DARLINGTON
Borough Council

Housing Services Climate Change Strategy 2024 - 2029

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Introduction

In July 2019, Darlington Borough Council declared a climate emergency and we are committed to become a carbon neutral council by 2040. The residential housing sector accounts for 22% of the UK's carbon emissions[1]. As the largest social housing provider in Darlington, we are committed to ensure our housing stock (which makes up approx. 10% of all the residential dwellings in Darlington) meets the Government's targets for energy efficiency and net zero carbon.

However, this presents a significant challenge for the Council. Nationally, the requirement to meet a minimum of Energy Performance Certificate (EPC) rating of C in all homes by 2030 is estimated at £3.5 bn based on an average compliance of 69% and £7,700 for each property to carry out the works2. To achieve net zero carbon, the total investment requirement is £78 bn, or £50,000 for each property over 30 years. This would increase by £9 bn if net zero is targeted by 2040.

This strategy sets out our approach to achieving these goals. Due to the long-term nature of this strategy and given there are still many unknowns in relation to funding, developing technology and capacity, it is difficult to provide precise targets as to how or when we will achieve net zero carbon for all our homes. Therefore, this strategy covers the initial actions required over the next 3 to 5 years and will be continually updated to ensure we remain on course.

[1]Sustainable Energy Association

[2]Local Government Research: Housing Revenue Account Expenditure 2023

Background

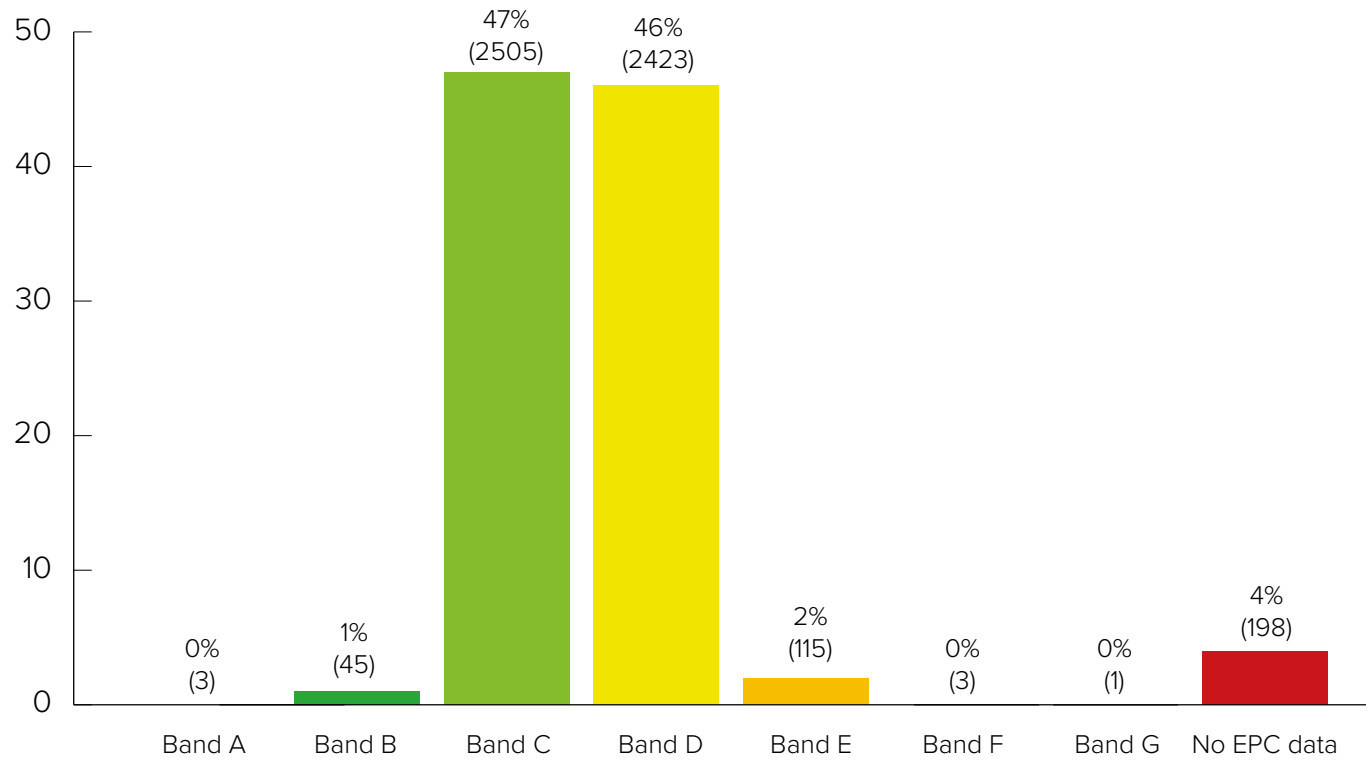
In November 2021, we commissioned a Zero Carbon Study report from Savills to evaluate the Council's ability to meet the Government's targets of achieving an EPC rating of C for all our Council housing by 2030 and net zero carbon by 2050 (at the time the report was drafted).

