

DRAFT Broadband Steering Group DRAFT

Due to sickness and conflicting diaries there was no meeting in May; here is a progress report in lieu of minutes.

1 Chairman's report

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

1.1 Bandwidth

The Lochcarron line was successfully migrated from Plusnet to Zen. The Achmore Plusnet line was migrated to Zen on the 24th May and is now in service. Once bedded in we will start to migrate subscribers to balance the four lines. This may require additional monitoring to make sure we have eliminated as many bottlenecks as possible. **Action: Phil**

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

1.2 False RADAR

There were 22 false RADAR events recorded since the last meeting (i.e. past two months). Aside from the link between Strome High and Strome Low relays most have been on the Access point for Craig.

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**

1.3 Subscribers

Live subscribers	- 66
Waiting for activation	- 0
Waiting for subscriber's confirmation of details / deposits	- 0
Pending installations	- 0
Waiting for installations	- 11
Leavers since the last minutes	- 0
New joiners since the last minutes	- 1
Total	- 78

Two new installations were completed this month.

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

1.4 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 new equipment to upgrade to the relays on Creag Mhaol and allow the replacement of ageing AirRouters has been ordered and received. **Completed**

1.5 ISPs

1.5.1 Install an additional line in the Achmore gateway

This line was successfully migrated to Zen and is now in use. **Completed**

1.5.2 Migrate the Achmore Plusnet line to a new ISP

As the stats for the current three lines were still showing bottlenecks at peak times we decided to migrate the Plusnet line to Zen and opt for four lines rather than cancel the Plusnet line and revert to three lines. This was completed on the 24th May. **Completed**

2 Secretary's report

2.1 Risk register

No progress this month.

2.2 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**

2.3 Broadband in Achmore Hall

The Hall committee have tested and signed off the installation. The upgrade of the gateway router in the hall caused problems with the original AirGateway. This turned out to be a hardware incompatibility between 100 Mbps and 1 Gbps PoE power supplies. As a short term fix the AirGateway was replaced with a MikroTik router; in due course this will be switched for an AirRouter so that the hall committee can take control of the WiFi password. **Action: Phil**

2.4 Electricity price increases

We will review the amounts paid for hosting relays and expect an increase of approximately 50% for the portion of the payments relating to the electricity charges. **Action: Phil, Kath**

3 Finance Director's Report

3.1 Monthly Statistics

Revenue for March

Brought forward

Balance	£1,890.63			
Creditors		£1,567.79		
Debtors		£1,553.77		
Net			£14.02	
Bank balance				£9,821.72

This month

Income	£578.00			
Expenditure	£211.48			
P&L	£366.52			
Creditors		£87.32		
Debtors		£42.50		
Net			£44.82	
Adjusted P&L				£411.34

Carried forward

Balance	£2,257.15			
Creditors		£1,655.11		
Debtors		£1,596.27		
Net			£58.84	
Bank balance				£10,233.06

Revenue for April

Brought forward

Balance	£2,257.15			
Creditors		£1,655.11		
Debtors		£1,596.27		
Net			£58.84	
Bank balance				£10,233.06

This month

Income	£557.00			
Expenditure	£367.20			
P&L	£189.80			
Creditors		£279.80		
Debtors		£67.50		
Net			£212.30	
Adjusted P&L				£402.10

Carried forward

Balance	£2,446.95			
Creditors		£1,934.91		
Debtors		£1,663.77		
Net			£271.14	
Bank balance				£10,635.16

Outstanding Expenses Claims

All claims are up to date.

3.2 Next year's tariff

The total number of gigabytes sold was 26,100, which makes the break even tariff for 3 fibre lines 250 GB per £1, for 4 fibre lines 188 GB per £1 and for 5 fibre lines 150 GB per £1.

3.3 Outstanding subscribers' debt

One account is in arrears.

3.4 Housekeeping

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

3.5 Payments for installations of subscriber's equipment

All payments are up to date.

3.6 Subscriber Payment Errors

Cheques will be written and dispatched to repay subscribers' overpayments. **Action: Kath, Phil**

3.7 Annual HMRC and Companies House Returns

The HMRC CT600 return, Companies House accounts and CIC 34 form have all been submitted and accepted.

4 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**

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

No progress this month.

4.2 Liabilities

No progress this month.

4.3 Description of the Audit Trail

No progress this month.

5 Customer Relations

5.1 Production Environment

5.1.1 Issues raised by Subscribers

5.1.1.1 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**

5.1.1.2 Strome High Relay

The backup router was rebooted and is now back online.

