

A photograph of a person from the waist down, wearing a dark patterned shirt and orange pants. They are looking down at a map and some documents on a table. The map shows a residential area with various colored blocks. The person is holding a small white card with text on it. In the background, there are other people's hands and a white wall.

Resident-led improvement and retrofit for housing estates

Guidance notes for residents looking to
safeguard the future of their estate

Who is this toolkit for?

This guidance has been developed to help residents of housing estates consider retrofit as part an overall improvement plan.

Many estates can be repaired, refurbished and retrofitted. However, this is often not considered by landlords, who may have other intentions.

The guidance is intended to help residents make an informed case for repair and retrofit, to ensure that this is considered before decisions about demolition are made.

The guidance has been prepared by AAB architects with the benefit of grant funding by Architects Climate Action Network. It originated from work carried out alongside residents of the Lesnes Estate, South Thamesmead between 2024-25, with support of colleagues from Housing Rebellion and Refurbish Don't Demolish. With special thanks to Sam Brooke, Florence Wright and Melissa Merryweather.

If you have any comment and feedback please email mail@aabarchitects.co.uk.

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Estates don't have to be demolished to provide better homes. Many can be repaired and improved, including energy-saving measures called "retrofitting."

Retrofitting can make homes warmer, safer, and more sustainable – often without residents having to move.

How can this be achieved?

Residents may have experience getting basic repairs done.

They can also lead the way in demanding improvements to ensure comfortable, healthy, good-quality homes that reduce energy bills and reduce carbon emissions.

As well as saving energy and making homes warmer in winter months, retrofitting can help adapt homes to a changing climate by combatting

over-heating and flooding.

Demolishing and rebuilding should be the last option. Unfortunately, landlords often prefer it, particularly when working with private developers who are motivated by profit.

This toolkit helps:

- Residents of estates take charge in creating a resident-led plan for improvements, including retrofit.
- Build agreement on positive changes to the existing estate.
- Make retrofitting a preferred option over demolition.

The toolkit suggests an Estate Improvement Plan to:

- Serve as the basis of a campaign to improve the estate.
- Provide better homes for residents, led by residents.

Contents

1. Introduction Problems with demolition Making the case for retrofit What is retrofit? Retrofitting jobs and roles	Page 4-6
2. A time-line of action How a resident group can develop an Retrofit Strategy as part of an overall Improvement Plan	Page 7
3. Where to start Getting organised Increasing retrofit awareness Building a Residents' Brief?	Page 8-10
4. First steps First assessments and studies Who to engage with Identifying funding strategies	Page 11
5. Assessing your estate for retrofit What is a Retrofit Assessment? Representative assessments Selecting your sample	Page 12
6. Preparing an Estate Retrofit Strategy A blueprint for improvements What's in a Retrofit Strategy? What else can you consider?	Page 13-14
7. Using your Estate Improvement Plan Promoting your plan Unlocking funding	Page 15
Appendices Appendix A: Lesnes Estate case study Appendix B: Funding sources and useful links	Pages 16-17

1. Introduction

Problems with estate demolition

Issues have been highlighted by residents, campaigners & researchers*:

- Demolition and rebuild projects tend to be overdeveloped, which causes harm to the community and the environment.
- The high proportion of market homes for sale, resulting from the cross-subsidy funding model typically used, results in gentrification and higher rents in the area.
- Communities are broken up and people moved away from their home. Social tenants may face 10+ years in temporary housing before returning. Despite promises, some residents may not return to a newly built home.
- Homeowners who bought through Right-to-Buy have to sell their homes at too low a value to enable them to buy an equivalent home in the same area.
- Social rent and service charges are likely to be higher in a new estate.

* Paul Watt, Estate Regeneration and its Discontents, 2021
Anna Minton, Ground Control, 2016

1.1

Challenging demolition -led redevelopment

Social housing in the UK is facing a crisis, due to lack of funding for repairs and poor performance of repairs services:

- Local authorities and social housing providers, who have neglected repairs, use mounting repairs to justify demolition and argue that rebuilding from scratch can create more homes on existing estate land.

Need for more homes

- There is an unmet need for council and social housing, due to the loss of council housing through Right-to-Buy, introduced by Margaret Thatcher in 1980.
- Local authorities and social housing providers have not been able to replace lost housing stock at the rate required, due to lack of funding.