The key findings from the report were as follows:

- The Council should adopt a "fabric first" approach in the first stage of its strategy by reducing energy demand in dwellings that will also achieve a minimum of EPC C. This will involve upgrading insulation, including loft insulation, external walls, windows and doors. This should be combined with additional ventilation to avoid the potential risk of increased damp and mould.
- The second stage of the strategy will be to install alternative zero carbon heating systems. The most likely option, at the time the report was written, will be heat pumps. However, Savills recognised that technology innovation will determine the actual solutions that we will adopt in the future, also taking into consideration the different property types in our stock. The adoption of solar PV panels on our housing stock could help us to meet our targets earlier, but this will require additional investment and will not be appropriate for some of our properties.
- Net zero carbon is unlikely to be achieved until the national electricity grid can also be decarbonised. In addition, the electricity grid has insufficient current capacity to take over from all domestic gas heating and therefore, the switch from gas will need to be phased. The implementation of new technology will require unprecedented levels of investment to achieve the Government's targets and will present huge challenges in its delivery in terms of different skill sets for the workforce and a current lack of capacity to deliver at scale nationwide. The switch to alternative heating systems could also increase fuel poverty, as electricity is more expensive, and the Government will need to review its subsidy arrangements for electricity, compared to gas. Therefore, existing gas boilers should probably be retained until they are due for life cycle replacement.
- Calculations show that these measures combined, will reduce the total CO2 emissions from our housing stock by around 85%, from a current (2021) base position of approx. 15,650 tonnes of CO2 each year to 2,360 tonnes each year, with average carbon emissions for each property reducing from approx. 2.5 tonnes of CO2 each year to around 0.4 tonnes each year. This residual CO2 emission is due to the fact that the national grid has not yet been decarbonised.
- The budget to become "near zero carbon" is estimated at £142m, depending on the technologies adopted, but could increase to £167m, if we also considered ground floor insulation. This cost equates to an average of between £26,707 to £31,410 for each property. These costs exclude any solar photovoltaic (PV) options, which would cost an additional £3,000 to £4,000 for each property (or an additional £10m overall).

- However, taking into consideration the related work contained in the current 30-year stock condition forecast and business plan, the additional budget requirement reduces to an estimated £91m (or £17,115 for each property) to £116m (or £21,817 for each property). A further review with more detailed data analysis is required to determine the exact scope of work required.
- The current average Standard Assessment Procedure (SAP) rating across the whole stock is 64, which equates to a mid-EPC D. Based on the current data, approx. 2,500 of our properties are below EPC C (or 48%). Of these, approx. 680 properties are only just below EPC C and require minimal work. Our initial strategy should, therefore, be to upgrade the remaining stock to EPC C. However, there are some properties where achieving EPC C may be challenging, and therefore, the Council may want to consider demolition, sale or rebuild as an option.
- The cost of undertaking this work is significant and we need to review our asset management strategy to evaluate the performance of our stock against our existing business plans. We need to give careful consideration to the long-term future of any lower performing stock together with the lifecycles for asset replacements and the high levels of investment required.
- In summary, improving building fabric and insulation levels should be the first strategic phase towards the net zero carbon target and during this phase, Savills suggested that gas boilers would be retained for possibly one further life cycle replacement up to 2035, after which they should be switched to an alternative system.

