

**PERTH AND KINROSS COUNCIL****Enterprise & Infrastructure Committee - 22 August 2012****IMPROVING DIGITAL CONNECTIVITY  
ACROSS PERTH AND KINROSS****Report by Executive Director (Environment)****ABSTRACT**

The purpose of this report is to seek approval for the outline bid and resources to support the Perth Super-Connected City Plan aimed at developing ultrafast broadband within Perth City. The Committee are also asked to note progress towards the completion of Perth and Kinross Rural Broadband Plan aimed at improving digital connectivity across the Council area outside Perth.

**1. RECOMMENDATIONS**

1.1 It is recommended that the Committee:

- i) Agree the outline bid and resources to implement the Perth Super-Connected City Plan and authorise the Head of Planning and Regeneration to submit the bid to the Department of Culture, Media and Sport.
- ii) Note progress towards the completion of the Perth and Kinross Rural Broadband Plan.

**2. BACKGROUND**

- 2.1 Access to high speed broadband has the potential to benefit the quality of life of every citizen in Perth and Kinross, improve economic competitiveness and significantly reduce the cost of delivering Council and other public agency services. Without service improvements there is a risk that Perth and Kinross will fail to attract new investment and the digital divide will widen between those who have access to broadband and those who don't. More detailed examples are provided in Appendix 1. Members may also find it useful to refer to the information note in Appendix 2 and glossary of terms in Appendix 3.
- 2.2 Both the Perth Super-Connected City Plan and Perth and Kinross Rural Broadband Plan are being developed in line with the strategic priorities of the emerging Perth City Development Strategy (Connected City theme) and the Perth and Kinross Regeneration Strategy (Stronger Communities theme).
- 2.3 Access to high speed broadband is a priority for both the UK and Scottish Governments. The Scottish Government recognises the considerable challenges in developing enhanced broadband coverage in rural Scotland where there is also a lack of 3G mobile coverage.

- 2.4 Because the private sector alone will not make the required investment, the Scottish Government intends to launch a single procurement for rural Scotland (apart from the Highlands and Islands where a project is already underway). It is intended to award the contract in the first half of 2013 with two companies bidding to deliver it: Fujitsu and BT Openreach.

### **3. FUNDING**

- 3.1 A UK Government-funded competition is underway to ensure the UK's cities have world class super-fast broadband. Round 1 initially funded larger cities (Edinburgh was successful) and now Round 2 is targeted at smaller cities and £50m is available across the UK with 27 eligible cities including Aberdeen, Dundee and Perth. The announcement of winning cities will be made in the Autumn Statement.
- 3.2 Super-Connected City Plans must plan to deliver connectivity across all of the urban area and offer:
- Fixed ultrafast broadband at download speeds as close to 80-100 Mbps as possible or higher.
  - High speed wireless (mobile) connectivity.
- 3.3 All the Super-Connected City Plans must include funding contributions from the cities to match the UK Government contribution and it is estimated that a contribution of £250,000 will be an adequate level to lever UK Government and private sector contributions.
- 3.4 To deliver the rural broadband programme across Scotland, the Scottish Government has allocated funding of approximately £245 million, of which £125m is available for lowland Scotland including Perth and Kinross.
- 3.5 The Scottish Government is currently working with each local authority to understand the coverage and costs for their area, to assess the funding gap, and to understand the potential for additional contributions that each local authority may be able to make or source for their area.

### **4 PERTH SUPER-CONNECTED CITY PLAN**

- 4.1 Perth City is already well served with 89% of premises with access to Next Generation Broadband. This is largely due to both Virgin Media and BT Openreach operating in the City and both are competing for customers by improving access and speeds. However, there are still areas which do not have access to broadband and for which no improvements have been planned by these operators over the next 3 years.
- 4.2 The position is very different in relation to high speed wireless coverage where the service is not well developed and is fragmented. Only part of Perth is currently covered by 3G.

