

## CAIRNGORMS NATIONAL PARK AUTHORITY

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### FOR DECISION

**Title:** **DELIVERY OF SUPERFAST BROADBAND IN THE NATIONAL PARK**

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#### **Purpose**

To provide an update on the delivery of Superfast Broadband in the Cairngorms National Park and set out the proposed approach to addressing provision in those homes and businesses that are hardest to reach.

#### **Recommendation**

##### **That the Board:**

- a) notes the progress that has been made to date;
  - b) agrees in principle to support the development of the Cairngorms Community Broadband Project; and
  - c) provides advice on the identification or establishment of a suitable community-based delivery organisation.
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## DELIVERY OF SUPERFAST BROADBAND IN THE NATIONAL PARK – FOR DECISION

1. The need for significant improvements in digital connectivity was highlighted as a priority in the Economic Strategy for the Park. The Cairngorms Digital Steering Group was set up to promote coordinated activity in this field and to ensure that opportunities for partnership working are maximised and duplication avoided. The terms of reference and membership are at **Annex I**. The Group has kept an overview of the rollout of the Digital Scotland Superfast Broadband (DSSB) project and have stimulated some useful connections between the policy areas that are of interest to the Park – for example, considering digital connectivity as part of the A9 Dualling Project and facilitating dialogue with developers together through the Developers Forum.

### Digital Scotland Superfast Broadband

2. CNPA is currently working with the Scottish Government, Highlands & Islands Enterprise (HIE), Community Broadband Scotland (CBS) and local authorities to support improvements in connectivity in the National Park through the ‘Digital Scotland’ roll-out of Superfast (or ‘next generation’) Fibre Broadband\*. This Scotland-wide infrastructure project is a £410 million project being funded by the Scottish and UK Governments, the European Union, local authorities and HIE.
3. The Scottish Government and HIE embarked on a procurement exercise to appoint a suitably experienced partner to co-invest in the provision of next generation broadband services across the region. BT emerged as sole bidder and a contract was signed in March 2013. BT is contributing £126.1m to the project across Scotland. The BT Group consists of five customer-facing lines of business; BT Openreach provides the UK’s telecommunications infrastructure (exchanges, street cabinets, etc) and the copper and the fibre that connects the infrastructure to homes and businesses.
4. The DSSB project will deliver access to fibre broadband to between 84% (in the area covered by HIE) & 96% (the rest of Scotland) of homes and businesses in Scotland by the end of 2017. The project is designed to be rolled-out to as many people as possible, as quickly as possible, from existing fibre infrastructure.
5. Significant progress has been made within the last year and there is now availability to connect to fibre in Grantown-on-Spey, Aviemore, KinCraig, Kingussie and Ballater. The communities of Boat of Garten, Braemar, Carr-Bridge, Cromdale, Dulnain Bridge, Nethy Bridge, Newtonmore and Tomintoul will all have fibre broadband installed by the end of 2016. Take-up of the service is reported by HIE to be good and this will allow some “claw-back” of public sector funding from BT. Meanwhile, a strand of work to promote greater use of digital connectivity is under way through a Digital Inclusion programme. This is especially important in remote and rural areas; the Highlands is known to be the region in UK with second highest proportion of people (17.9%) who do not use the internet. The social value to an individual of being online for the first time is estimated across Scotland to be £1064/annum (Source: The Highland Council).

6. While the progress with broadband roll-out is to be welcomed it should be noted that there will be many households and businesses in and around these settlements that will not benefit from superfast speeds, even though they are ‘connected’ to fibre infrastructure. This is because the speed delivered is dependent on its distance of the premises from the fibre cabinet. The further away the premises are the lower the speed, due to the continued utilisation of copper telephone line. The copper line generally needs to be less than 1.2km long to deliver “superfast” speeds (24Mbps or more).
7. In November the UK Government pledged that work is now starting to introduce a Universal Service Obligation with the aspiration to give people the legal right to request a connection to broadband with speeds of 10 Mbps, no matter where they live, by May 2020. A consultation on this is likely to begin in early 2016. Although this is potentially a positive initiative, particularly for remote and rural areas, the implications for existing work are not yet clear.