Current EPC rating for all our homes



What have we done so far?

We continually bid for government funding to maximise our investment and upgrade our properties. Some of the work undertaken recently is as follows:

- In March 2021, we were successful in securing £1.25m of funding under the Local Authority Delivery (LAD1b) and Local Authority Delivery (LAD2) schemes, with match funding of £0.68m. This enabled us to carry out upgrades to 737 of our homes with measures including double glazing, loft insulation, solar PV, Air Source Heat Pumps (ASHP) and smart heating control upgrades. All properties were able to achieve an EPC C rating following those works.
- In March 2022, we successfully secured £0.24m of funding under a consortium bid with the Tees Valley Combined Authority (TVCA) for the Social Housing Decarbonisation Fund (SHDF) Wave 1 from the Department for Energy, Security and Net Zero (DESNZ), with match funding of £0.28m. We upgraded 23 of our homes with solar PV, external wall insulation or internal wall insulation, dependant on the building type, double glazing, loft insulation, low energy lighting and new front and back external lights. These measures have made these homes a lot warmer and reduced energy consumption. The 23 properties were chosen as part of the pilot scheme, based on property types that would have most benefit from carrying out these energy efficient measures. We aim to conduct more of these pilot schemes and have been successful in future rounds of funding.
- Due to the number of properties benefitting from funding in 2022-23, we were able to upgrade all our remaining single glazed homes to double glazing from our planned investment programme. An additional 1,232 Council homes had double glazing fitted to replace single glazed windows, at a cost of £2.7m.
- In March 2023, we secured an additional £1.27m funding under the SHDF wave 2 scheme that will enable us to upgrade 130 of our homes with measures including external wall insulation and low energy lighting over the next 2 years. We will be match funding this with £1.27m from our own planned investment programme.
- A Stock Condition Survey was carried out in 2022-23 by an external contractor. 10% of our stock was surveyed, which equates to 550 properties. This survey confirmed that our properties are of a good standard.
- However, we have now recruited our own full-time Stock Condition Surveyor, who will carry out a rolling programme of stock condition surveys covering 100% of Council homes, ensuring we have a more up to date and complete picture of the condition of our properties. This information will be used to evaluate what measures are required to bring each property up to EPC C.
- We have updated our existing planned investment program specifications to meet current energy efficient standards. This includes upgrading loft insulation and low energy lighting on our internal planned maintenance programme (replacing kitchens and bathrooms).
- We have also introduced Air Source Heat Pumps where the property is not connected to the gas supply, usually in rural areas.

- We have started updating our specifications to cover the installation of external wall insulation, cavity wall insulation, solar PV, and energy efficient gas boiler replacements, where funding and investment allows for appropriate properties.
- We have also updated our approach to improving the ventilation in our homes. Alongside installing Positive Input Ventilation (PIV) units, we will also install extractor fans in our kitchens and bathrooms as standard.

New Builds

- We have set an ambitious programme to build additional new Council homes to meet increasing demand for social housing in Darlington. We build to a high specification to ensure we are providing new tenants with exceptionally high quality homes that meet lifetime standards, including wider doorways and larger bathrooms to make them wheelchair accessible with level access showers.
- We have recently updated our new build specification and all of our new homes will now include Air Source Heat Pumps, alongside our original specification for energy efficient windows, doors and insulation. Our new build homes all achieve a minimum EPC B rating.

How will we get there?

