ARGYLL AND BUTE COUNCIL

Development and Infrastructure

Digital Infrastructure Update on External Programmes

1.0 EXECUTIVE SUMMARY

The main purpose of this report is to provide an update on work that is being undertaken on a number of programmes, which aim to improve the digital infrastructure across Argyll and Bute.

The Council has no responsibility to deliver digital infrastructure in Argyll and Bute however it continues to actively engage with external partners/stakeholders responsible for Next Generation Access (NGA) whether it be Superfast Broadband (SFB) or Mobile Communications.

Next Generation Broadband

In Argyll and Bute 58.3% of premises have access to Super Fast Broadband, 8.8% of premises have access to fibre (improved service but not Superfast) and 32.8% are still waiting for next generation access. Therefore 41.6% of households still have no access to superfast broadband. BT has a contractual target, in Argyll and Bute under the Highlands and Islands programme, of 75% of premises having fibre access by the end of 2017. HIE have stated that a considerable number of cabinets have been installed on site but not yet connected and are waiting to be made live, and this target of 75% will be met. Current figures from HIE indicate that they are on line for 83% coverage in Argyll and Bute by the end of 2017.

Mobile Communications

Improvements to mobile network coverage have been slow across Argyll and Bute, however it is anticipated that this is going to be advanced rapidly as mobile network operators have a requirement for major coverage improvements before the end of 2017.

The UK Government has secured a binding agreement with the mobile networks EE, O2, Three and Vodafone to tackle poor signal issues in so-called 'partial not-spots'. These are areas within the UK that have coverage from some but not all of the four mobile networks. Depending on which network consumers are on, they may have no coverage in these areas.

This deal will also result in cutting total 'not-spots' where there is currently no mobile coverage, by two-thirds. This will support the UK Government's existing £150m programme to take mobile coverage to the areas of the UK that have no

coverage at all. As a result of the agreement, many areas will receive better data coverage, some for the first time.

1.1 **RECOMMENDATIONS**

- 1.2 The Committee are asked:
 - To note the contents of this report.
 - To note our concerns over the limited progress that has been made to date.
 - To note the work of Argyll and Bute Council to accelerate progress.
 - To note the concerns highlighted by the report and the technical difficulties faced by the infrastructure providers.

* It should be noted that while the report is printed in black and white (which will make some of the diagrams and tables difficult to interpret) colour is available in the digital agenda pack and slides showing the diagrams will be presented at the meeting.

ARGYLL AND BUTE COUNCIL

Environment, Development and Infrastructure 10th November 2016

Development and Infrastructure

Digital Infrastructure Update on External Programmes

2.0 INTRODUCTION

- 2.1 The roll out of digital connectivity throughout Argyll and Bute is critically important for the future economy of Argyll and Bute and also as a place to live, invest and visit. While Argyll and Bute Council has no responsibility to deliver digital infrastructure on the ground Council Officers and Members are actively engaging with infrastructure providers in an effort to speed up the roll out of Superfast Broadband (SFB) and mobile communications throughout Argyll and Bute.
- 2.2 The UK Government has set aside £530M to help Britain develop the best broadband in Europe and Broadband Delivery UK has been tasked by the Department of Culture, Media, and Sport to deliver this at a national level.

'Scotland's Digital Future' sets out how the Scottish Government will deliver a step change in broadband speeds. Commercial deployment plans cover certain areas in the country but there are many areas where commercial infrastructure providers have chosen not to develop. The Digital Scotland Superfast Broadband Project (DSSB) aims to provide fibre broadband infrastructure to those areas.

Work has continued on a number of commercial or Government funded projects through these external bodies which it is hoped will improve the digital infrastructure across Argyll and Bute. This report provides an update on the various programmes being undertaken in Argyll and Bute.

3.0 **RECOMMENDATIONS**

- 3.1 The Committee are asked:
 - To note the contents of this report.
 - To note our concerns over the limited progress that has been made to date.
 - To note the work of Argyll and Bute Council to accelerate progress.
 - To note the concerns highlighted by the report and the technical difficulties faced by the infrastructure providers.

4.0 DETAIL

The Council continues to liaise with partners/stakeholders responsible for Next Generation Access whether it be Superfast Broadband or Mobile Communications.

