

# Broadband Steering Group

Minutes of the Meeting held on the 13<sup>th</sup> November 2019 @ 7:50 p.m. Fernaig House

## 1 Present and Apologies

Present: Phil Game, Georgie Grimson, Joe Grimson, Mary MacBeth, Neil MacRae

## 2 Approve and adopt previous minutes

The previous minutes for October, were proposed by Neil, seconded by Mary.

Copies of previous minutes are on our website at:-

<http://www.stromeferry-and-achmore.co.uk/index.asp?pageid=433827>

## 3 Chairman's report

We have made good progress on the new relays on Creag Mhaol and all units are now running on mains power. We have successfully networked all the relays through to the Portchullin raised beach and the Lochcarron internet gateway.

We have started tuning the radios' signal strengths and frequencies. This is a labour intensive job as each radio has to be visited in turn to establish what else it can "hear" from its orientation. Then its frequency and that of its neighbours can be adjusted to make sure there are no overlaps. We then restrict the frequencies that the unit can use to reduce the risk of "false RADAR" incidents causing performance problems. This has to be repeated for every radio.

We are also adjusting the timing of the execution of the scripts which run on the routers now they can be run in the "real world". The scripts are small programs that check that all connections are functioning correctly and switch to the backup unit if anything fails.

All the new units have to be defined in the various reporting and monitoring systems.

Finally we are adjusting the error reporting.

The next steps will be to set up the North Strome relay and some subscribers test sites. See section 8.3 for a detailed description of progress.

### 3.1 Bandwidth

Capacity is holding up well. Since the last minutes there has been one instance when we reached a peak of 75 Mbps for 15 seconds. We will continue to monitor the situation. **Action: Phil**

Phil emailed Susan Galloway at Plockton High about the lack of a contact at the school; Susan explained that due to staff shortages the office has at times been unmanned; however a new member of staff has been recruited and so this should not be a problem in the future. **Completed**

### 3.2 Firmware / False RADAR

We are still seeing incidents of false RADAR detection and continue to monitor the situation. **Action Phil**

### 3.3 New Backhaul Installation in Achmore Hall

#### 3.3.1 Get quote for installation

Mary has completed the forms to register the hall with the Post Office who have responded to say the address has to be registered with the Highland Council before it can go on the Post Office database. Mary has tried to contact the Highland Council several times and finally made contact and has been directed to the relevant form. Mary has completed and submitted the form and is waiting for a response. There will probably be a charge to register the hall address with the council. **Action: Mary**

#### 3.3.2 Install our cabinet and internal equipment in the hall

The cabinet has been assembled ready to install. Before it is fixed to the wall we will check with Martin to make sure it does not block access to any other equipment. **Action Phil**

#### 3.3.3 Install external equipment at the hall

#### 3.3.4 Install new dish on CMAchmoreHigh for Plockton access

#### 3.3.5 Switch connection from Plockton to CMAchmoreHigh

#### 3.3.6 Install new dish on CMAchmoreLow for Achmore access

#### 3.3.7 Get new line installed in the hall

#### 3.3.8 Test the new line

#### 3.3.9 Activate the new line

### 3.4 Subscribers

Live subscribers	- 45
Waiting for installations / activation	- 0
Waiting for subscriber's installation dates	- 0
3.4.1 Waiting for new backbone relays	
Waiting for installations	- 31
Leavers since the last minutes	- 0
New joiners since the last minutes	- 0
<b>Total</b>	<b>- 77</b>

One installation has been completed since the last minutes.

We have had a request for a connection in Lochcarron; once our existing commitments have been met we will see if this is feasible.