- **Data Quality and Validation**
  We need to ensure the data we hold regarding our stock and its condition is accurate and up to date, to help shape and inform decisions we need to make to reach our targets. We also need to ensure we fully understand what is required, how we can deliver this and who will do it, so a comprehensive review and validation of data we hold is required.
- **Fabric First**
  A fabric first approach allows for simple changes considering the design, construction and building fabric of a home to produce an efficient and low energy building. The building fabric refers to the roof, walls, windows, floors, and doors of a home. Using this method, we can prepare a programme of work to help us achieve EPC C for all our properties by 2030. We will also be able to effectively deliver measures and engage with our tenants, whilst monitoring the effectiveness of work and re-evaluating where necessary.
- **Funding, Bidding and Capital Programme**
  Significant investment will be required for us to implement our plans and we will need to source this through our own Housing Revenue Account (HRA) resources and our capital programme. This must be managed effectively alongside continually reviewing our energy efficiency budget. We will continue to bid for available grant funding and provide supported matched funding to ensure the delivery of schemes. Our capital programme will be reviewed on an annual basis, and we will consult our tenants about our planned expenditure. This will include a review of existing timescales for the replacement of key building assets (such as kitchens and bathrooms) and what work can increase EPC ratings to align with our Housing Asset Management Strategy. From this, we will create a new business plan considering new technologies and the lifespans of assets. We will also review funding for the upskilling of internal staff, to compliment the introduction of our energy efficiency measures.
- **Retrofit and Technology**
  Retrofit is the introduction of new materials, products and technologies into an existing building, to reduce the energy needed. When retrofitting our homes, we aim to increase their energy efficiency by implementing improvements to reduce energy consumption and provide our tenants with a warm, comfortable home. Retrofitting will include:
  - Reviewing new technologies as they emerge onto the market (such as new heating systems).
  - Reviewing and upskilling our workforce, to ensure we have capacity to install and maintain new technologies.
  - Ensuring our tenants have the right information and support to use new technologies.
  - Ensure we have robust supply chains in place for the supply and maintenance of new technologies.
- **Biodiversity**
  Biodiversity is the term used to describe all life on Earth, in all its variety. There's a growing mountain of evidence to show that green spaces are good for our mental and physical wellbeing, as well as supporting carbon offsetting. We will consider how we can encourage biodiversity such as wildflower meadows. We will also consider using Housing land, which we are not able to develop, to plant trees and support the Council's Tree and Woodland Strategy, which will make areas more attractive.

Action Plan

Area	Action	Timescale	Responsible Officer(s)	Expected Outcome
Data Quality and Validation	Identify new energy efficiency measures to mainstream energy efficiency into the capital programme	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	This will become standard practice within the capital programme
	Review specifications of our planned work including: • Internal Planned Maintenance • Heating Replacement • Void Properties • New Builds	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Increase in energy efficient measures delivered as standard
	Engage with our tenants and develop a communications plan	2024-29	• Housing Asset and Compliance Manager • Head of Housing	Tenants are aware and involved in decision making around Climate Change
	Understand the impact of SAP10 (and other SAP changes) and the impact this will have on EPC ratings	2024-25	• Housing Asset and Compliance Manager • Building Surveying Manager	Clear understanding of SAP10 and EPC ratings
	Review new Decent Homes Standards	2024-25	• Housing Asset and Compliance Manager • Building Surveying Manager • Head of Housing	Our plans will be adapted to work within the new standards
	Assess what energy efficiency measures are needed for each property and the related costs	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Improved data quality for our bidding and business planning
	Review staffing resource and understand training requirements	2024-25	• Housing Asset and Compliance Manager • Building Surveying Manager • Housing Buildings Manager	Staff aligned to clear roles and appropriately trained
	Review carbon reductions for our properties and the cost savings for our tenants	2024-25	• Housing Asset and Compliance Manager • Building Surveying Manager	Reporting will show how the energy efficiency measures have potentially reduced the cost of heating our homes and the carbon reductions

