

Cross Party Group in the Scottish Parliament on Rural Policy 2017/18

Tuesday 5th June 2018, 6-7.30pm, Committee Room 4

Technology and Rural Communities

Approved Minutes

Attendees

Name	Organisation
Graeme Dey MSP	Scottish Parliament (CPG co-convenor)
John Scott MSP	Scottish Parliament (CPG co-convenor)
Alexander Burnett MSP	Scottish Parliament
Margaret Currie	James Hutton Institute (Speaker)
Richard Harris	Balquhiddar Community Broadband (Speaker)
David Johnstone	Balquhiddar Community Broadband (Speaker)
Ailsa Clark	InspirAlba (Speaker)
Alistair Hamilton	SRUC (Speaker)
Davy McCracken	SRUC (Speaker)
Sarah Allison	Soil Association
Jane Atterton	SRUC
Joshua Bird	SRUC
Wojciech Borowski	Planning Aid Scotland
Andres Cibils	New Mexico State University
Rachel Creaney	University of St Andrews
Paul Daly	Scottish Rural Action
Neil Davidson	Scottish Government
Callum Hendry	SRA
Jim Hume	National Rural Mental Health Forum
Ameila Kuch	Scottish Government
Julia Latto	Scottish Enterprise
Ian Macdonald	
Michele Macdonald	
Catriona Maclean	Scottish Government
Marianna Markantoni	SRUC
Shaun Marley	Stirling Council
Ross McLaren	SRCG
John McMillan	East Lothian Council
Caroline Millar	Go Rural for Business
Gavin Mowat	Scottish Land and Estates
Julian Pace	Scottish Enterprise

Eugenio Perez Certucha	University of Edinburgh
Nicola Pringle	Lothian Broadband
Alistair Prior	Scottish Government
Peter Ross	Dumfries and Galloway LEADER
Sarah Skerratt	SRUC
Clare Slipper	NFUS
Susan Smith	East Lothian Council
Leanne Townsend	James Hutton Institute
David Walls	Lothian Broadband
Simon Warr	West Fife Enterprise
Marilyn Workman	Centre for Stewardship

Apologies

Name	Organisation
Graham Blythe	European Commission
Jackie Brierton	GrowBiz
Andrew Brough	Buccleuch Estates
Karen Dobbie	SEPA
David Gass	Rural Matters LLP
Helen Glass	SAOS
Stephen Graham	Highland Council
David Henderson-Howat	
Ann MacSween	Historic Environment Scotland
David Miller	James Hutton Institute
John Mitchell	Anderson Strathern
Duncan Nisbet	Scottish Government
Karen O'Hanlon	UHI
Ann Packard	
Lorna Philip	University of Aberdeen
Wayne Powell	SRUC
Chloe Purves	Scottish Enterprise
Alistair Stott	SRUC
David Watts	University of Aberdeen
Ruth Wilson	James Hutton Institute

1. Welcome, introductions and apologies

Graeme Dey MSP (chair) welcomed everyone to the meeting. There were no further apologies to add to those already noted by the Secretariat (see above). Graeme Dey MSP

noted that there were several MSPs in attendance, including John Scott MSP (Group co-convenor), Finlay Carson MSP, Peter Chapman MSP and Alex Burnett MSP.

2. Approval of minutes from the previous meeting (on 'Policing and Rural Scotland') held on Tuesday 6th March 2018

The unapproved minutes from the previous meeting were circulated by the Secretariat on 18th April 2018. No further edits/comments were received. The minutes were approved by Peter Ross as a true record of the meeting. The approved minutes can be found online [here](#).

Graeme Dey MSP noted that a response had been received from Cabinet Secretary for the Rural Economy and Connectivity Fergus Ewing MSP, in response to the letter sent to him following the December 2017 meeting on 'the rural workforce'. The letter is available to view online [here](#).