The remaining installations are waiting on the completion of the new relays. See 8.3 for more details

We have had an enquiry for a new connection and have sent details of our tariff and asked that the subscriber check their line of sight to a relay but so far have had no response. **Action: Subscriber**

### 3.5 New MikroTik replacements for AirRouters

No progress this month due to other commitments. **Action: Phil**

### 3.6 Terms of Reference

Deferred

## 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 is being rewritten so it can be used for any sort of device from any manufacturer in the future. **Action: Phil**

### 4.3 Terms of Reference

Deferred

## 5 Finance Director's Report

### Monthly Statistics

#### Revenue for October:-

##### Brought forward

Balance	<b>£72.20</b>		
Creditors		£2,800.35	
Debtors		£111.00	
Net			£2,689.35
<b>Bank balance</b>			<b>£9,871.79</b>

##### This month

Income	£403.50		
Expenditure	£162.24		
<b>P&amp;L</b>	<b>£241.26</b>		
Creditors		£8.49	
Debtors		£1,707.50	
Net			-£1,699.01
<b>Adjusted P&amp;L</b>			<b>-£1,457.75</b>

##### Carried forward

Balance	<b>£313.46</b>		
Creditors		£2,808.84	
Debtors		£1,818.50	
Net			£990.34
<b>Bank balance</b>			<b>£8,414.04</b>

## Liabilities

Estimated Liabilities	-	£990.34
Estimated balance after liabilities	-	£7,423.70

## Provision for replacement of Electronic equipment

Total value purchased to date	-	£16,843.29
Balance after provision	-	£-9,419.59

One more refund cheque was signed and is ready to be sent out. A few remaining subscribers still have issues outstanding on their accounts and these will need to be resolved before we issue refunds. **Action: Phil, Mary, Joe, Georgie & Neil**

### 5.1 Next year's tariff

The total number of gigabytes sold was 7,750. The break even tariff for 2 fibre lines is 76 GB per £1, and for 3 fibre lines is 51 GB per £1.

### 5.2 Outstanding subscribers' debt

Excluding subscribers with quota increases there are three accounts in arrears.

### 5.3 Housekeeping

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

### 5.4 Payments for installations of subscriber's equipment

All payments are up to date.

### 5.5 Standing orders

One account is in credit, the relevant subscribers have been asked to correct their account. **Action: Georgie**

## 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 Problems and complaints

On the 14<sup>th</sup> October a major power outage at Plockton High School due to planned maintenance on the main power distribution board caused a total loss of service to customers. On identifying the problem and ascertaining from the contractor that the power would be off until the following day customers were switched to the Lochcarron line. Power was eventually restored at 1440 on the 15<sup>th</sup> October and on the 16<sup>th</sup> October all customers were put back on the Plockton line. CMNet had not been informed of the maintenance schedule, had we been informed prior to the commencement of maintenance we would have switched customers to the Lochcarron line thereby providing continuity of service.

#### 7.1.2 Usage quotas

The monthly total for October was 3.63 TB. The daily average was 117 GB; with a peak usage of 215.5 GB on Sunday 27<sup>th</sup>. This is the highest daily total ever and more than twice that of the entire monthly quota for the first ten customers in the first year of operation. It is also the highest ever monthly total.

Two customer exceeded their quota for the month and have had their quota increased. **Action: Phil**

#### 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 Installation of equipment

Several software upgrades were made to the system in the early part of the month and customers were informed prior to and on completion of the upgrades.

##### 7.1.4.1 Ardaneaskan

The LoS (line of sight) from the raised beach is to be confirmed however the LoS from Creag Mhaol has now been confirmed. **Action: Phil**

#### 7.1.4.2 *Craig*

We will review the situation when we have more experience of low level links over water or other options become available. **Action: Phil**

#### 7.1.4.3 *Achmore*

No issues.

#### 7.1.4.4 *North Strome*

One subscriber has been asked to confirm they have line of sight. **Action: Subscriber**

#### 7.1.4.5 *Other installations*

Work continues on the Creag Mhaol relays. **Action: Phil**

#### 7.1.5 *Customer Contracts*

Joe will check that all changes to customer contracts and charges are now correct. **Action: Joe.**

### 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 different types of equipment - this program is being rewritten so it can be used to check configurations regardless of the manufacturer and simplify the process to replace faulty units **Action: Phil**

#### 7.2.2 *Potential personal safety issue*

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

#### 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*

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

## 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*

##### 8.2.1.1 *Equipment and tidy up*

The new dishes have arrived and will be configured and installed when traffic can be switched away from Plockton.

**Action: Phil**

### 8.3 *Backbone development*

#### 8.3.1 *Plockton*

No issues.

#### 8.3.2 *Lochcarron*

No issues.