Next Generation Broadband

4.1 <u>Broadband</u>

Figure 1 below, details the status of Broadband rollout across Argyll and Bute. This indicates that in Argyll and Bute 58.3% of premises have access to Super-Fast Broadband (UK standard), 8.8% of premises have access to fibre (improved service but not Superfast) and 32.8% are still waiting for Next Generation Access. Therefore 41.6% of households still have no access to Superfast Broadband. BT has a contractual target in Argyll and Bute under the Highlands and Islands programme of 75% fibre access by the end of 2017.

HIE have stated that a considerable number of cabinets have been built but not connected and are waiting to be made live, and this target of 75% will be met.

Current figures from HIE indicate that they are on line for 83% coverage in Argyll and Bute by the end of 2017.

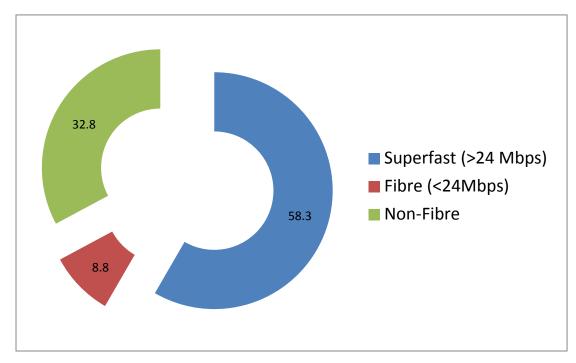


Figure 1: Current status of broadband rollout across Argyll and Bute

For premises that currently have broadband speeds, less than 2Mbps, a voucher scheme is available for a temporary solution. <u>https://www.scotlandsuperfast.com/where-when/the-programme/national-satellite-broadband-scheme/</u>

Connection to a fibre cabinet does not guarantee Superfast speeds. Fibre to the Cabinet utilises part of the old copper network and as broadband speeds degrade rapidly over the copper network, this results in line lengths requiring to be less than 2km from the fibre cabinet to achieve Superfast Broadband speeds.

It should be noted that the 2km distance is copper line length to the cabinet not physical distance of a property from the cabinet. e.g The copper network configuration might mean that a premise is only 500m away from a cabinet but has an actual copper line length of over 2km.

Additionally it should be noted that householders need to purchase an upgraded service from their Internet Service Provider to receive Super-Fast Broadband service.

4.2 BT Commercial Programme

The BT commercial rollout is continuing but is not yet complete. Because the BT commercial rollout is not managed by either HIE or Digital Scotland there is limited information available as to what further works have still to be undertaken within Argyll and Bute.

4.3 Highlands and Islands Programme covering (BC, MAKI & OLI)

This is a government funded programme awarded to BT OpenReach which is being managed by HIE.

Works have progressed slowly over the last 6 months however over this period it has been announced that the following exchanges will be included in the current roll out:

- Achnamara
- Appin
- Barbreck
- Bowmore
- Cairndow
- Coll
- Crinan
- Glenbarr
- Jura

Several more in progress

- Ardentinny
- Clachan
- Furnace
- Kilmartin

- Kilchrenan
- Kildonan
- Kilfinan
- Kilmore
- Lochgoilhead
- Port Askaig
- Portnahaven
- Southend
- Whitehouse
- Port Charlotte
- Port Ellen
- Tayvallich

Some additional cabinets have been added to extend the reach from previously

upgraded cabinets/exchanges due to premises being on long copper lines however exact locations have not been identified as surveys are underway to identify best locations to serve the most premises.

The HIE project is currently being accelerated across Argyll and Bute after a meeting was held between Council representatives, BT and HIE to ensure equitable coverage and investment. It should also be noted that the Council Leader has also raised the issue of the importance of Digital connectivity for the future of Argyll and Bute at the October Convention of the Highlands and Islands Conference meeting.

4.4 Rest of Scotland Programme covering (Helensburgh and Lomond)

This like the HIE project is also Government funded with the contract awarded to BT OpenReach but it is being managed by Digital Scotland. No new connections have been made within the Rest of Scotland programme although work continues in a number of exchange areas with announcements being made on the inclusion of a number of cabinets in the roll out.