## Community Broadband Scotland and local authorities

8. CBS, as part of HIE, has been tasked as part of the Scottish Government’s Digital Scotland strategy to work with people who are unlikely to benefit from the DSSB project. CBS helps communities find sustainable ways to get faster broadband, providing advice, guidance and project funding to develop local projects and partnerships and tailored digital solutions through the use of innovative technologies and business models. The Scottish Government has committed £7.5 million to CBS to March 2018. In addition, £9m has been allocated from the 2014-20 Scottish Rural Development Programme to support broadband delivery in the most rural communities.
9. CBS initially identified six community projects to act as ‘pioneers’, and CNPA helped to ensure that two of these projects were located in the National Park (Corgarff & Glenbuchat, and Tomintoul & Glenlivet). These projects were selected before coverage of the DSSB project was established and, as a result, there have been difficulties in taking the work forwards, compounded by communications difficulties resulting from contractual relationships with BT Openreach about which specific areas would benefit. More recently it has emerged that the reach of fibre roll-out will be greater than originally envisaged and some of the ‘pioneer’ areas are expected to have some fibre coverage. While this is positive news the ongoing uncertainty around this issue has caused significant delays and frustration in the relevant communities. A summary of progress is provided in **Annex 2**.
10. Each of the local authorities is involved with the DSSB project but have taken a different approach to investment in broadband depending on their circumstances. Aberdeenshire Council have been the most proactive and committed £18m in September 2012 to improve broadband connectivity, targeted at those premises that currently receive speeds of 2Mbps or less. Through an agreement with Scottish Government the Council included committed to providing early infill solutions (alternatives to fibre broadband) and trials have been undertaken across Aberdeenshire using satellite solutions with speeds of up to 30Mbps. The installation is free but user charges have to be met by the subscriber. Feedback to date indicates

that the services are proving to be much more reliable and faster than previous satellite broadband options although they do have data limits that can be restrictive.

## **Proposed Cairngorms Community Broadband Project**

11. As result of experiences in the Cairngorms and elsewhere, CBS have now established a model for working at a more strategic or regional level to assist communities through larger, “aggregated” projects. The approach aims to overcome the scale, capacity and sustainability related issues that can be associated with working with a number of smaller, “stand alone” projects.
12. CBS has committed to use £9 million of funding via the SRDP over the period 2015 to 2020 to extend penetration and coverage of CBS aggregated projects throughout Scotland. CBS will fund up to 100% of demand stimulation and project development costs and 89% of capital costs. Projects will be supported where there is clear evidence of market failure and no prospect of solutions being delivered by the public sector.
13. A number of such schemes are programmed across Scotland but the most advanced is currently being piloted in the Argyll Isles where CBS have supported seven community groups working together (including 3,000 people on seven islands in 1,500 premises) to build a wireless project which will deliver next generation broadband to 95% of residents and businesses in the area by the end of 2017. Current broadband speeds available within the region vary from below 1Mbps up to around 6Mbps. The new GigaPlus Argyll project will cost around £1.2 million and will deliver speeds of over 24Mbps, never dipping below 15Mbps. A summary of the project is in **Annex 3** and further information will be provided at the Board meeting about other similar projects in Skye and in Fife.
14. The potential for an aggregated project specifically focused on the Cairngorms National Park has been discussed with the Digital Communication Steering Group and with the Association of Cairngorms Communities and there is considerable support in principle.
15. CBS has estimated that for reputable suppliers to be attracted to deliver Superfast services over community-owned broadband infrastructure the number of connections required is at least 600, and more likely to be nearer to 1,000. Initial scoping work indicates that the number of potential beneficiaries in the Cairngorms National Park is suitable and the costs have been estimated. CBS have the funding available and, if the proposal is accepted, will work with CNPA on delivery. The key information with comparative information for other similar schemes is in Table I.

**Table I: Summary of Aggregated Projects (Community Broadband Scotland)**

<b>Aggregation areas - Phase I</b>	<b>Premises</b>	<b>Population benefiting</b>	<b>Area km<sup>2</sup></b>	<b>Estimated cost (£k)</b>
Cairngorms National Park	966	1820	4528	1,274
North and West Skye	1640	2678	1250	1,500
East Neuk and Howe of Fife	1128	2693	196	1,000
<b>Total</b>	<b>3734</b>	<b>7191</b>	<b>5974</b>	<b>3,774</b>

16. The design and technology that would be used for a community broadband project in the Cairngorms has yet to be finalised but is most likely to include wireless due to the topography of the area. Certain areas of the Cairngorms may be best served by the further installation of fibre. The final design of the project will emerge through the commercial tendering process.
17. If a wireless design was selected, implementation of the project would require the establishment of a number of small scale masts. There are supportive planning policies in place in the Local Development Plan but care would be required to ensure that they were located in a way that was not damaging the landscape. Delivery of the project would require to be phased across the Park but initial advice is that this should be left to the tendering stage so that the various technical options proposed by suppliers can be considered.
18. If the recommendation to support the project is approved, the key next step will be the identification or establishment of a suitable community-based organisation to lead and deliver the project. A condition of funding from CBS is that all assets relating to the broadband project (i.e. wireless and/or fibre infrastructure that enables the delivery of broadband) be owned by the community. There are a number of suitable legal structures that can take forward a community broadband project including Community Interest Companies and Scottish Charitable Incorporated Originations. The broad options are:
  - a) An existing Park-wide organisation that can adapt to take on the project e.g. The Cairngorms Trust (currently in formation)
  - b) An existing locally-based organisation that can scale up and adapt to take on the project e.g. Badenoch Broadband
  - c) A completely new organisation set up to drive the project forwards
19. The indicative timeline for the development of the project is shown below.