Area	Action	Timescale	Responsible Officer(s)	Expected Outcome
	Survey all Council properties to identify the stock condition	2024-29	• Building Surveying Manager	We will hold accurate, good quality data for reporting, analysis and planning
	Use stock condition data to identify properties that can't get to EPC C. Evaluate and provide options	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Appropriate options for those properties are considered and progressed
Fabric First	Prepare programmes of work based on improved stock data and evaluate the financial implications	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Business plans and capital programmes updated with investment options identified
	Deliver programmes of work	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager • Housing Building Manager	Homes will be more energy efficient with an improved EPC rating. Plans on course to achieve EPC C for all Council properties by 2030
	Monitor the effectiveness of work (re-evaluate)	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Identified and evaluated what has gone well and lessons learned. Plans adapted to take these into account
	Evaluate green credentials of contractors	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	The impact of climate change evaluated and considered through the procurement and contracting process
	Evaluate the capacity of contractors, supply chains and energy efficiency skills externally	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Better understanding of the skills and capacity gaps
Funding, Bidding and Capital Programme	Review energy efficiency budgets	2024-29	• Housing Asset and Compliance Manager	Budgets established for each year
	Continue to bid for grant funding and ensure sufficient match funding is available	2024-29	• Housing Asset and Compliance Manager	Successful grant funding bids
	Implement the Housing Asset Management Strategy including reviewing lifecycles for asset replacements	2024-25	• Housing Asset and Compliance Manager • Building Surveying Manager	Housing Asset Management Strategy implemented
	Review funding for upskilling and training	2024-25	• Housing Asset and Compliance Manager	Skilled and knowledgeable workforce
	Identify and develop partnership opportunities	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Partnerships in place to support delivery, procurement, engagement, and knowledge.

Area	Action	Timescale	Responsible Officer(s)	Expected Outcome
Retrofit and Technology	Review technologies available for each property type and how this affects the lifecycle replacements and costs to install and maintain	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Good understanding of the impact of new technologies on our stock and business plan
	Review actions to support the Council's Climate Change Agenda such as electric charging points and fleet management	2024-29	• Housing Asset and Compliance Manager	Good understanding of how the Council's Climate Change objectives impact on Housing Services
	Participate in regional and national groups to identify best practice and carry out benchmarking	2024-29	• Housing Asset and Compliance Manager	Good understanding of how we are performing against our peers and best practice used to develop our plans
	Review skills of workforce to understand the educational and training offer available	2024-25	• Housing Asset and Compliance Manager • Building Surveying Manager • Housing Building Manager	Increased skills and knowledge base
	Upskilling our tenants and Housing Staff	2024-29	• Head of Housing	Staff and tenants trained in the new technologies and measures as they are rolled out
	Provide website updates and guidance materials	2024-29	• Housing Asset and Compliance Manager • Head of Housing	Website updated regularly and guidance available
	Monitor and review supply chains and market	2024-29	• Housing Asset and Compliance Manager • Building Surveying Manager	Good understanding of supply chains and market
Biodiversity	Review housing open spaces to support the Council's woodland strategy	2024-29	• Head of Housing	Improvements to housing open spaces with more trees and wildflowers where appropriate

Challenges and Risks

What are the challenges to net carbon zero for us as a landlord?

Achieving net carbon zero by 2040 will be one of the most significant projects for Housing Services in the coming decades.

We want to provide homes that are energy efficient, affordable, comfortable, and safe to our tenants. However, achieving net zero carbon for our homes is a complex project with several key challenges and risks for delivery.

We have highlighted below the following key challenges, risks and mitigations that we need to consider as we plan to meet our targets.