Survey packs have currently been received from the contractors for cabinet locations in the following exchange areas-

- 3 in Helensburgh
- 2 in Arrochar
- 2 in Clynder
- 2 in Kilcreggan
- 1 in Rhu
- 4.5 BT Openreach, HIE and Digital Scotland have interactive maps indicating where you can get further information.

http://homeandwork.openreach.co.uk/when-can-i-get-fibre.aspx.

https://www.scotlandsuperfast.com/where-when

http://www.hie.co.uk/regional-information/digital-highlands-and-islands/can-i-getit.html#

The following link has been added to the Digital Scotland website detailing reasons for lack of connectivity.

https://www.scotlandsuperfast.com/where-when/why-cant-i-get-a-date/

4.6 Community Broadband Scotland and GigaPlus Argyll

The GigaPlus Argyll network has an intervention area shown on the map adjacent. This network will operate wirelessly the and broadband signal will be transmitted centrally from Oban via a network of masts located throughout its intervention area. Community Broadband Scotland continue to work with GigaPlus Argyll and ABInternet, who are the



Internet Service Providers. It is hoped that their first wireless connections on Mull can be made before the end of the year; delays have been experienced due to the aggregation of this project and the number of communities that have to be engaged. BT has also announced that the central Oban exchange may have to be completely upgraded. If this is the case then there will be a further delay before the first connections can be made. Construction of the network infrastructure will continue to be progressed, so that when connections are available a greater percentage of premises will have coverage.

4.7 Community Broadband Scotland have started an external consultation to establish if the community of Luing are supportive of being included in the GigaPlus Argyll project. Some of the community have expressed concerns and wish to remain part of the HIE programme. It had already been outlined that BT currently have no plans to extend their fibre rollout to the island. Community Broadband Scotland became involved to provide a wireless solution and the intervention area was descoped from the BT project.

Other broadband issues

4.8 <u>Gainshare, Extension of Funding, Phase 2 (R100 Commitment)</u>

Under the two contracts being delivered across Scotland as part of the Digital Scotland Superfast Broadband Project there is a gain share (claw back) mechanism to the contracts whereby BT are required to return part of the public investment when take up of the new service passes beyond 20% in some related areas.

The modelling exercise, planned to confirm the extent of Phase 1, and which areas it is technically possible for them to cover within Phase 2, has been delayed due to Virgin Media's announcement that they are planning an extension of their commercial coverage. This has required the modelling exercise to be redone. An announcement on the additional coverage to be provided with the £42 million of Phase 2 monies was not expected until the modelling exercise had been completed. Phase 2 has however now become the Scottish Governments commitment to reaching 100% by 2021 (R100).

4.9 Audit Scotland

The <u>Audit Scotland Report</u> was released on the 18th Aug, Argyll and Bute area are one of the six Local Authorities that are still to achieve contractual targets of 75% of premises having fibre access. This is mainly to do with the fact that BT's commercial coverage is very limited in these six areas.

Not all homes passed can access superfast speeds. When a cabinet becomes live the properties served by it are included as premises having access to fibre and are considered to be connected to a fibre cabinet in Digital Scotland Superfast Broadband figures. However a considerable number of premises are on long copper lines which means they are unable to receive an increase in speed. Therefore this is not providing an accurate account of the number of premises with access to Superfast Broadband in Argyll and Bute.

Mobile Communications

4.11 A rough guide to terminology that is regularly used by the mobile industry:

	Definition
•	2G – Second Generation of mobile telephony systems. Uses digital transmission to support, low speed data communications, and short messaging services, (calls and texts).
•	3G – Third generation of mobile systems. This provides high-speed data transmission and supports multi-media applications such as video, audio and internet access, alongside conventional voice services. (Email and webpages).
•	4G – Fourth generation of mobile systems. It is designed to provide faster data download and upload speeds on mobile networks. (music, video streaming and gaming).
•	5G – Fifth generation of mobile systems. This is in the early stages of development and will require additional spectrum to support.

4.12 CTIL (acting for Vodafone and O2)

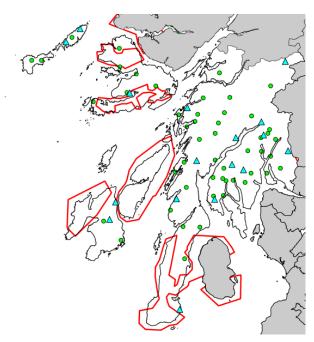
CTIL have informed the Council of a couple of upgrades along the A82 Loch Lomond corridor which will supply 4G along the route which has areas of no mobile coverage availability. Two masts will be upgraded, one near the Military Haul Road covering Luss and the surrounding area, the other at Tarbet. CTIL continue to work to get the required planning consents in place which will enable the physical works to progress.

- 4.13 The next upgrades are expected to be completed by the end of the year and will be in Dunoon, Faslane, the western shore of Loch Lomond and Lochgilphead. However these are forecast works, and the dates could be subject to change.
- 4.14 In Oban and the surrounding area there are 9 sites to be upgraded and 3 new sites to be installed. In the last month CTIL have acquired the necessary planning approvals for these sites and landlord consent to progress with 2 of them. CTIL continue to work on the remaining 7.