Room layouts and accessibility

- Homes built in the 1950s and 60s often have less space than today's standards, although from the late 1960s the revised Parker Morris standard was more widely adopted and space standards improved.
- Existing flats may not provide enough space for people who use wheelchairs or have other mobility issues. Upper floors may not be accessible due to lack of lifts.

1.2

Safety of high-rise flats

- After the Grenfell Tower disaster, high-rise blocks of flats have been placed under renewed scrutiny. The lack of a second means of escape staircase may be an obstacle to retaining and refurbishing a high-rise block.
- There may be concerns about a building's structure, particularly if it is built of prefabricated panels with no supporting frame.

Alternatives to demolition and rebuilding

The need for more social housing can be met by building new homes on existing estates without demolition. Architects for Social Housing (www.architectsforsocialhousing-design.co.uk) provide examples which involve increasing the height of existing buildings and building on sites between existing buildings.

Improvements to internal and external layouts can overcome original design flaws. www.aabarchitects.co.uk/west-kentish-town-estate-retrofit/ provide some examples.

Additional means of escape staircases can be built, and lifts added.

Why push for retrofit?

Upgrading estates benefits both residents and landlords. This can include repairing, refurbishing and retrofitting.

A 'joined up' maintenance plan

- A strategy to improve an estate can reduce the need for quick fixes.
- It can include energy efficiency upgrades as part of the landlord's asset management plan.
- A coordinated approach minimizes wasted work, and reduces costs.

However, this requires upfront coordination and planning, which is often lacking on the part of landlords.

Financially beneficial

- Retrofitting is cheaper than demolishing and rebuilding.
- It avoids costs for rehousing tenants and buying back homes from leaseholders in order to demolish them.
- Retrofitting often results in better building quality than new construction, as it requires a careful approach and skilled contractors.
- Maintenance costs go down.

Social benefits

1.3

- Retrofitting may allow residents to stay in their homes during improvements, minimizing disruption and keeping communities together.

Environmental benefits

- New buildings use a lot of materials that create large quantities of carbon emissions, a major cause of climate change. Retrofitting existing buildings reduces carbon emissions by avoiding new construction. It also reduces the energy needed to heat and power homes.
- Keeping existing buildings preserves trees and green spaces, helps local biodiversity, and reduces pollution and over-heating.



Making the case for retrofit

1.4

If residents discover that their estate is threatened with demolition, and redevelopment plans are at an advanced stage, it may be difficult to persuade their landlord to change their plans.

A successful outcome is more likely if residents intervene earlier in the process.

There are number of tactics to fight against pre-determined outcome:

- Share information.
- Campaign for representation in decision making.
- Mobilise residents to work together for a better outcome.

Make the case for retaining and improving the estate before demolition proposals come forward:

- If necessary appoint an independent tenant advisor to help this process.
- Consider all the issues that may be used by the landlord to justify demolition.
- Develop an Improvement Plan, maybe including a fundable retrofit strategy.

What is retrofit?

When you retrofit, you add things like insulation or renewable energy technologies to a building that didn't have them originally, to reduce energy consumption and improve the building's ability to retain heat. These measures can alter the fabric of buildings, such as insulating walls, roofs and floors.

Your home might not be modern, but you can still live with modern comfort.

The PAS 2035 Standard

PAS 2035 is a British Standard which sets a framework for high-quality energy retrofits of existing homes.

It details how to:

1. **Assess dwellings**
for retrofit
2. **Identify appropriate improvements**
3. **Design and specify**
energy efficiency measures
4. **Monitor measures**
during and after installation

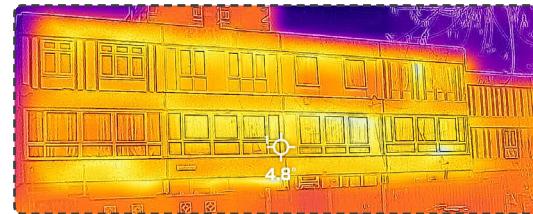
This toolkit follows PAS 2035, as most government-funded schemes require compliance with the standard. See this [link](#) to the BSI website for details.

1.5

Retrofitting jobs and roles

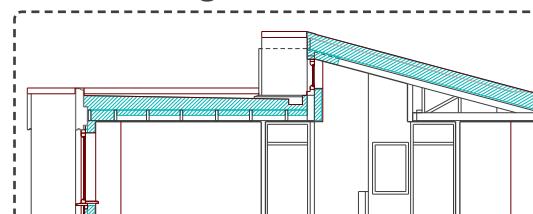
Several professionals are involved in the PAS 2035 retrofit process:

Retrofit Assessor:



- Expert surveyor who visits homes for assessment and to discuss residents' needs.
- Prepares an energy model and identifies improvement options.
- Holds a TrustMark accreditation through a Retrofit Assessor scheme.