3. Presentations (approx. 8 minutes each), followed by discussion

Four presentations were given at the meeting and the key points can be summarised as follows:

- **Margaret Currie (James Hutton Institute) and Lorna Philip (Aberdeen University): *Digitisation and Rural Communities: priorities, preferences, barriers and opportunities***
 - It is important to understand digital opportunities and challenges in the context of wider changes that are happening in rural communities, including: outmigration from remote rural areas but population gain in many accessible rural areas; an ageing demographic overall; service delivery challenges (exacerbated recently by public sector funding cuts and population ageing); new ways of delivering services (partly in response to challenges); changes to the make-up of employment in rural areas, with more service sector-based activities for example, etc.
 - We have also seen challenges resulting from neoliberalisation, the global financial crisis and Brexit. However, digital represents a potentially very positive story which can bring benefits for rural areas. Digital enablement is critical for everyone to support the Scottish Government in delivering its National Performance Framework and National Outcomes, including promoting economic sustainability, reducing the negative impacts of travel, etc.
 - But while digital bring opportunities, digital connectivity is not a panacea to solve all challenges. It is one of a suite of solutions that need to be tailored to the circumstances in particular rural areas.
 - The benefits of digital to rural businesses are clear too: for example, digital connectivity can open tourism businesses up to global markets, through online advertising to attract visitors, digital connectivity during their visit and use of social media to give feedback on places afterwards.

- Digital connectivity can promote social inclusion by providing different ways for people to access a range of services including entertainment, home/tele-working, reducing the effects of physical distance, providing different educational opportunities, new cultural experiences, etc.
 - Digital can promote the creation of 'smart homes' equipped with technology to support people in everyday living. E-health is a major part of the NHS enablement agenda around supporting older people to stay at home for longer.
 - But all of these uses require a reliable and quick internet connection for individuals, businesses, communities, etc. to overcome some of the challenges of being in a rural place (e.g. distance to markets/services), and to support economic diversification and growth, reduce isolation and inequality, improve access to services, etc.
 - As well as rural areas generally having poorer connections than urban areas (and particularly the most remote and sparsely populated areas, and premises on the fringe of settlements), there are other barriers which mean that not everyone is well connected. The 'oldest old' and mid-life adults often find that they are not connected; there may be income barriers with the cost of digital equipment and service contracts too high.
 - The assumption that 'going digital' is the solution for all rural challenges is false, however equality of access to 'decent' broadband between rural and urban areas is essential.
 - The Universal Service Obligation of 10MB/second for all is the starting point but *not the solution* – future proofing is therefore necessary in this respect
- **Richard Harris and David Johnston (Balquidder Community Broadband):**
Balquidder Community Broadband: The Digital Glen
 - The community of Balquidder is made up of approx. 200 properties and it sits within the Loch Lomond and the Trossachs National Park. It had been 'bypassed' by commercial broadband companies and Government programmes so the community decided to 'do it for ourselves'.
 - As fibre is being used, the Balquidder scheme is future-proofed and will provide up to 10mb/s without needing to do major equipment upgrades in the coming years. The first properties were connected at the end of 2017; the network when it is complete will be 32km. The network is connected to a planned data centre in Comrie and the plan is to complete the whole network by the end of 2018.
 - The Balquidder group is guided by their belief that 'global class digital connectivity is the railway of the 21st century' as it is critical in terms of launching and sustaining economic activities, community connections, etc.. There are also no negative environmental impacts of such digital schemes, as there are with large-scale transport infrastructure projects.
 - Connectivity is transformational. A good example is that farmers no longer have to drive 30 miles from Balquidder to Stirling to do their business returns. It is now possible for local people to order items online. Digital connectivity can slow/reverse depopulation – in Balquidder's case the population is now increasing.