- 4.3 The Super-Connected City Plan is being developed to ensure that Perth capitalises on the national priority to develop ultrafast broadband provision. The objective is to secure investment in digital infrastructure to support more rapid economic growth for and wider digital participation. If successful, Super-Connected City status will assist Perth's inward investment campaign by providing businesses locating in the city with a competitive advantage.
- 4.4 The outline bid, to be submitted by 17 September, has four strands:
- **Infrastructure Infill Project** – which seeks funds to provide fibre-based broadband infrastructure for those areas of the city which currently do not have access to high speed broadband, and which are not on track to receive it through private sector investment. The total cost for this project is estimated at £1.1m and this will form the basis of the bid.
  - **High Speed Wireless Infrastructure Project** – which will provide open access wireless zones covering the core city centre with the potential to extend this through transport corridors to key cultural, commercial and community locations. This wireless network infrastructure will require to use the Council's street furniture/buildings – such as lighting columns. The total cost for this project is currently estimated at £500,000 and this will also form part of the competitive bid.
  - **Demand stimulation and digital participation** – which is important to both encourage demand for broadband services and also develop educational and social opportunities to ensure that Perth City is a digitally inclusive place to live and work.
  - **A90 Corridor** - Dundee City Council and Perth & Kinross Council will each bid for funds to deliver a WiFi service along the key commuting corridor between Perth & Dundee. The estimated cost of this is currently being finalised.
- 4.5 In view of the deadline for submissions to the UK Government's Urban Broadband Fund, the Committee is therefore asked to agree the outline bid for the Perth Super-Connected City Plan and authorise the Head of Planning and Regeneration to submit it to the Department of Culture, Media and Sport.

## **5 PERTH AND KINROSS RURAL BROADBAND PLAN**

- 5.1 The Committee is also asked to note progress towards the preparation of the Rural Perth and Kinross Broadband Plan. The Plan is based on the findings of a study was undertaken in 2011 which provides the current position in Perth and Kinross including technical data covering the whole area. A coverage map is provided in Appendix 4.
- 5.2 The Rural Broadband Plan has been developed with the following aims:
- By 2015, as a minimum everyone will have access to a 2Mbps service
  - By 2020, everyone will have access to at least 20Mbps service
  - Take-up of broadband will be at least equal to the average across the UK

- 5.3 The overall cost of delivering the Plan is estimated at £31.2m to deliver a good broadband service to 91% of the premises in the Council area with the remaining 9% provided by a wireless, satellite or other technologies.
- 5.4 A report will be submitted to the Council in due course with further details of the Plan and the likely revenue budget implications for Perth and Kinross Council.

## **6. CONSULTATION**

- 6.1 The Chief Executive, Executive Director (Education and Children Services), Executive Director (Housing and Community Care), the Head of Corporate Business Change and Information Technology, the Head of Legal Services and the Head of Democratic Services have been consulted in the preparation of this report.

## **7. RESOURCE IMPLICATIONS**

### Capital

- 7.1 There are no capital implications arising from the recommendations of the report.

### Revenue

- 7.2 The revenue costs linked to project implementation, project management, procurement and legal costs as well as demand stimulation and digital participation arising from the Perth Super-Connected City Plan are estimated at £250,000 and can be met from the existing Environment Service Revenue Budget.
- 7.3 The Perth and Kinross Rural Broadband Plan will be the subject of further engagement and discussion with the Scottish Government to establish in more detail the level of funding commitment required, the findings of which will be incorporated into business cases and reported to a future Committee.
- 7.4 Other funding streams will be investigated including partner funding of demand stimulation and marketing activities and creation of revenue streams from leasing of assets and possible other European Funding opportunities.

## **8. COUNCIL CORPORATE PLAN OBJECTIVES 2009-2012**

- 8.1 The Council's Corporate Plan 2009-2012 lays out five Objectives which provide clear strategic direction, inform decisions at a corporate and service level and shape resources allocation. They are as follows:
- (i) A Safe, Secure and Welcoming Environment
  - (ii) Healthy, Caring Communities
  - (iii) A Prosperous, Sustainable and Inclusive Economy
  - (iv) Educated, Responsible and Informed Citizens
  - (v) Confident, Active and Inclusive Communities

- 8.2 The Proposed Plan and its associated documents promote all of the above criteria.