Retrofit Designer:



- Construction professional (like an architect) with detailing experience.
- Designs and specifies measures such as insulation. It is important that this is done properly to avoid future problems.

1.6

Retrofit Coordinator

- Your main point of contact. A construction professional who oversees the project from start to finish.
- Develops a Retrofit Strategy.
- Protects the interests of the client (householders and landlords) and the general public against the risks associated with poor retrofit.
- Holds a TrustMark accreditation.

Retrofit Installer

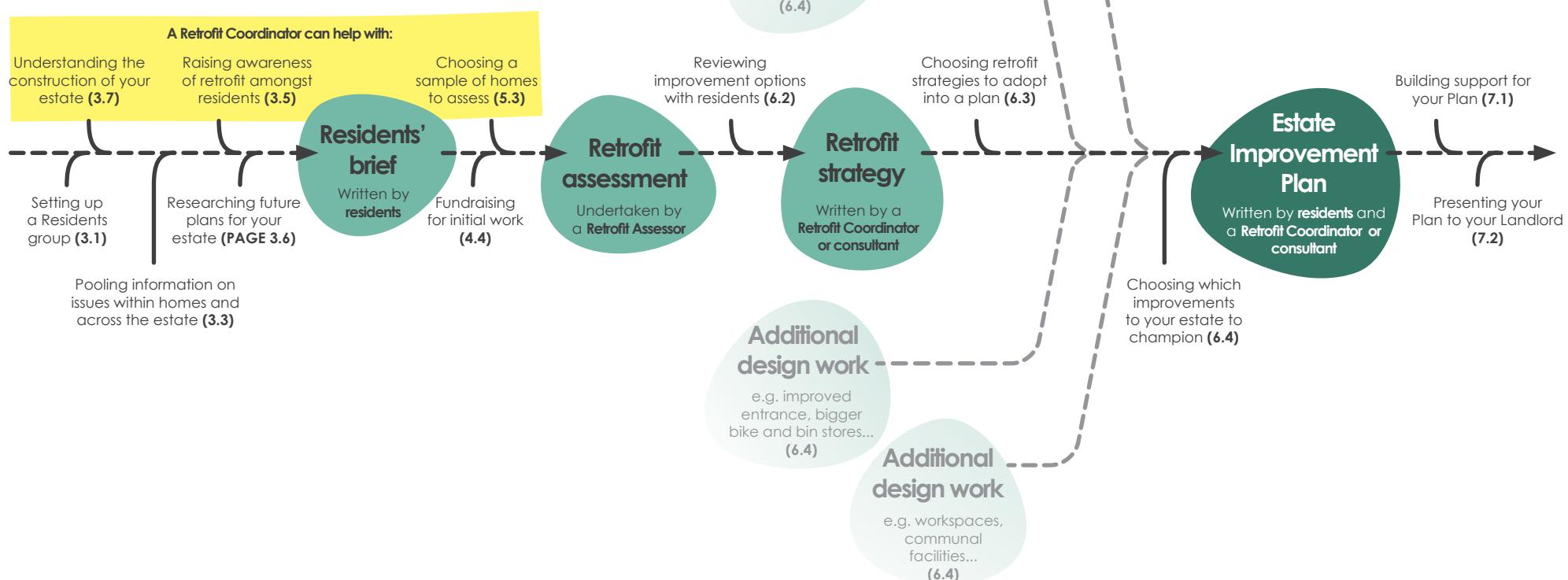


- Contractor who installs energy efficiency measures.
- Holds a TrustMark accreditation and accreditations specific to their trade.

2. A time-line of action

This page outlines the steps residents may take to develop an Estate Improvement Plan, including a Retrofit Strategy

Detailed guidance on pages that follow is indicated by numbers in brackets.
This time-line is not fixed- it's just an example.



3. Where to start

Getting organised

Form an estate improvement group

- Create a group dedicated to campaigning for estate improvement.
- An existing Tenants and Residents Association might already exist.
- Improving homes and common areas is a shared goal.
- Collaborate with existing groups.

Constitute your group

- Formalise your group by adopting a constitution.
- Agree on simple rules and principles.
- Outline what your group intends to do and how.
- This is an important step in creating a legitimate resident voice.
- May unlock funding and legitimise the right to be consulted.

