



Council Housing Development

Moving to net-zero



Housing Strategy & Development

Small but perfectly formed team!

We cover

- New council housing development and buying homes for use as council housing
- Encouraging energy efficiency, especially in the private sector
- Housing strategy and monitoring progress against our strategy
- Enabling more affordable housing from other partners and through the planning system
- Connecting housing to other themes and work such as social care, health, economic development and climate change



Luton Housing Strategy

“Domestic dwellings account for 39% of CO2 emissions in Luton. If we are to be a carbon neutral town by 2040, this will require significant investment and a step change in sustainable technologies for insulation, heating and hot water across all homes, including initiatives which will be attractive to homeowners.”

“The council has set minimum standards for new council homes, decarbonising heating where possible. Our influence over the homes that we own and manage is a great opportunity to continue to be a local leader in low carbon design, retrofit and housing quality. Our maintenance of our homes, the standards we set for new homes...all help us to work towards Zero Carbon.”

Adapting our Council Housing Programme

2019 – Agreed to convert all current programme to remove gas boilers

This affected two schemes which had progressed to planning stage:

Denham Close/Morris Close

6no 3 bedroom houses

Air Source Heat Pumps



Proposed Front Elevation

Buckle Close

37no 1, 2 & 3 bedroom flats

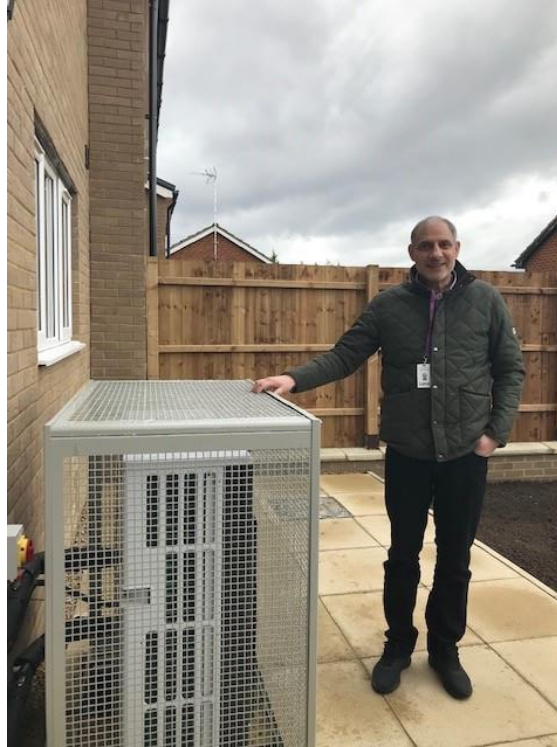
Ground Source Heat Pump



Denham & Morris Close – Completed Spring 2023



Under construction



Shabir shows off the Heat Pump!

Finished homes



Opening Ceremony

luton.gov.uk

Luton

Buckle Close – Under Construction



Kensa Ground Source Heat Pump
Very early part of the procurement
process

Learning experience – pipework
and internal plumbing

Completion in 2024

Housing Development Design Guides

1. LBC New Build Council Housing 'Design Brief'
2. LBC Council Housing 'Net Zero Guidance'

New guides for overall design and operational net-zero carbon design

This will guide our own council housing design and also influence developers who want to partner with the council





Net Zero Guidance

Based on size of development

Size of scheme	Key expectations
1-30 homes	10% improvement over carbon emissions over the Part L 2021 Be Lean (passive design measures only) and 20% overall carbon emissions over Be Green.
31-50 homes	These developments should aspire to achieve a Passive House 'Classic' Standard with focus on Fabric First Approach, quality, and occupant comfort.
51+ homes	Passive House Standard should continue being the target with addition of Renewable Energy Generation requirements which should be achievable for developments of this size. This is based on assumption that larger developments will have more space allowances for green technologies such as Photovoltaics.

Maximising renewable energy technologies is recommended for all developments despite their size.



Considerations in Net Zero Guidance

- Fabric First Approach, ie. prioritising well insulated building fabric with low heat loss.
- Water Management
- Circular Economy – Materials
- Waste Strategy
- Air Quality
- Green Infrastructure
- Transport & Sustainable Movement

Eg – thermal comfort, low water use, good use of materials, minimise waste, sustainably sourced timber, low volatile paints/glue

Example table: Fabric First

Development size	1 – 30 Units	30-50	>50-100
Energy Bands	Part L 'Plus'	Passive House 'Classic'	Passive House 'Plus'
How does the development mitigate overheating risk?	Part 'O' (CIBSE TM59)	≤10% hrs over 25°C/yr	≤10% hrs over 25°C/yr
What is the shading strategy for the developments?	Window recess / optimised glazing ratios	Overhangs and external fins	Movable shading elements such as external blinds
Is thermal mass being considered?	Low 100 (kJ/m ² °C)	Medium 250 (kJ/m ² °C)	High 450 (kJ/m ² °C)
How does the development benefit from consideration of form and massing?	Compact form, consideration of orientation	Maximised potential for crossflow ventilation	External shading elements such as balconies included but not interrupting the thermal envelope
Glazing Specification	G-Value: 0.40-0.50	G-Value: 0.50 with appropriate shading	G-Value: 0.50 with appropriate shading
How does the building respond to mode extreme, future climate scenarios?	Overheating strategy demonstrates how building can further improve over 'Part O' compliance	Achieves 'Pass' under Part 'O' for DSY 1 and 2	Achieves 'Pass' under Part 'O' for DSY 1,2 & 3



What next?

- New in-house schemes working to net-zero
- Asking the question of other developers where we look for partnerships
- Working at feasibility stage for 11 council sites
- In discussion re 2 partnership agreements

Growing our development team to build up and deliver more homes.

Acquisitions are part of our programme, net-zero considerations are part of scheme appraisal.



RETROFIT CREDITS

Verified Carbon Units + Social Value: A certified product for the housing sector

RETROFIT CREDITS, developed by HACT and Arctica Partners, is a carbon credits scheme that unlocks additional funding into housing retrofit by verifying the emission reductions and social value of retrofit projects – combining the Net Zero Goal with an intrinsic part of the sectors DNA.

A methodology has been developed to measure the carbon savings and social value created through retrofit activity. To ensure the environmental integrity of the issued credits, this project has been developed under the Verified Carbon Standard, the world's leading certification program for emission reduction



HOUSING DECARBONISATION IN THE
UNITED KINGDOM



arctica partners



Housing Strategy & Development

Contact

Claire Astbury

Head of housing strategy & development

Claire.Astbury@luton.gov.uk 01582 546969