## **9. EQUALITIES IMPACT ASSESSMENT (EqIA)**

- 9.1 An equality impact assessment is carried out for functions, policies, procedures or strategies in relation to race, gender and disability and other relevant protected characteristics. This supports the Council's legal requirement to comply with the duty to assess and consult on relevant new and existing policies.
- 9.2 The Action Programme presented with this report was considered under the Corporate Equalities Impact Assessment process (EqIA) and it is considered that the investment could have a positive impact on older people, people with a disability or people on low income or not working by offering more opportunities to access services and develop social interactions. However, specific targeted activities would have to be developed to promote positive impact.

## **10. STRATEGIC ENVIRONMENTAL ASSESSMENT**

- 10.1 Strategic Environmental Assessment (SEA) is a legal requirement under the Environmental Assessment (Scotland) Act 2005. In relation to bidding processes there are no environmental impact issues arising from the submission. Further analysis of environmental impacts and potential benefits will be undertaken as part of the detailed planning phase to September 2012.

## **11. CONCLUSION**

- 11.1 Access to high speed broadband has the potential to benefit the quality of life of every citizen in Perth and Kinross, improve economic competitiveness and significantly reduce the cost of delivering Council and other public agency services. It is proposed to improve digital connectivity through the Perth and Kinross Broadband Plan and the Perth Super-Connected City Plan. Both plans will require substantial investment from public and private sectors. This report highlights the arrangements for the development and implementation of both plans.

**JIM VALENTINE  
EXECUTIVE DIRECTOR (ENVIRONMENT)**

The following background papers, as defined by Section 50D of the Local Government (Scotland) Act 1973 (and not containing confidential or exempt information) were relied on to a material extent in preparing the above report.

## Attachments

Appendix 1 Examples of potential benefits of Next Generation Broadband

Appendix 2 Information note

Appendix 3 Glossary of terms

Appendix 4 Perth & Kinross Broadband coverage

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### EXAMPLES OF POTENTIAL BENEFITS OF NEXT GENERATION BROADBAND

#### **Council**

Meeting corporate objectives such as reducing the number of buildings occupied by the Council and enabling distance and mobile working throughout the Council will be facilitated by more widespread availability of high speed broadband as will the greater use of video conferencing and virtual meetings.

#### **Education & Children Services**

Improved digital connectivity would be the enabler for home access to virtual learning environments, which is particularly relevant under the Curriculum for Excellence programme, where students access material provided/supported by external partners including video or web conferencing on an “anytime, anywhere” approach.

Many organisations such as the Open University and the University of the Highlands and Islands are using internet enabled Learning Management Systems to deliver courses. The Council would benefit from the widespread availability of high speed broadband to enable staff, teachers and residents (including students), to access such courses and course related material and to interact on a real time basis with other course members or tutors.

#### **Housing & Community Care Services**

Virtual home visits would be enabled with high speed broadband using webcams – this could reduce the number (and cost) of home visits and make it easier to keep in touch with vulnerable people in times of adverse weather. There is significant scope to increase the scope of telehealthcare initiatives if high speed broadband is available – specific applications could be rapid access to remote advice in emergency situations and the monitoring of melanoma treatment via high resolution cameras, removing the need for a hospital visit. People who live remotely from Perth can spend significant time travelling to/from Perth Royal Infirmary or Ninewells for hospital visiting. A project is being developed to allow virtual visits to take place, deploying a webcam at the patient’s bed with another at either the “visitor’s” home or some common user location. High speed broadband is key to delivery of this project but the benefits for those involved are significant, particularly if they have limited mobility or are dependent on public transport which may be infrequent.

#### **The Environment Services**

Roads Inspectors could be used more productively if they were able to access Council internal networks when in the field. More widespread availability of high speed broadband would help encourage applicants to submit Planning Applications on line rather than using hard copy, which in some cases means a substantial quantity of paper and a significant storage requirement.

#### **Chief Executive Services**

High speed broadband would allow residents to use more Council services online such as payment of council tax.





