POLICY & RESOURCES COMMITTEE	Agenda Item 129 Brighton & Hove City Council

Subject:		**The Brighton Research & Innovation Fibre Ring**
Date of Meeting:		**13th February 2020**
Report of:		**Executive Director Economy, Environment & Culture**
Contact Officer:	**Name:**	**Max Woodford** **Tel: 01273 291666**
	Email:	**max.woodford@brighton-hove.gov.uk**
Ward(s) affected:		**All**

FOR GENERAL RELEASE

1. PURPOSE OF REPORT AND POLICY CONTEXT

1.1 This report sets out the proposal to create a Research and Innovation Fibre Ring (R&IR) in the centre of Brighton, which has received support from the Coast to Capital Local Enterprise Partnership. The R&IR is a partnership project, and the report seeks agreement from members for the council to invest in and deliver its proposed parts of the project.

1.2 The R&IR seeks to install a ring of fibre-optic cabling that will connect up key public sector sites in the city centre with the Brighton Digital Exchange (BDX) at New England House, and in doing so also link up the experimental 5G test bed in New England House, operated by the national Digital Catapult, with the new 5G test bed at Brighton Dome. The new fibre optic infrastructure (ducting and cables) will initially be owned by the city council, with space leased to a co-operative of local digital businesses to drive community wealth building.

2. RECOMMENDATIONS:

2.1 That members note the recent award of Local Growth Funding from Coast to Capital LEP to help deliver a Research and Innovation Fibre Ring in Brighton, and agree to enter into a funding agreement with Coast to Capital to access that funding.

2.2 That members agree to the city council investing in the provision of the fibre ring, in line with the business case at Appendix 1.

2.3 That members authorise the Executive Director Economy, Environment and Culture to enter into a partnership agreement with the project partners to agree roles and responsibilities to deliver the project.

2.4 That members agree to the Brighton Digital Exchange (BDX) continuing to occupy space at New England House for a peppercorn rent for 3 years, as part of the city council's match funding for the project.

2.5 That members authorise the Executive Director Economy, Environment and Culture to undertake or participate in any procurement processes necessary to deliver the city council's obligations under the funding agreement.

3. CONTEXT/ BACKGROUND INFORMATION

3.1 In December 2019, Policy & Resources Committee agreed a programme of work towards providing for the refurbishment and expansion of New England House; to commence detailed design, stakeholder engagement and preparation of a business case. New England House is a hugely important asset in driving the growth of the city's tech cluster, for a number of reasons:

- It is the base for Wired Sussex's Fusebox, a unique approach to incubating and supporting businesses.
- It is the base for the Brighton Digital Exchange (BDX). Completed in 2015 and managed by a Co-operative of digital businesses, the BDX is a data centre and connection point that provides ultrafast connectivity and the means to develop and innovate a wide range digital products and services for its members and its end users.
- It is the base for the Digital Catapult Centre Brighton, focusing on projects that encourage innovation from real-time and location-based data to virtual and augmented reality. The centre is currently being used as a test bed for 5G.
- The Fusebox and Digital Catapult stimulate development of new digital and tech ventures, leading to applications that benefit from the infrastructure provided by the Digital Exchange and 5G Testbed.
- It is home to the single largest concentration of creative and tech businesses in Brighton, along with the surrounding New England Quarter. It is a natural focal point for the cluster.
- It provides accommodation that is flexible enough and affordable to accommodate young and rapidly growing tech businesses as they expand.

Full Fibre

3.2 However, to maximise and spread the benefits of this cluster, and the supporting infrastructure, then the city needs to increase its provision of full fibre. Full fibre broadband uses a fibre optic cable to connect from the exchange to homes or businesses without the use of any copper cable. Full fibre offers speeds of 1000Mbps, 20 times faster than the UK average.

3.3 According to the most recent figures from Ofcom, full-fibre availability in the UK stands at just 8%, with around 2.5 million properties covered. This is significantly lower than many other parts of the EU – where only Belgium, Cyprus and Greece have lower levels of full-fibre coverage than the UK. Japan and South Korea both have full-fibre coverage of over 95%.