3.1

How to gather information

- Gather residents' experiences and issues to build a full picture of the estate.
- Collect their views for the Estate Improvement Plan.
- This is key to building a proposal everyone supports.

Consider these methods:



Workshops: Small groups to hear thoughts.



Questionnaires: In-person interviews with residents, or online or postal.



Email address: For residents to share thoughts.

3.2

Keeping fellow residents informed

Consider how you will communicate your retrofit campaign:



Postal communication:
Reaches all residents



Social media groups:
For immediate communications, but can lose focus



Meetings: Effective, but only to those who can attend

Information should remain focussed on the campaign's aims.



3.3

Increasing retrofit awareness

Sharing information about retrofit

3.4

- Many residents may not know what retrofit is or its benefits.
- Create an information campaign to inform and enthuse residents.

Consider these methods:



Print literature: Leaflets and posters explaining retrofit.



Retrofit Workshops: Invite retrofit professionals to share knowledge.



Estate tours: Engage residents with their built environment.

People will have different reasons to support retrofitting, such as:

- warmer homes in winter
- cooler homes in summer
- reducing heating bills
- preserving heritage
- reducing carbon emissions
- dealing with condensation, damp and mould

The more benefits you highlight, the broader your support for retrofit will be.

Gathering information

Are there any future plans for your estate already?

3.5

Research what plans your landlord already has for your estate.

There may already be plans for repair or renewal works to be carried out. It is useful to understand the context in which your Plan will be received, as it could influence how you form your Estate Retrofit Strategy.

Open and honest conversations with your landlord is encouraged. However, information can often be found via online searches. If your landlord is a local authority you can submit a Freedom of Information (FOI) request asking for any material which is linked to your estates, such as meeting minutes or feasibility studies.

Understanding your estate

3.6

- Understanding the estate's construction, history of improvements, and current issues is an important starting point.
- A Retrofit Coordinator can help you identify key factors.

Actions:

Look for original plans and drawings to answer questions such as:

When was the estate built?



What kind of construction is it?



Have measures been taken to improve or alter homes already?



Are there common faults?



Collaborate with other residents to create a comprehensive list of issues.

Building a Residents' Brief

Setting out wants and needs

3.8

- A brief will form a basis of what you hope to achieve with your Estate Improvement Plan.
- Aim to create a simple document which spells out the overarching aim which residents can get behind, and design professionals can understand when looking at providing design or retrofit solutions.
- A good brief will be realistic, achievable, and inclusive:

- **How will it benefit you?**
- **How will it benefit the estate?**
- **How will it benefit the Landlord?**
- **How will it benefit the wider community?**



What's in a brief?

- 1 An introduction:** introduce your group, its intentions and reasons for coming together
- 2 Your over-arching vision:** summarise the aim in a few sentences.
- 3 An outline of the issues:** identify occurring issues.
- 4 Key objectives:** list absolute requirements.
- 5 Additional requests:** measures you would like to include, but are not top priority.

Brief-writing tips:

- Take time to write a brief that satisfies all residents.
- Create a brief-writing workshop.
- Keep it aspirational and don't get bogged down in technical requirements.
- A Retrofit Coordinator may suggest what level of retrofit improvements can be achieved.

Example brief:

3.9

Your residents' brief may be similar to this:

**GREEN GARDENS ESTATE 2025
RESIDENTS BRIEF FOR IMPROVEMENTS**

WHO ARE WE?
We are the Better Green Gardens residents group. We formed to build a resident-backed vision for the improvement of the Green Gardens Estate and homes upon it.

OUR VISION
A future for our estate where the homes are warmer and more energy-efficient, and the estate's outdoor spaces are greener and more suitable for our children to play in.

CLIMATE EMERGENCY AND ENERGY COSTS
We want to do our bit to reduce fuel use and carbon dioxide emissions, which are a threat to our future by causing climate change, as well reducing energy bills.

CURRENT ISSUES
Flats have single-glazed windows which are cold, draughty and prone to condensation.
Flats suffer from persistent leaks through the roof, causing damp and mould. The shared courtyard has no green space and opens out on to the road, making it unsuitable to use or play in.
The lifts are too small to fit a mobility scooter in, and are often out of order.

KEY OBJECTIVES:

1. Install double-glazed windows into every flat
2. Fix and insulate the roofs of each block
3. Install planting in the courtyard and shield from the road
4. ...

4. Retrofit first steps

Assessments and studies

Initial assessments and evaluation of options are necessary to understand the full potential of a retrofit scheme. This work builds up a picture of your estate, recording its existing condition and suggesting improvements which could be made.