- Digital creates a level playing field between rural and urban or it can even tip the balance in favour of rural as people can do more in quiet rural environments where quality of life is higher. It can therefore drive diversification and resilience in the rural economy, stimulating inward investment and in-migration. There are subsequent benefits to quality of life and wellbeing if services also improve, and people can stay in the area for longer if they can access tele-health options.
 - The real cost for projects like that being done by Balquidder is the cost of putting the infrastructure into the ground; the cost of the fibre is very low. 90% of the success of the project is due to the volunteer labour provided by the community in the glen. The cost of the project is estimated at approx. £2,800 per property, £600 below the Government's cost threshold of £3,400 for the USO and about half what Community Broadband Scotland (CBS) has been rolling out for 4 mb/s wireless connections.
 - The biggest challenge for Balquidder and other communities is access to backhaul. The Balquidder community was lucky as they found a company with a bunker closeby but this solution is not available for many communities.
 - Balquidder has demonstrated that projects like this can be delivered successfully and they are keen to support other communities with similar projects.
 - A key question is how does the Government enable rather than deliver universal and future proofed services, without skewing the market in favour of particular providers. What is the best model to adopt and how can communities effectively turn a need into an opportunity? It is also important to explore how small networking companies can get the necessary critical mass to get involved and how public and private sector funding can be effectively integrated.
 - It can be a hard road to secure the funding. A small glen like Balquidder could not do the project on a commercial basis so funding was required but the bureaucracy associated with this was substantial. Even downloading/uploading the necessary paperwork from CBS took several hours. There should be a different approach taken to bring about several million pound projects for Government, compared to smaller commercial projects for communities that are keen to get involved.
 - There is also a need to move beyond the risk-averse approach from civil servants especially with respect to communities. There are apparently concerns with working with communities because it 'doesn't fit with existing procedures' which were designed for the large commercial operators like BT not for a group of community volunteers doing everything themselves from home. These are important hurdles that need to be addressed to enable communities to take on projects and to make them successful.
 - Balquidder currently has about 7% of its network rolled out; this compared to the UK level where only 3% of premises are connected to full fibre.
- **Ailsa Clark (InspiraAlba): *Developing digital networking solutions to support collaboration, peer learning and networking for social enterprises and rural communities across Argyll and the Islands***

- The work of InspirAlba covers Argyll and the Islands, which is a very large rural area with a dispersed population. The area suffers from challenges which are common to many rural communities, particularly the out-migration of young people who go away for education and then have little knowledge of the local economy when/if they come back.
 - The enterprise policy context tends to focus on growth and scale but these are not applicable to rural areas; in rural the sum of the small parts equals quite a lot. There needs to be greater recognition amongst policy-makers about the size/scale/type of impacts from projects in a rural setting.
 - 34% of social enterprises in Scotland are in rural areas (compared to 18% of Scotland's population) but policy is shaped by the urban majority and does not recognise that small is often beautiful. In rural areas, social enterprises tend to be delivering essential services and have specifically evolved to service community need, which is different to urban-based social enterprises.
 - However rural social enterprises face many challenges in relation to capacity, training and sharing expertise and this is where technology can really help.
 - Many rural social enterprises are hugely significant in terms of the local economy in which they operate, and often provide employment and training for those who face barriers to being in the job market, for example. The majority of these social enterprises are hugely enterprising, although the grant funding that many receive is a critical part of the package of maintaining vital services (but can itself bring challenges as a result of the short-term nature of most funding).
 - All of the social enterprises operating across Argyll and Bute recognise the importance of networking to share ideas and best practice, deliver training, etc. but bringing people together physically is difficult due to geography so technology can really help here (e.g. through Zoom, webcasts, online discussion fora, live streaming, etc.).
 - Technology can also help to effectively bring organisations together to collectively procure from the public sector (who usually prefer to deal with a bigger company/contract). Technology can also be used to draw rural voices into national discussions helping to reduce the domination of the urban voice.
 - Getting young people involved in discussions around the most appropriate technological solutions can be very useful as they tend to have the best digital skills. One example is inspiring young people to think about local career opportunities using short films which can be viewed on smart phones.
 - It can certainly be harder for small organisations to attract resources as their capacity is limited but they have creativity and enterprise in abundance. The sum of the parts can be hugely influential and lots of small things can achieve big impact.
- **Alistair Hamilton and Davy McCracken (SRUC): *Environmental Data: Drones and Networks***
 - Davy McCracken opened the presentation by commenting on the extent to which technology is already used in agriculture. He also emphasised that the presentation was less focused on the technology itself (such as drones) and more focused on the data which is collected and how it can be used.