3.4 The Greater Brighton Economic Board is developing a digital strategy for the city region. There is a significant amount of work underway across the city region to deliver full fibre, and to develop digital services. These digital services are the range of applications, services and capabilities that will make use of the digital infrastructure that is built and drive the economic growth. The draft strategy identifies that different modes of delivering fibre is required for the city region to reflect the diverse nature of the conurbations; from a large urban area like Brighton & Hove to smaller urban areas and then to rural communities.

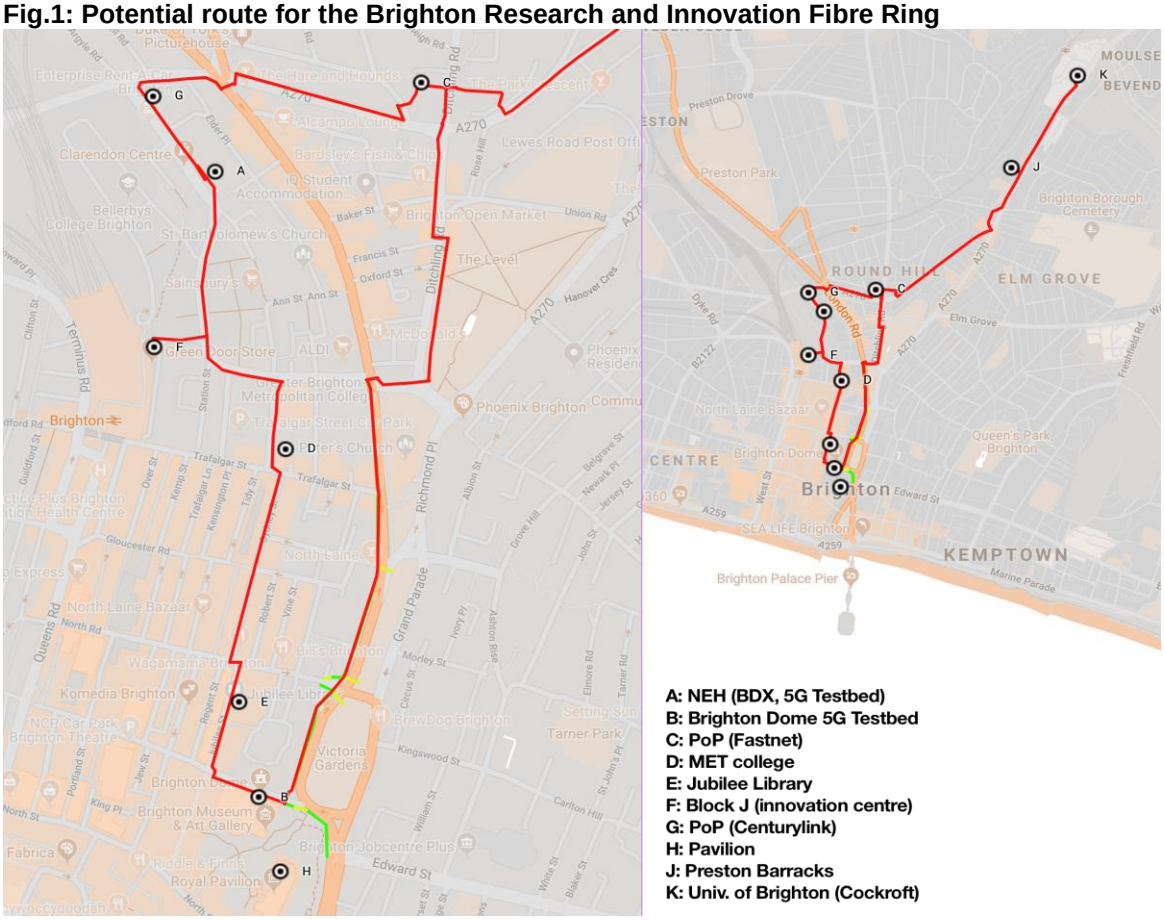
3.5 The city council is exploring options for the roll out of full fibre across the city. The challenge is to minimise the risk and cost to the city council, whilst at the same time ensuring new digital infrastructure that is as open access as possible

for local digital businesses. The Greater Brighton Digital Strategy identifies that Public Sector Anchor Tenancy (PSAT) is one of the primary ways that local authorities can drive the installation of new fibre. PSAT works on the basis that a local authority commits to connect its own sites up to a new fibre network, which incentivises the fibre provider to create the basic network that connects those sites. Once that spine is in, the business case to extend the network to other nearby premises – or indeed all premises in the city – becomes less challenging. So, by committing to a long term use (or tenancy) of the fibre, the local authority is removing some risk and making full fibre an investible proposition.