<b>Activity</b>	<b>Timeframe</b>
Scoping of suitable community organisation	December 2015 - February 2016
State Aid consultation	February – March 2016
Issue State Aid public consultation report	March/April 2016
Issue Official Journal of European Union	March/April 2016
Competitive Dialogue procurement	April - October 2016
Contract awarded	November 2016

## **Resource Implications**

20. No financial input is required from CNPA. Staff time from the Rural Development team would be made available to assist with the formation of the community body. Once the options have been more fully evaluated and the time commitment is clear it may be appropriate for a CNPA Board member or member of staff to join the Board of the community organisation to ensure appropriate lines of communication and accountability.

## Next Steps

21. A meeting will be convened in early January to explore formation of the appropriate community organisation. Meanwhile CBS will prepare the documentation for the State Aid consultation which is programmed to commence in February 2016. An update will be provided at the March Board meeting.

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### \* Glossary of terms:

- **“Superfast”, “Fibre” and “High Speed”** are all names used for the next generation of broadband. It differs from basic broadband in that it is much faster in terms of the data it can transfer. BDUK officially still defines this as being a service with “potential headline access speed of greater than 24Mbps, with no upper limit”. Ofcom, the telecoms regulator defines “superfast broadband” as 30Mbps+.
- **Fibre to the Cabinet** is the main fibre technology currently in use in the Scottish network. It uses fibre-optic cables throughout the network right up to the street cabinet. Copper wires then connect the cabinet to homes and businesses. Fibre to the Cabinet currently offers download speeds of up to 80Mbps and upload speeds up to 20Mbps. However, this will decrease as you get further away from the cabinet. Any property that is more than 2km (length of copper, not as the crow flies) from the street cabinet is unlikely to get Superfast speeds.
- Further technical terms associated with Broadband are explained at  
<https://www.broadbandgenie.co.uk/broadband/help/broadband-glossary-technical-terms-explained>

## Annex I: The Cairngorms Digital Communications Steering Group – Terms of reference

1. The Group operates at a strategic level within the National Park to:
  - Coordinate partner activity on digital and telecommunications activity
  - Ensure that opportunities for partnership working are maximised and duplication is avoided
  - Assess current and future telecommunications provision to try and ensure that communities are not disadvantaged
  - Give strategic direction, looking at all technologies
  - Do horizon scanning towards a Park-wide solutions
2. Membership includes: CNPA, HIE, CBS, The Scottish Government, Aberdeenshire Council, the UK Mobile Operators Association, The Scottish Futures Trust, Scottish Land & Estates, the Association of Cairngorms Communities, Transport Scotland and the Cairngorms Business Partnership.
3. The Group will play a lead role in achieving the outcomes of the Cairngorms National Park Partnership Plan 2012-17 and the Cairngorms Economic Strategy.

### Policy Context

4. Cairngorms National Park Partnership Plan 2012-2017  
Long-term outcome 1: A sustainable economy supporting thriving businesses and communities (Key work package: Improving IT and mobile communications connectivity)

Policy 1.2: Enable sustainable patterns of settlement growth, infrastructure and communications by:

- planning and supporting improvements to the information technology network;
- planning and supporting improvements to the mobile communications network that improve access to new generation technology and minimise the need for visually intrusive infrastructure.

This programme will deliver improvements to infrastructure and communications in the Park. It focuses on two critical areas for the next five years: to improve IT and mobile communications speed and connections; and to develop bespoke housing solutions for the needs of communities.

#### *2a. Improving IT and mobile communications connectivity*

- Identify and deliver short-term improvements to IT connections where needed to support business, communities and visitors in the Park.
- Identify and deliver longer-term high speed IT connections to meet the current and future needs of business, communities and visitors throughout the Park.
- Identify and deliver mobile communications improvements to meet current and future needs of business, communities and visitors in the Park.

Co-ordinating partners: CNPA, HIE, LA's, SE, Scottish Government, Telecoms Companies

**5. Cairngorms Economic Strategy**

**Priority Theme 5 - Infrastructure**

**What we want to achieve:** Improved infrastructure in the Park supporting a growing economy.

The Cairngorms National Park is a rural area which faces key challenges around telecommunications provision, transport and affordable housing. Due to the high proportion of small-businesses there is also demand for business units and sites which meet the needs of small businesses.