Challenges	Risks	Mitigations
We will need sufficient budget within our business plans to meet the cost of achieving net zero carbon	• Insufficient Government Grants available to meet the costs	• Lobby Government through regional representative groups such as NECCo
	• Insufficient funding within our Capital Programme to match fund Government bids	• Explore ways to allocate more resource within the Capital Programme to energy efficiency measures • Review our Housing Asset Management Strategy in relation to the timescales for replacement of key building assets
	• Competing priorities for our financial plans in relation to new Decent Homes Standards, new RSH Consumer Standards and new Health and Safety Regulations	• Identify what components of these new standards and regulations can contribute to the energy efficiency of homes (such as new fire doors)
	• Cost of materials and resources continue to increase above inflation	• Review financial plans on an annual basis and update Members
	• Rent increase caps limit the amount of available financial resource to energy efficiency work	
We will need sufficient capacity within the Council and with contractors to meet the demands of the Climate Change programme	• Insufficient resource within our own Repairs and maintenance team	• Resources to be reviewed on an annual basis to ensure we have sufficient capacity to meet demand
	• Insufficient resource for grant funding bids, procurement and contract monitoring	
	• Insufficient capacity in the commercial sector to tender for contracts	• A review of the capacity of potential contractors to be undertaken before any major Capital works is planned • Establish partnerships with local housing providers to make work programmes more efficient for contractors

Challenges	Risks	Mitigations
Our workforce will require upskilling to enable us to install and maintain new technologies and to support our tenants	• Insufficient capacity within the Council to provide adequate training for existing staff	• Training programmes and personal training plans to be reviewed as new technologies emerge
	• Colleges not offering the right courses for new staff and apprenticeships	• Liaison with local colleges to ensure they have the capacity to provide the right training courses and qualifications
	• Tenants will be unable to use new heating systems effectively	• Review the need for a specialist tenant liaison officer to undertake this role
We will need robust and reliable supply chains in place to ensure we have sufficient stock to meet demand	• Suppliers unable to meet demand for new technologies and parts	• A review of the capacity of potential suppliers to be undertaken before any new heating systems are procured
	• Electricity grid unable to meet extra demand for electric heating systems	• Work closely with Government agencies to understand the capacity of the electricity grid before any new heating systems are procured
We will need to consider the extent of work needed for each home to achieve EPC C and/or net zero carbon	• Some homes are not able to achieve EPC C and/or net zero carbon	• Carry out a stock survey of all properties to understand the level of work required. • Understand the impact of each measure to plan work effectively • Consider the long-term future of any lower performing stock together with the lifecycles for asset replacements and the high levels of investment required • Consider all available options such as decants, selling or demolishing the property
	• Works may be extensive and require decant during the work	
We will need to consider the effect of any upgrades on our tenant's utility bills	• Energy bills may increase through additional electricity consumption	• Consider if a range of measures are needed to offset any increases, such as solar PV

Monitoring and Review of the Strategy

Effective monitoring reporting of this strategy will help us understand if our climate change activities are making a difference. Therefore, we will measure and report on the effectiveness of this strategy by doing the following:

- We will expect to see an increase in the number of properties achieving EPC C or above. We will measure and report on this through KPI reporting via our website, Housing Connect magazine and an annual report to Members and our tenants.
- We will evaluate the progress of climate change activities at regular intervals throughout the year to ensure these are working effectively.
- We will publish the details of our climate change and energy efficiency opportunities through an annual plan, regularly reporting on how we are progressing.
- We will publish the records of meetings and decisions made.
- We will provide an annual report to the Health and Housing Scrutiny Committee on the progress against our strategy.
- We will ensure climate change energy efficiency forms a core competency for housing staff and is reflected in all job roles and training plans.
- We will ensure our performance is monitored against the overall Darlington Council Climate Change Action Plan.
- We will review and update our Tenant Engagement Strategy to ensure our tenants are involved and empowered to help us shape our plans towards net zero carbon.

Housing Services contact details

01325 405333

housing@darlington.gov.uk

www.darlington.gov.uk/housing

darlingtonbc

facebook.com/DBCHousing

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Borough Council