5.1.1.3 Fernaig

A subscriber's AirRouter power supply failed and was upgraded to a MikroTik unit.

5.1.1.4 Achmore

No issues

5.1.1.5 The Glen

No issues

5.1.1.6 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**

5.1.1.7 Craig

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

5.1.1.8 *Ardaneaskan East*

No issues

5.1.1.9 *Ardaneaskan West*

No issues

5.1.1.10 *Leacanashie*

No issues

5.1.1.11 *North Strome*

The issues preventing the installation of a whole house Wi-Fi system using mains LAN extenders has been resolved by installing an Ethernet cable. **Completed**

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

5.1.1.12 *Strome Ferry*

A subscriber's secondary access point (AirRouter) failed and was replaced.

5.1.1.13 *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**

5.1.2 *Usage quotas*

The monthly total for March was 8.8 TB, the daily average was 285 GB, with a peak usage of 399 GB on Thursday 21st. No subscribers exceeded their quota in March.

The monthly total for April was 9.9 TB, the daily average was 331 GB, with a peak usage of 486 GB on Saturday 13th. 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 April.

5.1.3 *Possible virus infection*

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

5.1.4 *Planned upgrades of equipment*

5.1.4.1 *Fernaig*

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

5.1.4.2 *Achmore*

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

5.1.4.3 *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.**

5.1.4.4 *Braeintra*

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

5.1.4.5 *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**

5.1.4.6 *Ardaneaskan East*

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

5.1.4.7 *Ardaneaskan West*

No issues

5.1.4.8 *Leacanashie*

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

North

5.1.4.9 *Strome*

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

5.1.4.10 *Strome Ferry*

No issues

5.1.4.11 *Ardnarff*

No issues

5.1.5 Backbone relays

5.1.5.1 Plockton

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

The internet link failed on the 25th May, it is likely the “modem” router has failed; it will need a site visit to resolve. All

Plockton traffic was rerouted through Achmore. **Action: Phil & Mary**

5.1.5.2 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**

The VPN has been set up and tested in the UK and overseas and works very well making remote problem determination much easier. Resolving RouterOS v6 & v7 will take some time so for the moment we will stay with the two router solution. **Completed**

5.1.5.3 Lochcarron

The Zen replacement for the Plusnet line was installed as scheduled, tested and is now in service. **Completed**

The Raspberry Pi micro computer was rebooted and is now working again. **Completed**

5.1.5.4 Other relays

No issues.

5.1.6 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**

5.1.7 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**

5.1.8 Customer Contracts

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

5.2 Changes for next month

5.2.1 Additional Management tools / reports

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

Software to check the configuration of equipment - this has been upgraded. **Completed**

5.2.2 Potential personal safety issue

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

5.2.3 Additional equipment for subscribers

Nothing to report

5.3 Volume trial

5.3.1 Review of the trial

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

5.4 Terms of Reference

Deferred

6 General topics

6.1 Documentation

6.1.1 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**

6.2 Backbone development

6.2.1 New relays

6.2.1.1 Completed

No progress this month.

6.2.1.2 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**

6.2.1.2.1 Portchullin (raised beach)

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

Re-align the existing Portchullin Access Point

Install test equipment in Portchullin

6.2.1.2.2 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

6.3 Testing

6.3.1 Management & accounting software

Nothing to report

6.4 Restoring power to the old TV repeater

6.4.1 Removal of old cable

No progress this month.

6.4.2 Protection of cable on the hill

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

6.4.3 Backup Generator

No progress this month.

6.5 ISPs

The Plusnet lines migrated to Zen. **Completed**

6.6 Implementations

6.6.1 Phase 3

6.6.1.1 Ardaneaskan East

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

6.6.1.2 Ardnarff

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

6.6.1.3 Strome Ferry

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

6.6.1.4 North Strome

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

We have had a request for a new installation. **Action: Phil**

6.6.1.5 Achmore

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

6.6.1.6 Portchullin

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

6.6.1.7 Craig

All installations have been completed.

6.6.1.8 Leacanashie

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

6.6.2 Phase 4 - Further investigations / backbone development required.

6.6.2.1 Ardaneaskan West

6.6.2.2 Reraig

6.6.2.3 Lochcarron

6.6.2.4 Strathcarron

6.6.2.5 Balnacra

6.7 Company Logo

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

6.8 General Data Protection Regulation (Data Protection Act)

Nothing to report

7 Director's training session

7.1 Configuring Ubiquiti and MikroTik equipment

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

8 AoB

Nothing to report

9 Next meeting

Provisional date Monday 17th June