

Eco Impact Checklist

Title of report: Bristol Heat Pump Ready Project				
Report author: Alex Minshull				
Anticipated date of key decision February 2023				
Summary of proposals: To accept a grant of £3.3m from the Department of Business, Energy and Industrial Strategy (BEIS) to deliver up to 200 Heat Pump Installations. Heat pumps to be installed in high density in Westbury-on-Trym.				
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	<p>The project will install heat pumps in homes that are currently using gas boilers so will avoid greenhouse gas emissions from gas consumption.</p> <p>Heat pumps use a refrigerant which is a potent greenhouse gas and can leak from the systems. The benefit of removing natural gas as a heating fuel outweighs the impact of potential refrigerant leakage (see Impacts of Leakage from Refrigerants in Heat Pumps - Eunomia).</p> <p>The project aims to enable more widespread roll out of heat pumps across Bristol, expected to have a net positive effect on greenhouse gas emissions.</p>	<p>Only use heat pumps that use a refrigerant with a GWP of 675 or less (e.g. R32).</p> <p>Ensure householders are encouraged to keep their heat pump well maintained and dispose of the heat pump appropriately at the end of its life.</p>
Bristol's resilience to the effects of climate change?	Yes	+ive	<p>The project will be surveying and retrofitting homes primarily to reduce energy demand, but assessors will have</p>	<p>Heat pumps can offer cooling as well as heating although cooling is not a focus for the project.</p>

			regard for overheating risk and can ensure solutions do not exacerbate this.	
Consumption of non-renewable resources?	Yes	-ive	Heat pumps and gas boilers are made of non-renewable resources.	Ensure householders are encouraged to dispose of the heat pump appropriately at the end of its life and the refrigerant is recycled. There is scope for the project to ensure that gas boilers removed are harvested for replacement parts.
Production, recycling or disposal of waste	Yes	-ive	Gas boilers will be replaced with heat pumps so gas boilers will need to be disposed of.	In conversation with a plumbing merchant to recycle any functioning gas boilers for use as replacement parts.
The appearance of the city?	No			
Pollution to land, water, or air?	Yes	+ive -ive	Avoiding NOx emissions from gas boilers. Heat pumps do generate some noise.	New heat pump models are much quieter than older ones and we will encourage use of the quietest models.
Wildlife and habitats?	No			

Consulted with:

Summary of impacts and Mitigation - to go into the main Cabinet/ Council Report

The overwhelming positive impact of this proposal is that heating in 200 homes will be electrified and therefore present a significant carbon reduction for these homes compared to the gas boilers that will be replaced. The project will develop and demonstrate a methodology for more widespread heat pump rollout beyond the lifetime of the project and therefore even greater carbon savings. Negative impacts of less significance are the embodied carbon in heat pumps, the disposal of gas boilers that still function and potential leakage of high GWP refrigerant.

The proposals include the following measures to mitigate the impacts:

- Ensure householders are encouraged to dispose of the heat pump appropriately at

the end of its life and the refrigerant is recycled.

- In conversation with a plumbing merchant to recycle any functioning gas boilers for use as replacement parts.
- Only use heat pumps that use a refrigerant with a GWP of 675 or less (e.g. R32) and ensure householders are encouraged to keep their heat pump well maintained.

The net effects of the proposals are positive.

Checklist completed by:

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Date:	08.12.2022
Verified by Environmental Performance Team	Daniel Shelton 09.12.2022