- Alistair Hamilton showed a number of images including photos of crops taken using a drone which can be used to detect diseases quickly and at less cost than with a light aircraft. But translating these images into something meaningful in a relatively short space of time requires substantial computer processing power.
- Some of the applications available are highly developed, including the ability to use different sensors to pick up different wave lengths to see plant disease for example. Images can be turned into 3D models and tree height can be shown down to cm resolution. Software can be 'trained' to do things differently to find out what we want to know e.g. to identify sheep scattered over a large area, or to locate particular crop species and identify disease.
- There are some challenges to using drone technology, including that the operation of drones can be affected by the weather (wind and rain), there are increasingly tight regulations on flying drones (for example, only in the line of sight rather than round a hillside), and the need for certifications, and the availability of equipment and the skills to use them. And again, a key challenge is having the capacity to process the data once it is collected.
- This technology is being used in many different ways to replace manual work, including forestry, river surveying (e.g. in relation to flooding), infrastructure inspections, and in SRUC's case, for the education of students.
- Davy McCracken spoke about the ways in which technology is being used on SRUC's Hill and Mountain Research Centre at Kirkton, which has put the farm at the forefront of the global Internet of Things (IoT). He specifically focused on the LoRa Network which is a long range, low power communications platform on which sensors and other devices can be deployed from which small amounts of data are transmitted periodically. This is the first LoRa network covering a remote rural part of the UK and the Scottish Government (as set out in the Digital Strategy) is committed to establishing LoRa networks across Scotland. This technology does have the potential to be a game-changer in terms of agricultural and environmental data collection in large parts of remote rural Scotland.
- The Kirkton farms (2,200 ha) are serviced with two gateways. The technology itself is relatively cheap and has a high capacity; one gateway can take data from 10,000 different sensors.
- HMRC has been working with a company called CENSIS to set up the Network. This is a good example of industry - which has the technology to connect people but needs help to identify potential needs - is working with a user to identify what data is needed to answer which questions and in what ways.
- The technology can be adopted for many different kinds of uses, including measuring soil temperature and moisture, tracking animals on/off farm, peatland restoration monitoring to show the benefits regarding water table coverage, water depth and flow predicting in rivers, etc. HMRC serves to demonstrate how the technology can be used effectively in rural locations.

Questions and Discussion

- **Finlay Carson MSP:** Why did Balquhiddy move away from working with CBS? And how are they succeeding in rolling out the network using fibre?
 - **Balquhiddy:** The process of working with CBS was very time-consuming, and involved a range of challenges including legal disputes and complexities surrounding the advice that was given at different stages (e.g. regarding the benefits of using wireless technology), the negotiation process, and funding availability (including in respect to the broadband vouchers).
- **John McMillan (East Lothian Council):** Noted that he had a similar experience with CBS. He asked about Balquhiddy's starting point of being able to take fibre from the bunker and what has been the total cost?
 - **Balquhiddy:** For them, 'just go and do it' is a key phrase! It was partly serendipity with the bunker. It is an old nuclear command bunker which was decommissioned and then bought by an ISP as its ideal for a secure data centre. The community had contacts with the company which enabled the engagement to commence.
- **David Walls (Lothian Broadband):** Lothian Broadband are a commercial company. They looked at the Balquhiddy project and decided that the project could not be done within the parameters set. What is the sustainability of the project? To date Lothian Broadband has been working mainly on wireless projects but they are moving towards fibre even in East Lothian where wireless is viable. The Balquhiddy project's infrastructure is sustainable but what about its operation? How are Balquhiddy ensuring that the reliance on individuals in the community is future-proofed?
 - **Balquhiddy:** As far as they are concerned, to be sustainable, the project must 'at least be washing its face commercially'. The build costs are falling as the project progresses. The project makes enough money per month to be financially viable. They are currently working towards having a 'frontline support system' to provide immediate response when help is required by a user. They are in the process of training people in the community to be able to provide help so that there is more than one point of immediate response. An element of the project still relies on local goodwill to help solve problems and therefore the availability of local technical knowledge, but this does not cause any concerns as the community is generally very engaged in the project. The BARN project in rural Lancashire has paid staff and a voluntary network which is a different model which works for them. The key is to keep everyone engaged and informed.
- **Caroline Millar (Scottish Enterprise Rural Leader former participant):** Former participants on the Scottish Enterprise Rural Leaders course have put out a survey to fellow Rural Leaders to find out about good and bad experiences of rural broadband. They would be happy to share the survey results with CPG members once it is completed.
 - **Sarah Allison (Soil Association):** We need to have a better way of sharing best practice amongst community groups, especially information-sharing between communities who have done/are doing projects to those who are keen on doing so. This can help to convince communities that they shouldn't be frightened and should 'get stuck in'. Seeing examples of successful