## INFORMATION NOTE

Broadband Internet Access, often shortened to just 'Broadband' is the process of connecting to the Internet and transferring high volume of data at high speed rates. Connections are measured in Kilo Bits Per Second (kbps) or Mega Bits Per Second (mbps). The higher volume of data per second is transferred the better the connection will be:

- Connections below 2Mbps are not considered as providing an acceptable broadband access to the Internet being below the minimal Broadband connectivity.
- Connections between 2Mbps and 24Mbps are currently considered as acceptable in providing broadband access to the Internet.
- Connections over 24Mbps are considered as Next Generation Broadband (NGB). However, there is no fixed definition of NGB. The European Commission's Digital Agenda sets 30 Mbps as a minimum target. The UK Government has not yet set a target speed, rather it aims to achieve the best NGB network in Europe by taking into account four key indicators: speed, coverage, price and choice. BDUK defines NGB as greater than 24Mbps.

Broadband Internet Access can be via:

DSL: the copper telephone network with speeds limited to around 24 Mbps.

FIBRE: delivered through thin glass pipes known as fibre optic cable, using waves of light. Fibre to the cabinet (FTTC) and Fibre to the home (FTTH) are the two main methods of fibre broadband deployment in the UK with speeds ranging from 40 Mbps to 100 Mbps, with faster services being trialled.

WIRELESS: Wireless broadband is delivered through radio waves. Developments in fixed wireless access are concentrated on WiMax (Worldwide Interoperability for Microwave Access) technology. WiMax technology is currently capable of speeds up to 75 Mbps, whilst the latest versions under development could offer even faster speeds.

MOBILE: Mobile broadband is delivered through the mobile phone network. Current mobile broadband services (3G) offer broadband speeds broadly comparable with current fixed-line services – around 7 or 8 Mbps. The fourth generation of mobile broadband technology (4G), is currently being developed. It is also known as LTE (Long Term Evolution) and could provide bandwidth of up to 100 Mbps.

SATELLITE: Satellite broadband is delivered by a satellite in orbit around the earth which communicates with a computer via a satellite dish on the person's premises. The capability of current satellite broadband services is around 10 Mbps, however, the next generation could potentially deliver speeds of up to 50 Mbps.



## GLOSSARY OF TERMS

**2G Second generation of mobile telephony systems:** Uses digital transmission to support voice, low-speed data communications, and short messaging services.

**3G Third generation of mobile systems:** Provides high-speed data transmission and supports multimedia applications such as full-motion video, video-conferencing and internet access, alongside conventional voice services.

**ADSL Asymmetric Digital Subscriber Line:** A digital technology that allows the use of a standard telephone line to provide high speed data communications. Allows higher speeds in one direction (towards the customer) than the other.

**ADSL1:** The first generation of ADSL, capable of data speeds of up to 8Mbit/s towards the customer and up to 640kbit/s from the customer.

**ADSL2/ADSL2+:** Improved versions of ADSL, offering high speeds, especially on shorter telephone lines. In the case of ADSL2+, up to 24Mb/s can be delivered towards the customer.

**Backhaul:** Concerned with transporting traffic between distributed sites (typically access points) and more centralized points of presence.

**Broadband:** A service or connection generally defined as being 'always on' and providing a bandwidth greater than narrowband.

**Fibre-to-the-cabinet:** Access network consisting of optical fibre extending from the access node to the street cabinet. The street cabinet is usually located only a few hundred metres from the subscriber premises. The remaining segment of the access network from the cabinet to the customer is usually a copper pair but could use another technology, such as wireless.

**Fibre-to-the-home:** A form of fibre optic communication delivery in which the optical signal reaches the end user's living or office space.

**Internet:** A global network of networks, using a common set of standards (e.g. the Internet Protocol), accessed by users with a computer via a service provider.

**ISP Internet Service Provider:** A company that provides access to the internet.

**Mobile Broadband:** Various types of wireless high-speed internet access through a portable modem, telephone or other device.

**Points of Presence (PoPs):** An access point from one place to the rest of the internet.

**WiFi hotspot:** A public location which provides access to the internet using WiFi technology.

**Wireless LAN or WiFi (Wireless Fidelity):** Short range wireless technologies using any type of 802.11 standard such as 802.11b or 802.11a. These technologies allow an over-the-air connection between a wireless client and a base station, or between two wireless clients.

## APPENDIX 4

### PERTH AND KINROSS BROADBAND COVERAGE