Painting this picture accurately and convincingly with professional assistance will give the best start to your estate's journey to becoming retrofitted.

Working with your landlord

Your landlord may already have plans to make improvements using the Government's schemes, such as:

- Warm Homes: Social Housing Fund
- Warm Homes: Local Grant
- Social Housing Decarbonisation Fund

These will need to comply with PAS 2035, and the landlord will need to appoint their own Retrofit Assessor and Coordinator.

Reaching out to your landlord early and expressing willingness to collaborate as a unified 'residents' voice' can give you influence in shaping and driving future improvements for your home.

4.1

4.2

Engaging a Retrofit Coordinator

4.3

If your landlord is not considering retrofit, then your constituted group can of appoint a Retrofit Coordinator itself to start a plan.

They will organise retrofit assessments and analyse the information to develop a retrofit strategy.

If you choose a Retrofit Coordinator who is also a design professional such as an architect, they will be able to assist with additional proposals and improvements across your estate.

A Retrofit Coordinator will provide:



A retrofit strategy analysing options for a suitable retrofit



A risk assessment for retrofitting homes across your estate

A design professional may also provide:



Feasibility studies for additional improvements on the estate



Initial design proposals which incorporate retrofit measures

If you approach a Retrofit Coordinator at an early stage they can assist you in preparatory tasks, such as helping raise awareness of retrofit amongst residents through workshops or meetings.

Identifying funding strategies

Funding initial work

4.4

If you intend to produce an Estate Improvement Plan independently of your landlord, you will need to consider payment for professional fees in producing retrofit assessments and feasibility studies.

You could consider setting up an online fund-raiser or applying for funding from community investment schemes, such as the National Lottery to cover the costs of these initial evaluation exercises.

Considering funding methods: opportunities and limitations

4.5

Being able to identify available funding for carrying out retrofit improvements is vital for the viability of your Plan.

Some sources of funding can only be accessed by your landlord or local authority. Tenants will need to work with their landlord if they wish to improve their homes. Other sources of funding can be accessed by individual leaseholder or freeholder households. They will be expected to contribute to improvements which affect the whole estate or their block. This may put off some residents who are uninterested or will struggle to afford it.

5. Assessing your estate for retrofit

What is a retrofit assessment?

To figure out an appropriate retrofit solution for a home, the property must first be assessed to understand its current condition and level of performance.

The retrofit assessment, as required by PAS 2035, will record and evaluate several factors, such as:



Context: The property's location, exposure to sun and wind, risk of flooding, etc.



Condition: The property's state of repair and the integrity of structural elements.



Ventilation: The property's ability to supply fresh air and remove stale or humid air.



Energy use: The property's energy rating, and any existing energy-saving measures (see page 13 for details of EPCs).



Occupation: How many people live in the property and if there are any special requirements for vulnerable occupants.

5.1

Who carries out a Retrofit Assessment?

A Retrofit Assessor will carry out the assessments. If you have appointed a Retrofit Coordinator they can help find a suitable assessor.

Representative assessments

By selecting and assessing a sample of homes from across your estate, you can build up a fairly accurate understanding of many homes at once.

Housing estates are made up of tens or even hundreds of houses and flats that share the same design and are built at the same time. Each property is likely to share common design characteristics which affect how occupants heat and ventilate the home. There may be common ways in which homes have been altered over time.

5.2

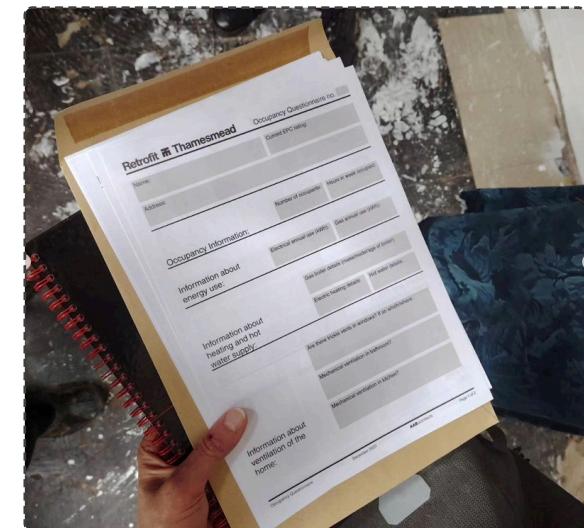
Diagnosing issues

Assessing a cross-section of homes will not provide exact recommendations for every home.

