



Doncaster
Council

Neighbourhood approach to decarbonising buildings and transport

Where is Doncaster in the race to net zero

Housing energy efficiency levels

- Net Zero by 2040 and 85% reduction in CO₂ against a 2005 baseline
 - **Latest BEIS data (2020) shows a 34% reduction since 2005**
- There are 139,585 dwellings in Doncaster
 - 65% are estimated to be owner occupied, 18% private rented and 17% social rented.
- The average SimpleSAP rating for all private sector dwellings is 61
 - worse than both England (62) and Yorkshire and The Humber (62).
- 3.7% (4,240) of private sector dwellings and 5.0% (1,261) of private rented dwellings in Doncaster are estimated to have an EPC rating below band E
- In the private sector stock, there are an estimated 16,920 dwellings with un-insulated cavity walls and 18,217 dwellings with less than 100mm of loft insulation

Where is Doncaster in the race to net zero

Renewables and decarbonisation

- **9th highest** of all 406 UK Local Authorities for the number of solar PV installations
 - with 7,311 homes/buildings utilising them.
- Doncaster is a target area for investment in renewable energy generation
 - There are 3 existing solar farms with a combined installed capacity of 42MW
 - A 49MW farm was recently approved by planning
 - There are 2 further applications coming through. One of them is for a **600MW solar farm.**
 - There is also an application coming forward for a **2.7GW battery storage facility** at the old Thorpe Marsh Power Station
- There is 61MW of onshore wind installed.
- Once installed, this level of energy generation will exceed the current energy demand of all homes in Doncaster...but still not enough to electrify heating and transport with zero emissions energy

Neighbourhood Approach

Targeting hard to treat

Mixed tenure

- In March 2020 the Council took a decision to fund insulation works to its remaining uninsulated homes
 - 1,800 homes were in scope for external wall insulation, loft insulation and new roofs up to 2025
- Neighbourhood approach been in place since 2008
 - Proactive 'door to door' targeting of homes requiring energy efficiency works / advice
- Always had a strong reputation for securing external funding to support a mixed tenure approach, but mostly for traditional works
- The Green Homes Grant voucher scheme, Local Authority Delivery and Social Housing Decarbonisation Fund all presented an opportunity to 'infill' private properties
- With ECO3 still in operation at the time, the variety of secured funding sources presented one of the best opportunities for full neighbourhood involvement
- During 2021-22 and 2022-23, we had over 650 homes in scope across 3 locations, including 470 Council homes

Community Liaison

The Council, St Leger Homes Doncaster, the contractor...and others

- Doncaster is a place of places. Each place is completely unique to the next one and as such, the support, services and investment into each community should be unique and bespoke to the residents living and thriving in each area
- New plans have been pulled together through listening to the voices of local residents, organisations and businesses to determine what is great about each community; their strengths and assets, and the areas in which they could be improved
- Our localities model is a partnership approach
- Always looking for other development opportunities which compliment planned delivery
 - Planting a Tiny Forest in the local primary school and installing solar PV on the community library
- Community meetings, home visits, wellbeing checks, energy saving advice – before, during and after works are completed

How the plans changed

Inflation, restrictive criteria, an enhanced specification of works, and a failed government scheme

- The Green Homes Grant voucher scheme ended
 - This was intended for use for all 'able to pay' households
- The cost of materials and labour more than doubled for some works
 - A combination of Covid and Brexit resulted in extreme levels of inflation
 - The government introduced PAS2035 standards
 - The cost of external wall insulation presented a pressure to the Council and to those private residents hoping to receive subsidised or fully funded works
- The Local Authority Delivery scheme and ECO3 had the same criteria and targeted the same works.
 - Private contractors targeting homes for low cost measures reduced the opportunity for hard to treat homes to receive fully funded external wall insulation
- The value of the successful bids total £7,084,942.
 - They have enabled delivery of 705 improvement measures to 409 homes. One of the schemes is still in progress and will raise these figures to 879 and 591 respectively, by March 2023.

Thinking ahead to future programmes

Drive-by validation of EPC's

- Prototyping scalable approaches to extracting building features
- Estimating the energy consumption from drive-by capture with the Urban Flows Observatory's multi-spectral advanced research vehicle (MARVel).
- The MARVel-based approach builds a 3D geometric representation of the buildings, and uses this to generate building energy model for simulation.
- Estimates of energy consumption generated by the simulations produce similar results to those reported in the EPCs
- Residential on-street EV charging



Reflections

The essentials required for successful neighbourhood delivery

- Financial support and incentive for all tenures
- Good quality supply chain which includes a contractor who is experienced and invested in community liaison
- PAS2035 surveys to identify all improvement measures which support a hierarchy of decision making
- Variety of communication channels to reach all households in scope
- Ongoing liaison and support
- Identify other opportunities for development which may support community engagement
- Working with other Councils and the Mayoral Combine Authority to create greater opportunities for accessing higher levels of funding, training and apprenticeships

Thank you

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