OH YES! NET ZERO Delivering Net Zero for Hull

Hull City Council and Ideal Heating

Decarbonisation begins at home

Around half of the housing in Hull is rented, with 19% (around 23,000 homes) being council housing and 8.1% other social housing. This is a higher percentage than average in the UK where, according to the latest government statistics, around 17% of households were rented from a local authority or other social landlord.

Emissions from consumer expenditure, largely through heating homes and travelling, are the largest single contributor to UK emissions and rose to over a quarter of total UK emissions in 2021.

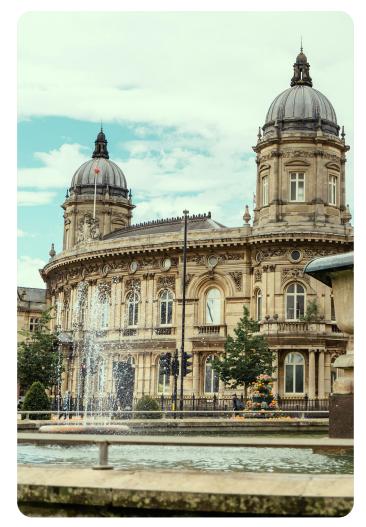
For Hull City Council, which is committed to the region's challenging net zero goals, decarbonising its housing stock is a priority. Most of Hull's council homes have gas heating, and the housing team is investigating the most efficient and effective way to refurbish and retrofit the estate's energy infrastructure in line with its low carbon ambitions.

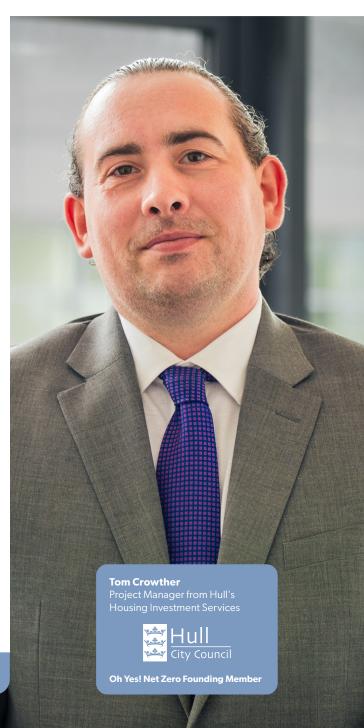
"There are different ways to reduce carbon emissions in housing," says Tom Crowther, Project Manager from Hull's Housing Investment Services. "A 'fabric first' approach – better insulation – will reduce the energy needed but then the remainder should be picked up by low and zero carbon solutions that provide heat and hot water at the lowest carbon footprint possible."

The Council's 2030 Carbon Neutral strategy, signed off in 2020, noted that over 1,000 private homes and 1,600 council homes had been improved with better insulation, with planned investment of over £18 million in further schemes in the future.

Oh Yes! Net Zero negotiated with Ideal Heating to donate air source heat pumps (ASHPs) to the Council to evaluate their effectiveness in the local housing stock. ASHPs are normally used in larger detached properties and capture the air circulating outside, boosting the temperature to provide heat and hot water. Compared to a gas boiler, an ASHP will emit around 75% less carbon and provide a more consistent, even level of heat.

As part of the cyclical refurbishment process of council properties, four ground floor flats were identified as in need of new heating systems and, instead of installing gas boilers, the Council installed the ASHPs.





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Less carbon, more comfort

"Some of the feedback we've received so far aligns with what's been documented elsewhere," says Tom. "The lower, more constant temperature of the radiators is conducive to a much more comfortable environment."

Any property with a 'C' rating for energy performance can be fitted with a heat pump now, says Martin Budd, the Council's Climate Change Manager. "It's part of changing how we relate to energy and how we actually feel heat. It takes longer to warm up, but it's a more even heat and it's not as dry. It's better for people with respiratory problems like asthma."

One of the first trial installations was in a home where the tenant had asthma, who reported that it was much more controlled after the heat pump had been installed. She had an all-electric home, and her energy costs were sky high. Installing a heat pump slashed her heating bill by around 60%.

Training and skills are a potential drag on the wider roll-out of ASHPs. At the moment, there aren't enough trained designers and installers to install the heat pumps the country needs. John Jackson, Ideal Heating's Technical Sales Manager for heat pumps, sums it up.

"We always use the target of 3,000 heat pump installers registered with MCS – a mark of quality assurance in the renewable energy sector," he said, "but the government wants 600,000 heat pumps installed by 2028, so those 3,000 qualified installers are going to be very busy. Installing a heat pump is a lot more complicated than installing a combi boiler. Pipework may need upgrading, flow rates evaluating, radiators replacing. And once the heat pumps are installed, housing officers need to be trained to advise tenants on the right energy tariff for their new type of heating, too."

Although commonplace in Nordic and Mediterranean countries, ASHP technology is still very new in the UK and this trial scheme and evaluation is critical to making sure it works for the benefit of residents.

"We've got to get it right. We already have the challenge of fuel poverty in the city, so it's important that when we decarbonise, we don't make it worse. Ensuring the system is set up for the residents to use properly, getting them used to a different way of heating their homes: it's vital that we learn from this trial period and then translate the information we have to provide to private rented sector landlords and owner occupiers in the city. We are all going to heat our homes differently, so we can't ignore it."



Martin Budd, Climate Change Manager Hull City Council