Many factors will affect a retrofit plan for an individual home, such as the number of people living in it, and whether improvements have been carried out.

The older an estate is, the more seemingly identical dwellings diverge, as repairs, alterations and heating system replacements accumulate. More dwelling types will need to be assessed.

A Retrofit Coordinator will be able to help you decide on which homes should be included in the assessment sample.



A Retrofit Assessor is likely to charge on a dwelling-by-dwelling basis, so there will be a limit to how many homes you will want to assess. The Retrofit Assessor will need access to the whole house when carrying out their assessment, and will require information to be provided by occupants on heating and energy use, so consider this when selecting your sample.

6. Preparing an Estate Improvement Plan

A blueprint for improvements

An Estate Improvement Plan should provide a clear vision for upgrading your estate and outline the steps needed to make these improvements.

Offer specific solutions for the issues or needs listed in your Residents' Brief. These solutions can come from the Retrofit Strategy created by your Retrofit Coordinator, as well as insights from any design work or feasibility studies conducted.



Their plan not only advocated for retrofit measures and repairs to existing homes, but also highlighted potential locations for new infill and rooftop developments and raised the need for new health and community facilities on the estate.

6.1

What's in a Retrofit Strategy?

6.2

Based on the initial Residents' brief and the data collected from your representative retrofit assessments, your Retrofit Coordinator will be able to develop a retrofit strategy.

They will use the information gathered to produce a report recommending appropriate energy efficiency measures. The report will assess the effectiveness of various energy efficiency measures, comparing the costs and feasibility of implementing each measure against the potential energy savings it is expected to deliver.

Here is a simplified example:

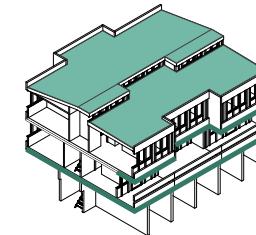
Potential measures:	Power use:	Install cost:	Cost saving:
[Existing property]	[30,000kWH]	[\$0]	[\$0/year]
Measure 1. Install loft insulation	25,000kWH	£750	£200/year
Measure 2. Install double glazing	21,000kWH	£10,000	£40/year
Measure 3. Install heat pump	17,000kWH	£7,500	£250/year

The strategy will recommend the most effective combination of measures, detailing the timing and sequence in which each measure should be installed. It can be used to show your landlord that retrofit is feasible to carry out.

6.3

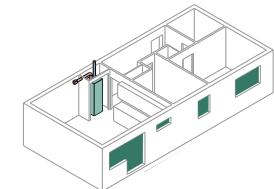
Considering retrofit measures for your Estate Improvement Plan

After receiving a Retrofit Strategy from your Retrofit Coordinator, you can work with them to choose which measures to include and how that should be delivered, considering factors such as:



Block-by-block?

Easier to manage
More cost-effective
Hard achieving consensus
Tricky with leasehold homes



Home-by-home?

More incremental
More resident choice
Easier with leasehold homes
Access to household grants



'Fabric-first'?

Extends life of buildings
Longer-term solution
It is better to reduce heat demand first
Potentially more disruptive and costly



Low-carbon energy?

Dedicated funding pots
Potentially less disruptive
Systems can cost more to run without improvements to the building fabric

Energy performance certificates, or EPCs, rate the energy efficiency of buildings with A being the best and G the worst.

What else can you consider in the plan?

Here are some other design changes or improvements you might want to add in to your Estate Improvement Plan (see 4.3):

Repairs:



Are there major issues or areas of damage which make parts of your estate unusable?



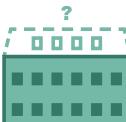
What about minor issues which might inconvenience you, or make your estate look neglected?

Think about common areas and shared walls, roofs, entrances and hallways, as well as external walls, paths, and fencing.

New Development:

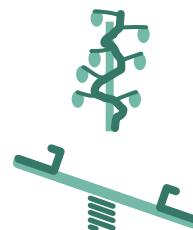


Are there areas of your estate which may be suitable for new additional housing, such as redundant garages or underused corners?



Are there blocks of flats which might be suitable for additional rooftop homes?

Consider what type of homes your area needs: more social rent homes or something else?



Landscaping and play space:

Do outdoor areas need more planting to make them more pleasant or shaded? Or are there planting beds which are overgrown and need pruning?

Could you benefit from installing privacy fences or security gates to make outdoor areas safer and more usable?

Do you want shared allotments or greenhouses for residents?