#### 8.3.3 *Creag Mhaol*

##### 8.3.3.1 *Existing relays*

###### 8.3.3.1.1 *Braeintra AP*

We continue to monitor the performance of the Braeintra link. **Action: Phil, Joe**

###### 8.3.3.1.2 *Achmore High to Achmore Low link*

After reports of poor performance from subscribers in Braeintra it appears there may have been a problem with the link between the Achmore High and Achmore Low relays. At times tests show the link has high latency although the signal strength, link speed, link quality and link capacity are all good. When working on the Achmore Low upgrade the

opportunity was taken to upgrade to faster “ac” dishes. Initial subscriber tests show a considerable improvement in speed and no drop in latency across the new dishes. We will continue to monitor the link. **Action: Phil, Joe**

#### 8.3.3.2 *New relays*

The link between Strome High and Portchullin raised beach has been upgraded

Using generator power the units on Strome Low have been tested and configuration errors corrected

Using generator power the units on Strome High have been tested and configuration errors corrected

Using generator power the links between Strome High, Strome Low and the Portchullin raised beach have been tested

An additional reel of trunking was taken to Achmore High ready to cover the cable to Achmore Intermediate.

The power cable from Achmore Intermediate to Achmore High has been encased in trunking

The Achmore High router enclosure has been upgraded

The mains power supply to the new relays has been tested and all relays are now live

The beam width of the Portchullin Access Point has been tested and needs to be improved

A reel of trunking was taken to Achmore Intermediate ready to cover the cable to Achmore Low.

The power cable from Achmore Intermediate to Achmore Low has been encased in trunking

The Achmore Low router enclosure has been upgraded

The link between Achmore Low and Achmore High has been upgraded to faster “ac” units.

#### 8.3.3.2.1 *Next steps*

Testing shows we need to reduce the size of the Achmore to Strome relay dishes to obtain the optimum signal strength

Continue to tune the links between the new relays - this is a slow job requiring each radio is accessed in turn to determine what other radios it can see from its point of view and adjusting frequencies to eliminate overlaps

Continue to test the new relay automated recovery algorithms

Re-align the Portchullin raised beach dish that point to Creag Mhaol

Re-align the existing Portchullin Access Point

Add an additional Portchullin Access Point

Install one subscriber’s test equipment in Ardnarff

Install one subscriber’s test equipment in Portchullin

Install the Strome Ferry relay in North Strome

Install one subscriber’s equipment in Ardaneaskan East

Install one subscriber’s test equipment in North Strome

Waste time replacing 700 metres of marker posts that have been removed

Bury all the mains power cables.

**Action: Phil, Mary, Joe, Georgie, Neil**

#### 8.3.4 *The Glen*

One access point will be upgraded to see if that will reduce the noise levels. No progress this month. **Action: Phil**

#### 8.3.5 *Ardaneaskan*

The Ardaneaskan access point is under test. **Action: Phil**

#### 8.3.6 *Leacanashie*

The Leacanashie access point is under test. **Action: Phil**

#### 8.3.7 *Portchullin (raised beach)*

The Portchullin access point is under test. **Action: Phil**

#### 8.3.8 *Craig*

We will review the link when other work is complete. **Action: Phil**

#### 8.3.9 *North Strome*

The North Strome relay access point is under test. **Action: Phil**

#### 8.3.10 *Strome Ferry*

The activation of the Strome Ferry access point is waiting on the installation of the North Strome link. **Action: Phil**

#### 8.3.11 *Ardnarff*

The Ardnarff access point is under test. **Action: Phil**

### 8.3.12 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 has been encased in trunking and is ready to be buried.

### 8.5.3 Backup Generator

No progress this month.

## 8.6 ISPs

### 8.6.1 ADSL Broadband installation at Plockton High School

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

### 8.6.2 ADSL Broadband installation at Lochcarron

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

### 8.6.3 ADSL Broadband installation at Achmore

Installation is waiting on the Highland Council. **Action: Mary, Joe, Phil**

## 8.7 Implementations

### 8.7.1 Phase 3 - Relays and creation of access points for the remainder of residents and connect trial subscribers.

The routers, inter relay links, access points and their backups on Creag Mhaol are under test. **Action: Phil**

## 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 8<sup>th</sup> January

The meeting closed at 8:30 pm