There are particular challenges involved in delivering services to areas like Oban not just in terms of topography but also due to the limited number of options for placing installations. This frequently leads to protracted lease negotiations but there is a real focus on getting the network upgraded in this part of Scotland and hopefully some significant progress will be made in the coming months.

4.15 Emergency Services Network

The Home Office has awarded a contract to the mobile network operator EE to provide a 4G network for the emergency services. The network will replace the existing two-way radio service currently run by communications firm Airwave. EE will require to give other mobile network operators access to the new mobile sites which are receiving state aid. HIE and the Home Office working are closely with EE regarding upgrades associated with the contract to provide the emergency service communication system. It has been established that Home Office intervention will



be required to extend coverage in difficult and non-commercial areas. These areas are outlined in red on the plan opposite.

A meeting was held with the Home Office on the 20th September to discuss the extension of the Emergency Service Mobile Communication Program (ESMCP). At this meeting an initial outline of the program area was presented with proposed mast locations provided. However no land negotiations have yet be undertaken and this will be progressed when the tender is awarded. The Home Office have indicated that they are only going to undertake what is required for the successful coverage to the Emergency Service Network. This means that they may not provide sufficient capacity to allow private users to access the system. If other mobile network operator's wish to utilise this infrastructure to improve commercial coverage, they will need to supply the necessary upgrades at their own expense.

4.16 **EE Commercial Programme**

As well as EE being awarded the Emergency Service Network contract they have committed to improve their commercial mobile coverage. They currently have 12 sites going through the land agreement/planning process with additional sites to be announced later this year or early next year.

4.17 Scottish Government Mast on Coll

Working in partnership with numerous stakeholders including Development Coll (a community trust set up to generate income through local enterprise) and Scottish Futures Trust, a state-of-the-art telecoms mast has been funded by Scottish Government and is now owned and maintained by Development Coll. This was a pilot project and Scottish Future's Trust are still exploring whether any additional sites within Argyll and Bute are suitable for a community ownership model. Scottish Future's Trust have advised that prior to additional site recommendations they need to secure an initial mobile network operator to make the mast feasible and to ensure its sustainability.

4.18 EE is in the process of upgrading the Coll Mast for the purpose of the Emergency Service Network and the extent of coverage will be increased significantly with the planned upgrade and height extension. EE have agreed to pay for the extension and additional works along with an annual rent of £6.5k a year. With this annual rent the Coll Pilot project is currently sustainable. In the event that EE are not awarded the next Emergency Service Network contract then the share licence will be transferred to the new operators.

4.19 Other Mobile Issues

Improvements to mobile network coverage have been slow across Argyll and Bute, however it is anticipated that this is going to be advanced rapidly as mobile network operators have a requirement for major coverage improvements before the end of 2017. A coverage matrix from key settlements can be seen at Appendix 1.

4.20 As part of its long-term economic plan, the UK Government has secured a binding agreement with the mobile networks EE, O2, Three and Vodafone to tackle poor signal issues in so-called 'partial not-spots'. These are areas within the UK that have coverage from some but not all of the four mobile networks. Depending on which network consumers are on, they may have no coverage in these areas.

No cash payments will be made by Government to the mobile networks as part of this agreement. This deal will also result in cutting total 'not-spots' where there is currently no mobile coverage by two-thirds. This will support the Government's existing £150m programme to take mobile coverage to the areas of the UK that have no coverage at all. As a result of the agreement, many areas will receive better data coverage, some for the first time.

Consultations

- 4.21 A response to the DSSB Rest of Scotland Gainshare Public Consultation was submitted, which can be seen in Appendix 2. Gainshare is the clawback mechanism, which essentially requires BT to return part of the public investment when take-up of the new service passes beyond the 20% mark. The current value of the Scotland's share is £17.8 million.
- 4.22 The consultation on changes to General Permitted Development, under Planning Regulations, is currently live. These changes mainly relate to changes to the Electronic Communication Code to ease the installation of digital infrastructure. Due to devolved powers additional Scottish Government legislation is required. The Council's Planning service is currently preparing a response.
- 4.10 An online survey is currently in the process of being developed which will initially be sent out to all Council employees to try and establish the current position of Fibre Broadband availability across Argyll and Bute. The aim is to get an indication of the number of households with access to Superfast Broadband

access and further detail on actual speeds.