The Brighton Research and Innovation Fibre Ring

3.6 Ahead of developing any proposal to roll out full fibre to the city, the city council has been looking at how to provide further fibre in the city centre, focused on the tech cluster around New England House. Convened by Wired Sussex, a partnership consisting of the city council, the Digital Catapult and Brighton Digital Exchange has developed a proposal for a city centre Brighton Research and Innovation Fibre Ring (R&IR). The R&IR would be a publicly-owned, shared-access duct with fibre-optic spine running in a 5.5km loop (with spurs) around the route in fig.1. Note that this plan was prepared before the Valley Gardens project had progressed so far, and so the final route is subject to further design that will ensure it does not involve any further road works to Valley Gardens.

Fig.1: Potential route for the Brighton Research and Innovation Fibre Ring



3.7 The ring would be a piece of infrastructure under the stewardship of the city council that links a number of core strategic education, research and public sector assets including the Pavilion Estate, Preston Barracks, GB MET and others with the BDX and the tech sector in New England House. Using an open

access model, the R&IR will enhance business access to key university R&D resources, significantly augmenting the value generated from the existing 5G-testbed technology. The Brighton Research & Innovation Fibre Ring will allow connections with larger employers, digital and technology SMEs, and the wider public sector.

3.8 The fibre spine will be operated by a cooperatively owned host for the mutual benefit of engaged businesses and public sector bodies. This will create a valuable core network that ISPs and operators, including new, smaller disruptive providers, can invest in and build out from. It will make possible direct access to 'dark' fibre to such smaller and scaling businesses, providing them with new growth opportunities. The Brighton Research & Innovation Fibre Ring is structured to deliver multiple opportunities for local digital, tech and creative businesses to innovate and grow, and to partner with larger businesses and research institutions, and collaborate with public sector partners.

3.9 Brighton hosts the UK's first 5G testbed that is accessible by SMEs, and it is housed across the Brighton Digital Exchange, the FuseBox innovation hub and the Brighton Dome & Corn Exchange. A central element of this project is enhancements to the connectivity and expandability of this nationally-recognised 5G Brighton testbed, by linking the elements at New England House with the elements at the Dome & Corn Exchange. The project will secure funding to the testbed to provide two key, value-generating benefits: It will act as the first user of the fibre ring infrastructure and establish an example, and test, of the open access approach to the ring. It will also significantly enhance the testbed's technical breadth and capacity, providing access for businesses and others, supporting them to design and develop new applications that utilise 5G to deliver value, growth and productivity gains for all across our city region.

Local Growth Funding

3.10 The Coast to Capital Local Enterprise Partnership ['the LEP'] has an action in their 2018 Gatwick 360 Strategic Economic Plan to establish a "fibre ring around Brighton & Hove to extend the reach of the Digital Catapult 5G Brighton Testbed." In July 2019 the LEP opened a new call for projects to spend unspent Local Growth Funding (LGF). The city council worked with the project partners to submit a bid for R&IR proposal, which the LEP's Investment Committee agreed, after a competitive bidding process. The project partners are in the process of negotiating the funding agreement for the project, though signing is of course subject to approval of this report. The business case for the LGF funding is at appendix 1. This business case explains the project and the strategic, economic and financial case for it in more detail.

3.11 The R&IR project has different elements, with different project partners responsible for each. The fibre ring element, which will include laying ductwork and blowing fibre through the ductwork would be delivered by the city council. The city council would then initially own that duct and the fibre within in, letting the fibre to the co-operative that will either be the BDX or a similar co-operative made up of local tech businesses. As part of ensuring the city council ends up in a cost neutral position, the co-operative will commit to buy the asset after renting fibre in the duct for a period of 15 years.

