. The line was subsequently installed and after testing is now in use. **Completed**

#### 3.5.2 Migrate the Lochcarron Plusnet line to a new ISP

We still wanted to make CMNet as resilient as possible by using alternate core backbone networks and so went back to Spitfire to order a line to migrate the Lochcarron Plusnet line. Mary's contact at Spitfire was out of the office and so, as requested, we used their alternate email address. There was no response and after giving them a deadline to respond

(again with no reply) we decided to go with Zen, who again completed the order in a few minutes and the line is scheduled to be switched to Zen on the 2<sup>nd</sup> April. **Action: Phil, Mary**

### 3.5.3 Migrate the Achmore Plusnet line to a new ISP

Once the new line in Lochcarron has been installed, tested and put into service we will look at the current and projected utilisation before deciding whether to cancel the Achmore Hall Plusnet line taking us back to three lines or to switch this line to a new ISP and so remain with four lines. **Action: Phil, Mary**

### 3.5.4 Alternate core backbone policy

Given our experiences with Spitfire and Aquiss (an alternate ISP who also failed to respond to our requests) and the excellent service we have received from Zen we will probably drop our strategy to have different ISPs and just stick with Zen. There isn't much point opting for alternative ISPs that don't respond. **Action: Phil, Mary**

We have now been informed by Plusnet that they have changed the end date for their business broadband to 28<sup>th</sup> May 2024.

Special thanks are due to Mary this month as many hours have been spent chasing up errant ISPs.

## 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 are still waiting for the Hall committee to test and sign off the installation. **Action: Hall committee**

### 4.4 Electricity price increases

In the light of the recent increases in electricity charges it was decided to review the amounts paid for hosting relays and to increase payments. This will result in an increase of approximately 50% for the portion of the payments relating to the electricity charges. **Action: Phil, Kath**

## 5 Finance Director's Report

### 5.1 Monthly Statistics

#### Revenue for February

##### Brought forward

Balance	<b>£1,625.30</b>			
Creditors		£1,498.41		
Debtors		£1,358.81		
Net			£139.60	
<b>Bank balance</b>				<b>£9,681.97</b>

##### This month

Income	£578.00			
Expenditure	£312.67			
<b>P&amp;L</b>	<b>£265.33</b>			
Creditors		£69.38		
Debtors		£194.96		
Net			-£125.58	
<b>Adjusted P&amp;L</b>				<b>£139.75</b>

##### Carried forward

Balance	<b>£1,890.63</b>			
Creditors		£1,567.79		
Debtors		£1,553.77		
Net			£14.02	
<b>Bank balance</b>				<b>£9,821.72</b>

## ***Outstanding Expenses Claims***

All claims are up to date.

### ***5.2 Next year's tariff***

The total number of gigabytes sold was 25,800, which makes the break even tariff for 3 fibre lines 247 GB per £1 and for 4 fibre lines 185 GB per £1. N.B these revised figures are based on a charge of £34.80 per line per month.

### ***5.3 Outstanding subscribers' debt***

All accounts are up to date.

### ***5.4 Housekeeping***

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

### ***5.5 Payments for installations of subscriber's equipment***

All payments are up to date.

### ***5.6 Subscriber Payment Errors***

Cheques are ready to dispatch to repay subscribers' overpayments. **Action: Kath, Phil**

### ***5.7 Annual HMRC and Companies House Returns***

The revised accounts, HMRC CT600 return, Companies House accounts and CIC 34 form were circulated prior to the meeting. At the meeting Phil took everyone through the documents. We discovered a small mistake where the revised tax charge calculated by the CT600 software had not been transferred to the Income and Expenditure account. This was corrected during the meeting and after this change the accounts were approved by all for submission.

Thanks to the governments Super Deduction scheme (now sadly at an end) we will pay no tax this year and show a loss of ~ £900 which will be carried forwards and used against next year's profits. The HMRC CT600 return will now be authorised on the HMRC website and the CIC 34 and balance sheet will be posted to Companies House. **Action: Phil & Mary**

Completion of the annual financial returns has been made much easier thanks to the accuracy of Kath's finance spreadsheets.

## **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***

#### ***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. We are also investigating options to send and receive emails from mobile phone when there is no internet connection. Due to the time taken on the accounts there was no time left to test this option. **Action: All**

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

##### ***7.1.1.2 Strome High Relay***

The backup router is showing as offline and may have failed. It will be replaced in due course. **Action: Phil**

##### ***7.1.1.3 Fernaig***

No issues

##### ***7.1.1.4 Achmore***

No issues

##### ***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 has reported drop outs and poor performance - this is down to obstructions in the line of sight of the subscriber's antenna. We will relocate their external antenna to restore a clear line of sight. **Action: Phil**

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**

#### 7.1.1.8 *Ardaneaskan East*

No issues

#### 7.1.1.9 *Ardaneaskan West*

No issues

#### 7.1.1.10 *Leacanashie*

No issues

#### 7.1.1.11 *North Strome*

One subscriber is having issues preventing the installation of a whole house Wi-Fi system. We propose to replace the mains LAN extenders with an Ethernet cable. **Action: Phil**

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

#### 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 February was 8.7 TB, the daily average was 301 GB, with a peak usage of 381 GB on Saturday 25<sup>th</sup>. CMNet peaks since operations started; highest average daily usage 367 GB, highest single days usage - 708 GB, highest monthly usage - 11.4 TB.

No subscribers exceeded their quota in February.

#### 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**

North

##### 7.1.4.9 *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*

An additional line has been ordered from Zen, installed, tested and implemented. All the traffic through the Achmore Plusnet line has been moved to the Zen line.

All the traffic from the Lochcarron Plusnet line has been rerouted through the Achmore Plusnet line.

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**

A test bed has had a MikroTik VPN set up and tested for remote access. It turns out this is best configured on RouterOS v7 but unfortunately this does not support the Accounting feature which we need. Temporarily we will install a second router to handle the VPN leaving the main router running v6 and supplying accounting information whilst we research what other options we have. **Action: Phil**

#### 7.1.5.3 *Lochcarron*

We have ordered a replacement for the Plusnet line through Zen this is due to be installed on the 2<sup>nd</sup> April. **Action: Mary, Phil**

The Raspberry Pi micro computer has frozen and is offline it will have to be powered off and on. **Action: Phil**

#### 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**

#### 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 will chase 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**

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

We have started the process to drop the Plusnet lines as they no longer supply business broadband.

### 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

We have had a request for two new installations. **Action: 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.

##### 8.6.1.8 Leacanashie

Two installations are waiting to be scheduled. **Action: Phil, Mary**

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*

Neil was trained in the use of the cloning software now installed on the support laptop. **Completed**

We will organise another training session for the use of the cloning software. **Action: All**

## 10 **AoB**

## 11 **Next meeting**

Monday 15<sup>th</sup> April - to be confirmed

The meeting finished at 10:00 pm