Initial Refurbishment Ideas

LANCASTER WEST
NEIGHBOURHOOD TEAM
W11

ECD Architects
ENERGY CONSCIOUS DESIGN

TALBOT GROVE & MORLAND HOUSE

With us tonight

LANCASTER WEST NEIGHBOURHOOD TEAM W11

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Neighbourhood Director

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Refurbishment Design & Delivery Project Manager

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With us tonight

ECD Architects
ENERGY CONSCIOUS DESIGN

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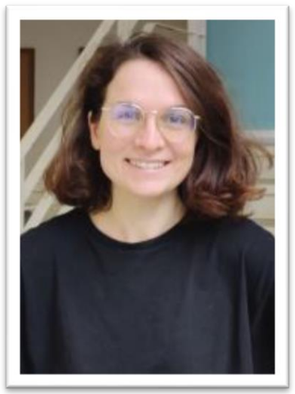


Louise Claeys

Senior Architect

Jessica Scott

Engagement Lead

Why are we meeting tonight?

1. **Continue a co-design conversation – in more detail**

2. **Share our current understanding of priorities**

3. **Discuss initial refurbishment ideas, present possible improvements, and capture ideas, concerns and questions**

In following co-design meetings, we will discuss preferred options, review feedback and develop final design proposals together.

Our shared vision

1. A 21st century model for social housing

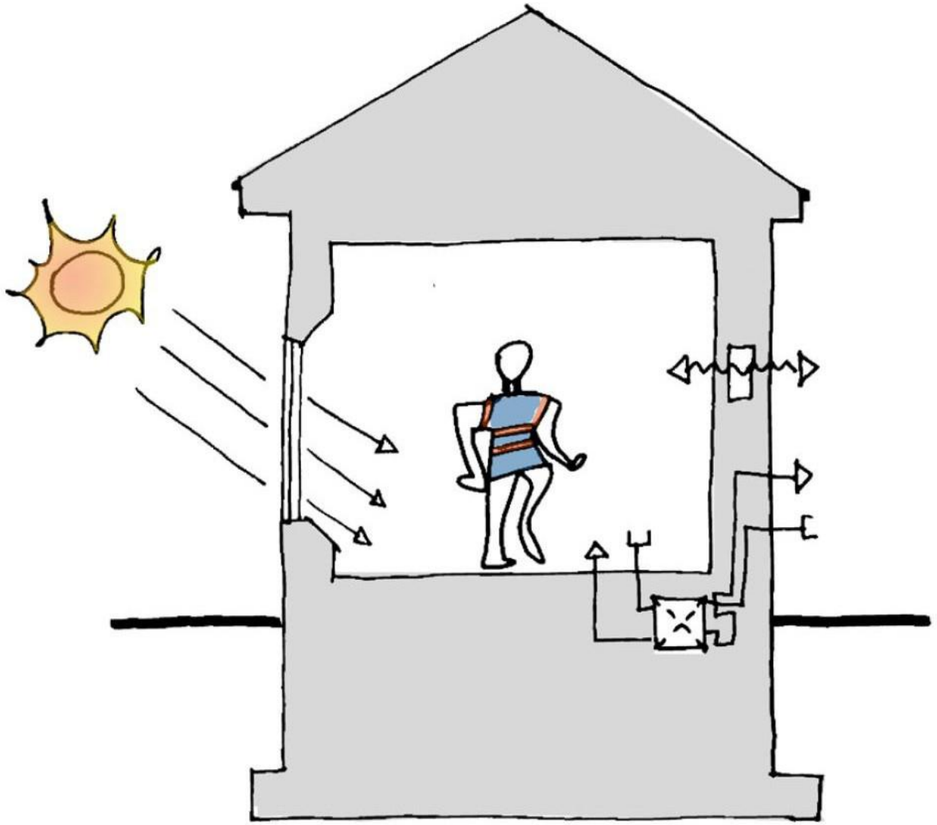
2. Homes that are carbon neutral by 2030

3. Co-designed with residents, sensitively and collaboratively

Stop Press: Additional funding news

What difference would ‘net zero carbon’ make to your homes?

- **Healthier and more comfortable homes:**
  - **Better thermal comfort through summer and winter**
  - **Better ventilation and indoor air quality**
  - **Lower energy bills and leaseholder service charges**
  - **More soundproofing between flats**
- ...and **an opportunity to co-design and refurbish** Talbot Grove House and Morland House to standards others will look to follow!