3.12 The Digital Catapult are receiving funding to upgrade the equipment at their two 5G test bed sites, which would be linked by the fibre ring. This would enable SMEs to test applications on the very latest equipment and in real life settings, not just a lab.

3.13 LGF funding requires match funding from project partners. The table below sets out the total project costs and what the partners are contributing.

	Amount	**% of Total Cost**
BHCC Contribution	£333,045	20%
Match funding from Digital Catapult	£499,602	30%
LGF Funding from Coast to Capital LEP	£832,647	50%
Total Project Cost	**£1,665,293**	**100%**

The match funding from the city council is proposed to be made up of offering the BDX a further three years of rent free space in New England House (worth approx. £50,000) and paying a portion of the fibre build costs. The city council will receive an asset in the form of fibre infrastructure that will save its own connection costs in the vicinity and will also receive a rental income. The Financial Implications of the proposal are set out in more detail at section 7.

3.14 There are a number of risk factors involved in the project, such as the need to procure and deliver the fibre build in a very tight timescale. There is also a risk that the saving on connection costs for the council and the income from renting fibres in the ring do not provide enough additional revenue to pay the financing costs of the council's element of the capital investment in building the infrastructure. However, the 50% contribution from the LEP assists with this, and the total exposure is under £300,000, and the co-operative has offered to commit to purchase the asset through or at the end of a 15 year period at a price that covers any remaining financing costs. Further work will also need to be done to get actual, rather than assumed, build costs to install the ducting and fibre. If those costs push the business case into not being viable then the city council could step back from the project having not invested heavily.

3.15 The economic benefits of the proposal make a case for the investment. As well as the pure economic benefits set out in section 3.1 of the Business Case at Appendix 1, there is also a strong Community Wealth Building element to this project. The fibre infrastructure is municipally built and owned (at least initially). Fibre is rented to a co-operative of local small and medium sized businesses, who use the asset to create local wealth. After 15 years there is an option for those firms to purchase the asset from the city council. This keeps the benefits of the investment local, and inspires local firms to invest and grow in their own community.

4. ANALYSIS & CONSIDERATION OF ANY ALTERNATIVE OPTIONS

4.1 The city council could decide not to take any steps to help drive the delivery of full fibre in the city, instead waiting for the private sector to make that investment naturally. There is a limited pool of private sector capital funding, and there are no guarantees that Brighton would be considered an investible proposition in the near future without the security of Public Sector Anchor Tenancy. In addition, the UK Government manifesto pledge pushing for 'full fibre for all' by 2025 is widely considered to be unachievable, so it would be risky to rely on this as being the vehicle to roll out full fibre to the city.

5. COMMUNITY ENGAGEMENT & CONSULTATION

5.1 The initial focus of the R&IR is around businesses in the heart of the city, rather than the residential market. There has therefore not been widespread consultation of residents. However, the LGF bid is a partnership project made up of city stakeholders. In addition, the BDX is a co-operative of local companies, so that collection of firms have been involved in the process of developing this bid. Furthermore, the LEP undertook considerable consultation on their Gatwick 360 Strategic Economic Plan, which proposes the idea of a fibre ring around Brighton's 5G testbed.

6. CONCLUSION

6.1 Investment in the Research and Innovation Fibre Ring in the centre of Brighton & Hove has several clear objectives with regard to enhancing the city's the economy. It will;

- Ensure that businesses in the area genuinely have access to the ultrafast broadband services they need to secure, retain and grow competitive advantage.
- Ensure that SMEs with a vital requirement for ultrafast broadband can afford to connect to services with the quality of service requirements they need.
- Enable the start-up and growth of digital businesses providing the ultrafast services they really need and lowering the barriers to acquiring them.
- Connect up innovative solutions like to the Brighton Digital Exchange (BDX) to ensure the infrastructure can remain relevant by better serving SMEs across the city region.
- Stimulate inward investment in the city centre by creating an environment in which there is genuinely ubiquitous ultrafast broadband.
- Build on Brighton & Hove's outstanding digital and entrepreneurial reputation, building genuine competitive advantage against other leading national and international digital cities.

6.1 And in particular, the innovative ownership and access model of the R&IR, encouraging investment from a co-operative of local digital firms in the same way as the BDX does, will ensure that this economic benefit is felt locally. This would therefore be a community wealth building project for the local digital sector.