**Action 5.1: Improve broadband & mobile connectivity and usage**

- Form a collaborative group of partners to assess Broadband and mobile coverage gaps in the National Park and potential delivery options
- Support businesses to maximise the opportunities that will come with Superfast Broadband and encourage innovative use of technologies including visitor information provision

## Annex 2 Summary of progress with community initiatives

1. CBS have supported **Badenoch Broadband and Communications Community Interest Company** which acts as an Internet Service Provider and which has already connected more than 100 premises in Laggan and the surrounding area. The solution in Laggan delivers a line of sight wireless service delivering speeds of between 4-8Mbps (which is not considered Superfast). Although Community Interest Company has been a great success, and has won national awards for its approach, it is now facing some capacity issues (both technical and operational) and is reaching an important stage to secure its long-term sustainability.
2. **Corgarff and Glenbuchat Community Broadband** undertook detailed scoping work for the two dispersed settlements in 2013. A technical options appraisal was completed in 2014, covering the defined target areas remote from existing broadband services. This is proving to be a very challenging area to develop a sustainable community broadband project and clarity is being sought regarding DSSB fibre coverage in the area.
3. The **Tomintoul and Glenlivet Development Trust** has undertaken a technical options appraisal and this has been used to inform business planning for a community broadband solution. It is currently estimated that partial DSSB fibre coverage is expected to benefit the area in late 2015 through the installation of a fibre cabinet in the village of Tomintoul and some fibre coverage in Glenlivet – details on fibre coverage in Glenlivet are still being confirmed. This could cover up to 50% of the premises in the Trust's target areas. It remains challenging to estimate the exact number of premises expected to obtain access to fibre services but it is likely that there will be a requirement for a community broadband project in the TGDT area
4. The **Highland Perthshire Community Partnership**, assisted by CBS, have developed a scheme that has introduced a superfast wireless broadband offering speeds up to 25Mbps. The project operates on the SW edge of the Park and is similar to the Badenoch Broadband approach but is planned to be much bigger so as to cover all of Highland Perthshire. The vision is that HPCP Wireless Broadband will employ key technical and customer support staff to ensure that everyone can enjoy a reliable service. The Partnership developed a specific Holiday Park WiFi Hotspot package enabling owners to offer fast internet services to their guests and, within the Park, this is already working extremely well at Blair Atholl through collaboration with Atholl Estates.
5. Communities in **Cromdale and Advie** have been investigating the potential for a community broadband solution in their area. Cromdale is likely to be well-served by the DSSB fibre roll out, but it has not yet been confirmed if there will be roll-out of fibre coverage in the Advie area. Whilst Advie is just outside the National Park it is likely that this community would be interested in participating in the aggregated project.

### Annex 3: Summary of GigaPlus Argyll

1. The project was initially driven by Mull & Iona Community Trust which, as a Company Ltd by Guarantee with charitable status, was best placed to lead. The Trust formed a steering group which included community activists, business people and people with technological expertise. This steering group evolved into the Board of Directors for GigaPlus Argyll (GPA).
2. GPA was formed as a Community Benefit Company and the Board was established to try and reflect the geography of the area, i.e. representation from across the islands and mainland, but also seeking to ensure that key skills (legal, financial, technical, etc) are present. Although GPA have appointed a project manager (funded by HIE) they are still strongly linked to MICT who provide the “back office” functions such as administration, payroll, and HR.
3. GPA has successfully secured funding from CBS to appoint an Internet Service Provider, AB Internet, on a design, build, maintenance and support contract – GPA will own the infrastructure. The contract is for a minimum of seven years. The system AB Internet has designed will deliver speeds of over 24Mbps, never dipping below 15Mbps. The system will cost around £1.2 million with a proposed CBS investment rate of 89% or £988,000. The balance of funding will come from connection charges and the ISP.
4. GPA expects 60-70% of the community to take-up the service (break-even point is 30%), this compares with 30% forecast by BT Openreach for uptake of superfast fibre services nationally. CBS funding conditions state that charges must be realistic and comparable with other Broadband suppliers. Any profits that are generated will be used for maintenance and upgrade, or investment back into GPA.
5. There are several economic benefits to the GPA area through the establishment of a broadband network in an area where there is considerable evidence of market failure. It is forecast that the project will deliver c. £3.6M of GVA from increased economic activity over and above the 8 FTE jobs, £133K of GVA and £57K of additional income created from construction and management. It is also envisaged that the ISP will recruit and train a number of community members to be ‘first responders’ for minor faults who will be paid for each call out.