**Eco Impact Checklist**

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| **Title of report: Further Heat network expansion and utilisation of the floating harbour to provide zero carbon heat** | | | | |
| **Report author: Paul Barker** | | | | |
| **Anticipated date of key decision: 03/09/2019** | | | | |
| **Summary of proposals:** Approval is sought to carry out the following capital projects:<br>• Progress Phase 1 of Old Market Network including installation of a Water Source Heat Pump Energy Centre at Castle Park Depot at a total capital cost of £18.18 million, including previously approved capital spend of £4.09 million.<br>• Expand the Redcliffe heat network to connect additional buildings at a total capital cost of £8.06 million, including previously approved capital spend of £4 million.<br>• Provide match funding of £3 million to fund the early elements of additional heat networks where developer timeframes require heat networks to be delivered prior to City Leap | | | | |
| **Will the proposal impact on...** | Yes/ No | +ive or -ive | If Yes… | |
| | | | Briefly describe impact | Briefly describe Mitigation measures |
| Emission of Climate Changing Gases? | Yes | +ive | Heat networks can provide higher efficiencies and better pollution control than localised boilers. Heat networks using CHP plants are amongst the cheapest methods of cutting carbon emissions and have one of the lowest carbon footprints of all generation plants. Aids progress along the zero carbon pathway.<br>The heat network will be able to supply low or zero carbon heat to connected buildings<br><br>Water source heat pumps will be in-stalled on the floating harbour and is a | (Note) Biomass/ gas CHP consume carbon however carbon consumption impact is much less than standard gas/ power generation. |

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| | | -ive | source of renewable heat.<br><br>Short term construction impacts | (See under consumption of renewable resources section) |
| Bristol's resilience to the effects of climate change? | Yes | +ive<br><br>-ive | Diversified energy supply increases resilience.<br><br>The Bristol heat network must also be able to supply low or zero carbon heat to connected buildings at a cost equivalent to or lower than mains gas which helps reduce fuel poverty in the city.<br><br>Consider if energy centres or pipes are in flood risk areas and resilience against flood risk here if so. | |
| Consumption of non-renewable resources? | Yes | +ive<br><br>-ive | In the medium and long term, the Bristol Heat network will be supplied from zero carbon heat generation sources as part of the installation of the Strategic Heat Main.<br><br>In the short term construction will use resources | Procure resources in a sustainable manner; consider re-use and recycling of construction materials, look at using local contractors and suppliers to reduce travel impacts.<br>Overall the positive effects of the heat networks when running |

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| | | | | will mitigate the impacts of the use of resources. Linking works to planned road works reduces the impacts of needing to dig up roads twice. |
| Production, recycling or disposal of waste | Yes | -ive | In the short term construction will produce waste | Ensure contractors provide a waste management plan and dispose of waste according to waste legislation and the waste hierarchy.<br>Works will be programmed to take place alongside other essential highway works so overall waste may be reduced through this. |
| The appearance of the city? | Yes | +ive/-ive | Development of energy centre at Castle park depot site (Will later be linked with other development, eg commercial or residential) | Any new construction is likely to be subject to Bristol Planning Policy. |
| Pollution to land, water, or air? | Yes | -ive/+ive<br><br>-ive | Construction work will have air quality impacts through contractor travel and traffic disruption.<br><br>New boiler plant may generate emissions. | Will work with BCC Transport teams to ensure disruption is minimised. Linking works with other necessary road works will reduce construction disruption and reduce the impacts of congestion and air quality.<br><br>Look at local contractor to reduce travel distance.<br><br>Any new construction is likely to be subject to Bristol Planning Policy |
| Wildlife and habitats? | Yes | +ive/-ive | Construction work and build of energy centre may effect | Ensure areas of construction do not affect any existing wildlife if |

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| | | | wildlife | being constructed on green land. May have to to engage with BCC ecology officer to do an ecology survey.<br>Urban environment means this impact is likely to be low/ not an issue. |

**Consulted with:**

**Summary of impacts and Mitigation - <u>to go into the main Cabinet/ Council Report</u>**

The significant impacts of this proposal are…

- A reduction in Greenhouse Gas Emissions (subject to number of connections)
- More resilience to heat supply in the city.
- Low carbon heat supply which will aid with achieving carbon neutrality
- Impacts from installation of new infrastructure:
- Possible highways disruption leading to temporary increase traffic congestion
- Waste from removal of existing plant and equipment
- Resources for manufacture and installation of new plant and equipment

The proposals include the following measures to mitigate the impacts… Where possible, carry out works as part of BCC capital projects, ensure contractors are well managed and comply with relevant environmental legislation (For example waste legislation)

The net effects of the proposals are Positive

**Checklist completed by:**

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| Name: | Sarah Sawyer |
| Dept.: | Energy Services |
| Extension: | 22/07/2019 |
| Date: | 22/07/2019 |
| Verified by<br>Environmental Performance Team | Nicola Hares |