7. FINANCIAL & OTHER IMPLICATIONS:

Financial Implications:

7.1 The total project cost is expected to total £1,665,300 (net of vat) of which £549,600 are operational costs. Therefore £1,115,700 of capital funding is

required, this total include £27,900 for contingency and £35,700 for project management which may be met from within existing budgets. Local Growth Funding grant from the Coast to Capital LEP of £832,646 has been identified, subject to approval of the Business Case and a Funding Agreement being finalised.

7.2 The operational costs match funding include the running of the 5G Testbed Accelerator Programme until March 2023, this is expected to be met from commercialisation arrangements through user rental fees for the Fibre Ring and the 5G Brighton Testbed operational and maintenance costs will be from existing Brighton Digital running costs. The council will contribute circa £50,000 toward the operational costs by offering a rent free period space to the BDX over a three year period in New England House

7.3 The council will be required to meet up to a maximum of £ £283,000 toward the capital investment cost and this is proposed to be met from borrowing over a 15 year period in line with the life value of the asset. There is potential for the co-operative to purchase the asset at the end of the 15-year period from the council. The financing costs for the borrowing are estimated at circa £24,500 pa and are to be met from potential savings associated with running costs for the existing Brighton Digital Exchange (BDX) at New England House plus commercial arrangements for other public sector partner users. In the event that insufficient revenue income and savings are generated to meet the financing costs a contribution will be required from existing revenue budgets within Environment, Economy and Culture . Further testing of costs are underway and should the total project cost exceed viability the council will not be committed to proceed.

Finance Officer Consulted: Rob Allen *Date: 03/02/20*

Legal Implications:

7.4 As part of its application for the LEP funding, the Council was required to consider the state aid implications of the project. Whilst the Council will be an "undertaking" for the purposes of state aid legislation as it will be offering access to the ring on a commercial basis, the measure has a purely local impact and therefore there is no effect on trade between Member States.

7.5 The Council will carry out competitive procurement exercises in accordance with its Contract Standing Orders and public procurement legislation to engage contractors to install the Ring and will therefore not grant any selective advantage to any contractor.

7.6 The Council will lease the ring to the co-operative on a commercial basis so it will not be granting state aid to the co-operative. The end users of the Ring are not receiving an advantage from the state because they will also be paying commercial rates to use the Ring. Furthermore, the Ring can be used by any users who wish to use it so no selective advantage is provided.

7.7 The Brighton Digital Exchange is receiving aid in the form of free rent. However it falls within the de minimis regulation because the value of it is less than €200,000 over a rolling three year period. It requires a decision of Policy &

Resources Committee because the officer delegation only applies when disposals are for best consideration.

7.8 The Council will enter into a funding agreement with the LEP and a lease with the co-operative who leases the ring. Legal services will advise on the legal agreements required to progress this project.

Lawyer Consulted: *Alice Rowland* *Date: 24/01/20*

Equalities Implications:

7.9 Digital inclusion is an equalities consideration that is growing in importance. The Greater Brighton Digital Strategy sets a key design principle that all parts of our communities should be included and access the benefits of the digital future. Whilst the R&IR is initially focused on businesses rather than residents, it is a step towards the roll out of more ubiquitous full fibre. Once that full fibre is rolled out it should bring down the costs of higher speed connections to all citizens, and so help to reduce digital exclusion. Furthermore, being a community wealth building project, it ensures that smaller local digital SMEs and start ups are more able to benefit from the value created by the ring.

Sustainability Implications:

7.10 Improved fibre connectivity enables a number of applications that should help to reduce travel related carbon by enabling better use of teleconferencing, telehealth etc. Furthermore, fibre in city centres drives the uptake of Smart Cities solutions. This involves the collection, transmission and sharing of large amounts of data that can be used to improve the efficiency of how cities operate.

Brexit Implications:

7.11 None identified. The state aid implications have been addressed elsewhere, and state aid law is derived from the European Union. However, there will be no change to the law during the transition phase.

SUPPORTING DOCUMENTATION

Appendices:

1. Business Case for the LGF Funding bid for the Research & Innovation Fibre Ring