Do you need a new child play space, or to refresh tired play equipment?

Additional space:

Are your bin stores adequate? Could you do with a bigger store and more bins?

Is there safe storage for bikes, prams and buggies on your estate?

Could you do with more general storage facilities such as lock-ups?



Communal facilities:

6.4

Do you want a communal laundry room and drying facilities?

Would families on your estate benefit from a crèche or youth club?

Is there a need for additional healthcare facilities for your area?

A dedicated community centre could provide the space and facilities for many of the above considerations for members of your estate, as well as neighbouring



Transport:

Could you benefit from bicycle hire docks or drop-off points?

Are there enough car parking spaces on the estate? Do you need charging points for electric vehicles?

Would an estate-specific bus stop be useful for members of the estate and neighbouring residents?

7. Using your Estate Improvement Plan

Promoting your plan

Building a campaign

7.1

Once you have an improvement plan, you can build support among estate residents and the neighbouring community for its implementation.



Produce summary leaflets and posters.

A QR code or URL link can be added to view your full plan online.

Organise walking tours around your estate which point out areas which would be improved within your plan.

Produce social media posts and templates for supporters of your campaign to share on their social media platforms.

Use it in other consultations

7.2

Refer to the proposals outlined in your improvement plan during consultation processes for adjacent plans produced by other organisations, such as your council's Local Plan.

Your Estate Improvement Plan doesn't need to be implemented as a single 'project'. Proposals can be taken forward step-by-step through various funding schemes which may arise over time.

Reaching people of influence

Winning the backing of local groups and community leaders is an effective way of increasing awareness and amplifying your campaign.

Who are the members of your local community who have a large audience and want to assist in improving the quality of your neighbourhood? Present the idea of your improvement plan to them, remembering to highlight what their group may gain from the improvements if implemented.

Local councillors or politicians? Local reporters? Congregation leaders? Business owners? Community leaders?

Unlocking funding

Individual household grants

7.3

Use the retrofit assessments and strategy in your Estate Improvement Plan to target funding grants for specific improvements.

Ensure that applicable grants are signposted in your Estate Improvement Plan. Include where to find and apply for them, what they will cover, and who they are applicable to (many are only available to leasehold and freehold owners).

If your Improvement Plan encourages residents to pursue individual household grants, make sure their use is guided by your Retrofit Coordinator's strategy, in terms of product specifications and sequencing of installation.

Larger capital funding

Your landlord will likely be aware of potential funding pots they can access. Approaching them with your Improvement Plan may encourage them to apply for grants.

If you have worked with a Retrofit Coordinator for your Improvement Plan, it will contain the initial assessments and feasibility work required for capital projects which your landlord might have been reluctant to carry out on their own.

Appendix A: Example case study

Lesnes Estate, South Thamesmead

Residents of Lesnes Estate have been fighting the demolition of their homes since 2016. Part of the estate - Coralline Walk- was demolished in 2020 and has been an empty site ever since. The remaining estate comprises 308 houses and 6 towers containing around 300 flats. Around 150 of the houses are freehold, having been bought through Right-to-buy. Many residents have lived on the estate for the most of their lives and bought up their families there. In addition to freehold households, there are social and private renters, guardians and licensees in temporary accommodation.



Gallions Housing Association and Bexley Council had intended to retrofit Lesnes Estate in 2012, but Peabody housing association has to date ignored the option of retrofit for Lesnes in developing its plans.

Residents agreed to research retrofit as an alternative to demolition. A crowd-funder raised funds to appoint a retrofit assessor, who carried out 6 retrofit assessments to inform a retrofit plan.

6 houses were selected as representative, including end-of-terrace and mid-terrace properties. The homes had an Energy Performance (EPC) of between D and E.

The following table a typical Options Evaluation showing the different measures that could be carried out:

Project Name: Property Ref 1	How much energy is saved, the cost of that energy, the carbon footprint and the EPC rating					
	kWh	2224 E	1045 D	CO2 kg	EPC SAP	EPC C02
EXISTING PROPERTY	25900	1130	2043	5784	590	506
EXISTING INCLUDING POSSIBLE INSULATION TO ROOF	23870	1060	1919	5353	620	536
COMPARISON BETWEEN MEASURES	kWh	2024 E	1045 D	CO2 kg	EPC SAP	EPC C02
1. Single glazed window to s/w c. replaced with vented double glazed unit	25800	1130	2043	5763	590	506
2. Air roof in roofspace, insulator of 16	23237	1097	1879	5208	610	541
3. Double glazing, dormer, internal lining to garage and 'cold' garage (insulation to s/w c. 36)	15016	884	1609	4297	680	620
4. Full insulation including roof insulation whole house ventilation	16000	775	1416	3645	726	680
5. Double glazing, dormer, internal lining to garage and 'cold' garage (insulation to s/w c. 36), external wall insulation 0.25, roof insulation 0.16	13738	692	1343	3137	754	726
6. Single air source heat pump (0.85 COP) 10.6kW (Ecozone 10.2 kW)	6427	1298	1881	3639	650	696
7. Single air source heat pump (0.85 COP) 10.6kW (Ecozone 10.2 kW) insulating south	23711	708	1474	3668	660	710
Measures					571	571
A. Measure A + ASHP 0.85 COP (0.85 COP) 10.6kW Min 8.5kW	3971	650	1932	1750	830	819
B. Measure S + ASHP 0.85 COP (0.85 COP) 10.6kW Min 8.5kW	3077	598	955	1397	848	868
C. Combustion A + 2.2 boiler	1212	235	468	629	920	939
D. Combustion A + 3.6 boiler	1185	230	461	614	924	934
Cost					1438	1438
CO2					30	0
Notes						105100

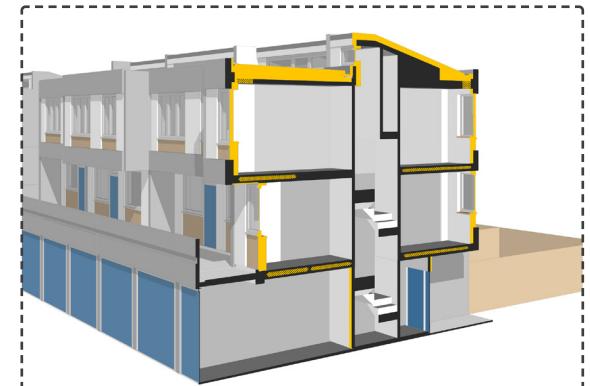
This demonstrated that it would be possible to upgrade these homes to Energy Performance A, with the following retrofit measures:

- All light fittings to LEDs
- Double glazing upgraded
- Roof insulated to 0.16 W/m²k
- Walls insulated to 0.29 W/m²k
- Continuous background extract ventilation
- Individual ASHPs per house

The proposed retrofit strategy included for the landlord to carry out replacement and insulation of the roof throughout the estate.



Further retrofit measures could then be carried out by the landlord, for tenanted or vacant properties, and individually by resident freeholders as and when they are able to, with assistance from an estate wide scheme, on a phased basis.



For further information about Lesnes Estate see:
[Retrofit Lesnes, October 2024](#)
[Lesnes Estate Retrofit, September 2025](#)

Appendix B: Useful links

Funding pots

Household grants

Boiler Upgrade Scheme

www.gov.uk/apply-boiler-upgrade-scheme

A grant which can provide up to £7500 toward a Heat Pump when installed to replace an existing gas boiler. Available to all homeowners and private landlords.

Great British Insulation Scheme

www.gov.uk/apply-great-british-insulation-scheme

Offers fully or partially funded insulation to homeowners and private/social landlord renters.

ELIGIBILITY

Low-income group:

- Receives qualifying benefits (e.g., Universal Credit, Child Benefit)

General group:

- EPC rating D to G
- Council Tax bands A to D

Local Authority Flex route

Warm Homes: Local Grant

www.gov.uk/apply-warm-homes-local-grant

A grant up to £30,000 to cover the costs of insulation, solar panels, heat pumps and smart controlled heating systems for your home.

ELIGIBILITY

Homeowners and private renters with EPC D or below:

- Household income less than £36,000
- Receiving qualifying benefits
- Live in an eligible postcode

Retrofit advice

Finding out about your home

Your home may already have an Energy Performance Certificate (EPC) rating? You can check here:

www.gov.uk/find-energy-certificate

You can search if your home has an EPC certificate, and if it has, you can see suggested ways that you can improve the property, and how much it might cost and how much it might save.

If you are renting a property, the landlord must comply with the [Minimum level of Energy Efficiency Standard \(MEES\)](#).

Resources:

The National Retrofit Hub provides access to advice and toolkits:

nationalretrofithub.org.uk

Campaign groups for retrofit:

Retrofit for the Future
retrofitforthefuture.co.uk

Refurbish Don't Demolish
refurbishdontdemolish.co.uk