

Environment and Sustainability Assessment

Birmingham City Council is required to assess any positive or negative impacts that any policy/strategy/ decision/development proposal is likely to have on the environment. This assessment must be completed for CLT and Cabinet reports where appropriate. It is the responsibility of the Service Director signing off the report to ensure that the assessment is complete.

To complete the assessment, you should consider whether the proposal will have a positive or a negative impact on each of the key themes by placing a (✓) for positive, (x) for negative and (?) for unclear impact, and (N/A) for non-applicable impact. Further guidance on the completion of the template is available on page 4 below.

Project Title:	The Digitally Connected City – Enabled for Future Growth			
Directorate: Digital and Customer Services	Team: Digital City and Innovation		Person Responsible for assessment: Raj Mack	
Date of assessment: 9-12-2022	Is it a new or existing proposal?			
Brief description of the proposal: Conduct an appropriate competitive process to select a JV partner to roll out full fibre across the Birmingham City Council region and replace the existing WAN which is due for renewal within the next 36 months. This initial phase is to prepare a detailed businesses case to secure funding for the JV to be set up. This further detailed business case is subject to approval by Cabinet Committee				
Potential impacts of the policy/development/ decision on:	Positive Impact	Negative Impact	No Specific Impact	What will the impact be? If the impact is negative, how can it be mitigated, what action will be taken?
Natural Resources - including water, soil, air			None	For this phase of the project as it is only establishing the full detailed business case for a go, no decision and the establishment of the JV, then there are no specific impacts. However, it is anticipated full fibre roll out will focus on re-use of existing assets and infrastructure including use of Openreach PIA. Where new ducts are necessary modern techniques cause minimal disruption and the majority of spillage (>90%) is returned to infill the trench once the duct is installed

Energy use and CO ₂ emissions			None	For this phase of the project as it is only establishing the full detailed business case for a go, no decision and the establishment of the JV, then there are no specific impacts. The fibre network will be utilised to replace the existing WAN; 70% less energy is needed to transmit the same amount of data though a fibre cable than using a copper wire. Using less energy means less heat is generated, so network equipment in an exchange doesn't need to be kept cool. This greatly reduces the network's carbon emissions. The deployment of full fibre will significantly increase the ability for individuals to work from home, and for businesses to hold virtual meetings. This will massively reduce the need to commute and for travelling to meetings, thereby also reducing CO₂ emissions
Quality of environment			None	For this phase of the project as it is only establishing the full detailed business case for a go, no decision and the establishment of the JV, then there are no specific impacts. Although it is anticipated there may be a requirement for digging, it is expected re-use of existing assets and PIA will keep this to a minimum. Where required, modern trenching techniques ensure minimal disruption and the depths required for duct laying are not expected to impact on any archaeological areas of interest.
Impact on local green and open spaces and biodiversity			None	For this phase of the project as it is only establishing the full detailed business case for a go, no decision and the establishment of the JV, then there are no specific impacts. By incorporating a 'dig-once' policy into the contractual arrangements for the delivery of this project we will ensure minimal impact on any green and open spaces by reducing any disruption to a one-time event.
Use of sustainable products and			None	For this phase of the project as it is only establishing the

equipment				full detailed business case for a go, no decision and the establishment of the JV, then there are no specific impacts. Fibre optic is inherently sustainable. It is made of entirely sustainable materials, such as silicon dioxide commonly found in sand and rocks. Silicon dioxide is one of the most plentiful materials in the earth's crust and is extracted in a much more environmentally friendly method than copper mining. Replacing copper networks with fibre optic is therefore a very positive step for sustainability.
Minimising waste			None	For this phase of the project as it is only establishing the full detailed business case for a go, no decision and the establishment of the JV, then there are no specific impacts. It is expected that the successful contractor will maximise re-use of existing assets, including council owned ducting and Openreach PIA. New technology and hardware deployed will be of the latest leading edge design and will have incorporated and paid heed to all the newest legislation and desires to reduce waste and carbon emissions.
Council plan priority: a city that takes a leading role in tackling climate change			None	For this phase of the project as it is only establishing the full detailed business case for a go, no decision and the establishment of the JV, then there are no specific impacts. Getting to Net Zero is a matter of powering down our energy demand and powering up zero carbon energy generation and sustainable technology. Transport is a major contributor to direct carbon emissions (27% for the UK as a whole). Facilitating the ability to work from home, reduce commuting and travel to meetings depends on the reliability and functionality of Broadband. Birmingham is already falling behind major cities such as Liverpool and Manchester in the deployment of full fibre; this project is essential to enabling the Council to meet this plan priority.
Overall conclusion on the environmental and sustainability impacts of the proposal	At this stage, a further detailed business case will be required to justify the investment, a if cabinet approves the full business case – there will be environment and sustainability issues as identified in this report, but not at this stage.			