projects will help to encourage others (as well as learning from others' mistakes and what they would do differently).

- **Ailsa Clark (InspiraAlba)**: commented that their work in Argyll and Bute involves bringing people together to access digital for peer learning, for example, through webcasts. There are opportunities for communities to engage in learning exchanges and the Scottish Community Alliance supports some of these.
- **Balquidder**: Are aware of lots of people who are looking for advice in other communities. They also know of other communities that are further ahead than themselves from which they can learn. Knowing that it can be done is an important motivation and has been very important for their progress. Forums at both local and national level can be useful. Balquidder specially mentioned the UK Network Operators Forum which is an independent network for cooperative associations. It has a technical focus but is mostly composed of small network operators and community projects. there is also the Broadband Delivery Group which has made a significant change in that it has started to view broadband as being key to securing economic development – i.e. as a benefit rather than an infrastructure cost.
- **John McMillan (East Lothian Council)** Thanked Balquidder for their presentation. He enquired specifically as to whether Balquidder know anyone who has done microtrenching and reiterated the benefit of hearing about and learning from other case studies. He suggested that having a website where information could be exchanged would be very useful.

Action: RPC as Secretariat to set up an area of their website where information on existing community broadband projects can be made available.

- **John Scott MSP** asked about the potential of drone applications to help with a range of land use and land management questions, including carbon monitoring.
 - **Alistair Hamilton (SRUC)**: Noted that the potential of this technology is great. He noted that the technology is moving faster than the regulations so the limitation on uses will relate to the ability to do these things. While the need for regulation is absolutely understandable, there is also a need for competent drone operators to have some autonomy in how they use them (e.g. being permitted to fly them outside the line of sight for example). Amazon using drone technology to deliver parcels shows the potential of the technology.
 - **Davy McCracken (SRUC)**: Noted the potential of this technology to help with a range of applications, including in relation to carbon. Sensors are hugely useful for estimating 'how much of something is somewhere'. An array of sensors in a particular geographical area can provide very detailed information on a particular issue relatively cheaply. For example, technology could be used to measure how and how far land managers are delivering designated public goods. Drones and the data generated from their use could be a valuable means of exploring what level of variation could be acceptable from land managers on a particular issue, and linking this with payment

levels. Drones can be used to show robust data on trends as well as gathering individual data.