5.0 CONCLUSION

5.1 Work is progressing on all aspects of digital whether it is mobile communications or broadband. However considerable issues are still to be resolved. Officers and Senior members of the Council will continue to monitor progress and lobby for accelerated progress in, Argyll and Bute wherever possible.

6.0 IMPLICATIONS

- 6.1 Policy The Scottish Government has made a commitment for Scotland to have 100% Superfast Broad coverage by 2021.
- 6.2 Financial None.
- 6.3 Legal None.
- 6.4 HR None.
- 6.5 Equalities Improving Services for rural/fragile communities.
- 6.6 Risk The lack of progress in delivering digital connectivity throughout Argyll and Bute has the potential to negatively impact on our economy and attractiveness as a place to live and work.
- 6.7 Customer Services None

Executive Director: - Pippa Milne 3rd October 2016

For further information contact: lain MacInnes Digital Liaison Officer <u>lain.macinnes@argyll-bute.gov.uk</u> 01546604647/07775551873

Policy Lead: - Councillor Aileen Morton

APPENDIX 1. Mobile Phone Coverage of Mobile Network Operators (MNO's) in Key Settlement

O=Outdoor Coverage, I=Indoor Coverage

Full Coverage, Partial Coverage, Poor Coverage

	Vodafone						EE							02							Three					
	2G		3G		4G		2G		3	G	4G		2G		3G		4G		2G		3	G	4G			
	0	I	0	1	0	I	0	I	0	I	0	I	0	I	0	1	0	I	0	1	0	1	0	I		
Main Towns		_							-				-													
Campbeltown																										
Dunoon																										
Helensburgh																										
Oban																										
Rothesay																										
Key Settlements																										
Lochgilphead																										
Ardrishaig																										
Cardross																										
Bowmore																										
Inveraray																										
Sandbank																										
Tarbert																										
Tobermory																										
Key Rural Settlements	_																									
Ardfern/Craobh Haven																										
Ardminish																										
Arinagour																										
Barcaldine																										
Benderloch																										

	Vodafone							EE							02							Three					
	2	G	3G		4G		2G		3G		4G		2G		3G		4G		2G			G	4G				
	0	Ι	0	Т	0	I	0	Т	0	I	0	I	0	I	0	Ι	0	I	0	Ι	0	I	0				
Bunessan																											
Cairndow																											
Carradale																											
Clachan																											
Craighouse – Keills																											
Craignure																											
Crossapol																											
Connel																											
Dalmally																											
Furnace																											
Garelochhead																											
Glenbarr																											
Tighnabruaich																											
Kilcreggan/Cove																											
Port Charlotte																											
Port Ellen																											
Rosneath/Clynder																											
Salen																											
Southend																											
Strachur																											
Taynuilt																											
Tayvallich																											

Matrix Compiled using data from OFCOM mobile phone coverage maps (1st October 2016)

APPENDIX 2. DSSB Gainshare Consultation response

Where it is now available within Argyll and Bute the uptake of SFB experienced to date has been significantly high – the demand for SFB is there. Argyll & Bute should get an equitable proportion of the gainshare investment as this is due to the uptake above what was expected in BTs' initial expectation, and not on new development postcodes that have been established since 2012.

From the OFCOM report Connected Nations 2015, 70% of premises within Argyll and Bute cannot receive a download speed greater than 10Mbits/s – more has to be done.

Where SFB is not available some premises are still classed as 'connected' or included with in the figures reported as 'Total Homes Passed (THP)'. This is misleading. Many premises are connected to a fibre activated cabinet but due to the distance they are located away from that cabinet they are unable to get the benefits of SFB. It is therefore imperative that the focus of the gain share monies is spent on improving this issue.

There should be greater transparency in relation to availability of SFB based on known facts around actual availability from round one. Figures should be published on premises that can now physically receive SFB if they so desire. Comparative figures should then be published regarding those premises that have taken up SFB. If these figures are similar then the demand for SFB is there.

Figures should also then be published regarding those that have applied for SFB on line but cannot receive it and are one of these premises that are included as Total Homes Passed.

Exchange Only Lines (EOL) should also benefit from the gain share when the issue is that premises connected to an EOL cannot be connected as yet to a fibre cabinet.

More premises in rural locations will take up High Speed Broadband if it is available as they do not have the benefits of good mobile (3G-4G) connectivity unlike virtually all urban areas.