	Experts at the Centre for Economics and Business Research (Cebr) took a closer look at the impact of a fully fibred nation. Their special report found that a faster and more reliable Full Fibre connection can give people the same levels of access to everything they can do online in an office, remotely from home. The research suggests that by enabling more people to work from home, a Full Fibre nation could save 300 million commuting trips each year – with three billion fewer kilometres travelled by car. That's a saving of more than 360,000 tonnes of CO2 emissions. A study by Telework Research Network suggests that if half the UK workforce worked from home just twice each week it would reduce UK transportation emissions by 4%, equivalent to taking 2.5 million cars off the road The switch to electric vehicles (EVs) – and green hydrogen power for heavy transport – is also incredibly important. Paired with zero carbon energy, net zero terrestrial transport ought to be achievable well ahead of 2050. Nearly every EV on our roads today is an internet connected vehicle, and fully autonomous EVs take that connectivity to a whole new level. They interact with people, smart road infrastructure and each other. They will form part of the ultimate transportation system: fast and convenient, multimodal, smart and fibre-enabled, with zero emissions. The upshot is that net zero transport and heating require full fibre networks almost as much as they need zero carbon energy. The carbon costs of building and operating those networks will be dwarfed by the carbon savings they enable.
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Guidance for completing the template

Theme	Example
Natural Resources - Impact on natural resources including water, soil, air.	Does the decision increase water use? Does the decision have an impact on air quality? Does the decision discourage the use of the most polluting vehicles (private and public) and promote sustainable modes of transport or working from home to reduce air pollution? Does the decision impact on soil? For example, development will typically use water for carrying out various operations and, once complete, water will be needed to service the development. Providing water to development and treating affluent water requires energy and contributes to climate change. Some of the activities including construction or disposal of waste may lead to soil pollution. The decisions may lead to more journeys thereby deteriorating air quality and thus contribution to climate change and greenhouse gases.
Energy use and CO ₂ emissions.	Will the decision have an impact on energy use? Will the decision impact on carbon emissions? Most day-to-day activities use energy. The main environmental impact of producing and using energy such as electricity, gas, and fuel (unless it is from a renewable source) is the emission of carbon dioxide.
Quality of environment.	Does the decision impact on the overall quality of the built environment? Decisions may have an impact on the overall setting, character and distinctiveness in the area. For example, if development involves ground digging and excavations etc. it may have an impact on the local archaeology.
Impact on local green and open spaces and biodiversity	The proposal may lead to localised impacts on the local green and open spaces which may have an impact on local biodiversity, trees and other vegetation in the area. Will the proposal lead to loss (or creation) of green and blue infrastructure? For example, selling an open space may reduce access to open space within an area and lead to a loss of biodiversity. However, creating a new open space would have positive effects.
Use of environmentally sustainable products, equipment and packaging'	Will the decision present opportunities to incorporate the use of environmentally sustainable products (such as compostable bags, paper straws etc.), recycled materials (i.e. Forest Stewardship Council (FSC) Timber/wood), non-polluting vehicles, avoid the use of single use plastics and packaging.
Minimising waste	Will the decision minimise waste creation and the maximise recycling during the construction and operation

	of the development/programme/project? Will the decision provide opportunities to improve recycling? For example, if the proposal involves the demolition of a building or a structure, could some of the construction materials be reused in the new development or recycled back into the construction industry for use on another project?
Council plan priority: a city that takes a leading role in tackling climate change and deliver Route to Zero.	How does the proposal or decision contribute to tackling and showing leadership in tackling climate change and deliver Route to Zero aspirations?

If you require further assistance with completing this template, please contact: ESAGuidance@birmingham.gov.uk