- **Paul Daly (Scottish Rural Action):** We know that banks are keen on moving to a cashless society but how can we ensure that rural communities are ahead of the curve with regard to new technologies and ensure that big corporations are taking care of their interests?
 - **Margaret Currie (JHI):** Noted that it can be harder to make a difference on these kinds of issues with private companies, but it is up to all of us, researchers, communities etc. to engage with organisations as much as possible. She noted that HIE are currently doing some work on bank closures and how they are affecting rural communities. We need to understand better what the challenges are for people regarding the use of digital technologies, and why digital services are not working. This can be due to a range of challenges, including infrastructure/connectivity, age-related issues, etc. It's a case of working out the challenges and then finding solutions. The latter might include increasing awareness of services that post offices can provide, for example.
 - **Graeme Dey MSP:** We need to get to a position where banks and other large corporations have to care about the consequences of their actions. They need to better understand their moral responsibility to customers.
- **Jim Hume (National Rural Mental Health Forum):** The Forum is tackling issues around access to services, health care, etc. especially in remote rural areas. He asked if Balquidder has found any evidence that the NHS is taking an interest in providing telehealth in their area?
 - **Balquhidder:** There has been no evidence of this so far in the project. However, the community are currently talking to Stirling Council about turning the village hall into a community hub and once that is done, there is great potential for a range of uses to use the hall as a base. Delivering the broadband is stage 1 of the project and there is then a need to look at how to develop other activities in the community building on the digital connectivity.
 - **Graeme Dey MSP:** Mentioned the community of Letham in Angus which has an older demographic, like many rural communities. There was no GP in the village and no chance of that changing in the near future. So they now have an impressive set up using telehealth care and the village is working with the NHS to continue to expand the project.
 - **Margaret Currie (JHI):** Reported on some work that she has been involved with looking at use of technology for people with chronic pain and who are housebound. The research found that older women in particular were reluctant to give up the face-to-face social interaction with health professionals to use digital technology. She is also aware of a PhD project exploring the use of ipads to allow people to engage remotely in activities to improve their mental health and wellbeing. One project has trialled the use of digital technology to play bingo but found that people valued the experience of being observers and seeing what was going on face-to-face, which isn't possible using digital technology. It is not just the NHS that is interested in enablement but housing associations are also active in this area, doing work to enable people to stay in their own homes reducing the demands on nursing homes.

- **Shaun Marley (Stirling Council):** Shaun used to work for CBS and he cited some of the challenges resulting from trying to use wireless technology in rural areas where the terrain is difficult, which is a problem for the Internet of Things.
 - **Davy McCracken (SRUC):** commented that the network is effectively 'there' and the sensors can then be connected. He also noted that the data is encrypted when it is downloaded so it is secure. If someone installs a network then it is almost there as a public good for others to access. Having said that there are some limitations when using this in a rural environment, not least the long walk to access some of the sensors/data.
- **Sarah Skerratt (SRUC):** Asked the speakers what would be the one step change application of technology that could really address a key challenge?
 - **Balquidder:** The one thing that the Government could do is to go back to a block grant and take de minimis out of the equation. The example of Finland was cited which is funding broadband projects using general block grant exception regulations (GBGER).
 - **Margaret Currie (JHI):** There is great value in facilitating ways in which communities can learn from one another and we need to think creatively in terms of finding ways to make this happen.
 - **Ailsa Clark (InspiraAlba):** Building on the point about sharing information between communities, there has been a fair bit of work looking at digital inclusion (e.g. skills, usage of digital for business, etc.) but relatively little investment in how digital can be utilised for networking and collaboration and sharing learning and this gap should be addressed.
 - **Davy McCracken (SRUC):** The technology exists and it is challenging but feasible to get the data. The key challenge that remains is to achieve a step change in user understanding about how best to utilise the data. Being able to interpret that data and showing data visually in meaningful ways is of paramount importance.
- **Peter Ross (Dumfries and Galloway LEADER):** noted that the 2018 Scottish Rural Parliament will take place in Stranraer in November. The event offers a great opportunity for showcasing existing projects and sharing best practice ideas between communities.

Graeme Dey MSP closed the discussion by thanking all speakers and participants for their questions

4. Next meeting: Autumn 2018 (topic and date to be determined)

Graeme Dey MSP noted that the Group's co-convenors and Secretariat will be meeting shortly to decide on the programme for next year's meetings. He encouraged anyone with any ideas to send them to the Secretariat to inform the discussion.

5. AOB

No other business was noted.

Graeme Dey MSP closed the meeting, thanking all speakers and participants.