Broadband Connectivity / LPWAN Network	14th November 2017
To: The Leisure and Development Committee **For Information**	

Linkage to Council Strategy (2015-19)	
Strategic Theme	Accelerating our Economy and Contributing to Prosperity
Outcome	
Lead Officer	Head of Prosperity and Place
Cost: (If applicable)	Within current budget, potential for matching funding demand in 2018

The purpose of this report is to update Members on communication projects including broadband connectivity and the potential for a free-to-use regional LPWAN network.

Background

As part of the economic development's programme to look at solutions to improve broadband connectivity, especially in rural areas within the Borough, two short reports were contracted to (1) identify broadband problem areas, and (2) look at more detailed solutions. This has provided useful information in itself, but also has provided a potential project application to the Rural Development Fund. Both reports are not lengthy, and are available on request should members require.

Report 1: Broadband Coverage Report

The project team created, promoted and analysed a survey of fixed line broadband provision within the Council area. Once data was collected from around 1300 respondents, each phone number was analysed to establish the maximum download and upload bandwidth available.

Once provision was mapped out, the project team, as instructed, set out to identify four areas from the former legacy councils, for immediate improvement (that is, a potential project area), based on current provision, number of underserved premises, and demand within the community for improvement, determined by respondents to the survey.

The four final areas prioritised from the data collected were as follows:

Dunloy, Artikelly, Brockagh and Moyarget.

Report 2: Solutions for Broadband Connectivity

This report details and assess potential solutions for areas of poor broadband connectivity within the Borough.

Within the report, the potential solutions are assessed against criteria including future-proofing, improved user experience, opportunities for business growth, and attractiveness for investors or funders.

In summary, the report suggests a primary solution of *fibre to the premises*, (an expensive option, with carriageway works and associated connection costs). Dependant on area, the indicatives costs, which are estimated only, ranged from £300,000 to over £1m.

A secondary solution is *fibre to the mast*, (much more inexpensive, but requires line of sight from the distribution point to the property, and is not as "future-proofed" as fibre to the premises, and can be subject to external issues, such as weather.) Indicative, estimate-only costs for some of the areas outlined range from £30,000 to £60,000.

Members should be aware that this is a first step investigation of possibilities. Some funding is available from the Rural Development Programme, however, it is limited. Those members who attended the meeting with Ofcom representatives last year will remember that they pointed out that £250,000 was very little to implement any kind of broad-based scheme. In addition, it would also be preferable if any project coming forward benefitted as wide a community as possible – not just limited to the business community.

Next step

Based on the information gleaned from these reports, the Head of Service will write to the Department for Agriculture and Environment to outline the solutions and opportunities in the reports. It will then be up to the Department to adjudicate on the admissibility of the project, as they have not yet given final direction on potential projects.

Additional Project

Staff are also currently working in a consortium (led by Ulster University) consisting of both the Schools of Engineering, Computing and Mathematics, Invest NI, the majority of local councils in Northern Ireland, Tourism Northern Ireland and a significant number of Northern Ireland businesses with various digital needs to investigate the potential for a free-to-use regional LPWAN network – a low power, wide area network.

An application has been drafted by the University to the Digital Catapult fund. At its simplest level, "the technology provides a means of inexpensive secure long distance communication between a sensor which is based in the community and the owner of the sensor. It could be measuring temperature, humidity, location, movement, air quality, or many other pieces of data. The data can be passed back to a server via the internet and presented to a decision maker with other similar pieces of data."

Businesses are exploring new solutions with this inexpensive data collection to monitor tourism, improve agriculture, streamline health service delivery, improve service delivery, and drive up operational efficiency. This is an example of the "Internet of Things", but many of the business applications are still to be discovered.

In terms of the economic development opportunity, it is two-fold:

- Digital Providers - The digital companies including the app developers, system developers, digital media and data analytics.
- For Domain Experts – Businesses which serve agriculture, food production, tourism, waste disposal, security, sustainable energy, health and many other sectors have potential opportunities to make new solutions for themselves or for their customers.

An update on the outcome of both these pieces of work will be available should they progress.