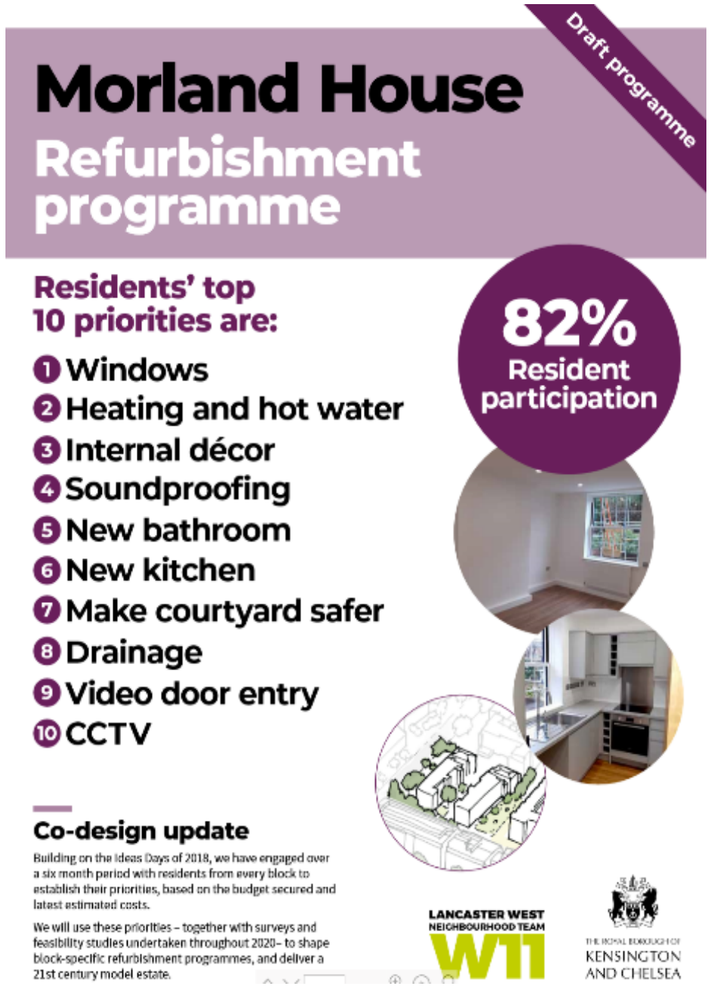


TALBOT GROVE & MORLAND HOUSE

What isn’t working well?

- **Your Top 10s**

- **Plus issues identified so far**
  - Thermal bridges (cold spots) due to non-insulated walls
  - Poor roof condition
  - Poor ventilation



TALBOT GROVE & MORLAND HOUSE

What we know:
Repairs in last six months

- On average, every resident has reported a heating or hot water problem in the last six months,
- General plumbing and leaks remains a problem.
- Door entry systems also need replacement.

Issue Type	Morland House	Talbot Grove
General Repairs	79.4%	66.7%
Heating / Hot Water	73.5%	131.1%
Plumbing	50.0%	71.1%
Leaks	55.9%	80.0%
Intercom / Door Entry / Locks	29.4%	68.9%
Electrical	26.5%	42.2%
Lighting	23.5%	46.7%
Windows	20.6%	26.7%
Drains / Gullies / Guttering	2.9%	2.2%

What we know:
Energy performance certificates

Talbot Grove House

EPC

Rating	Homes	%
A	0	0%
B	0	0%
C	1	7%
D	11	73%
E	3	20%
F	0	0%
G	0	0%
No EPC	30	-

Morland House

EPC

Rating	Homes	%
A	0	0%
B	0	0%
C	5	38%
D	7	54%
E	1	8%
F	0	0%
G	0	0%
No EPC	21	-

Single glazed sash windows

Pros

- Heritage look of timber

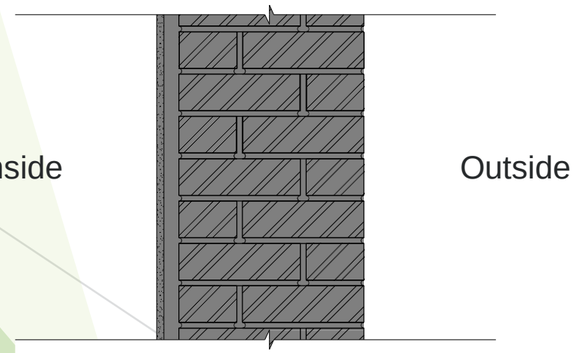
Cons

- Cold during Winter, overheating during Summer
- Draughty
- Heavy to operate
- Not secure enough
- Unsafe for children
- Maintenance issues - difficult to clean

Solid walls – without insulation

Problems:

- **Cold during Winter, overheating during Summer**
- **High levels of heat loss**



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Poorly insulated roof

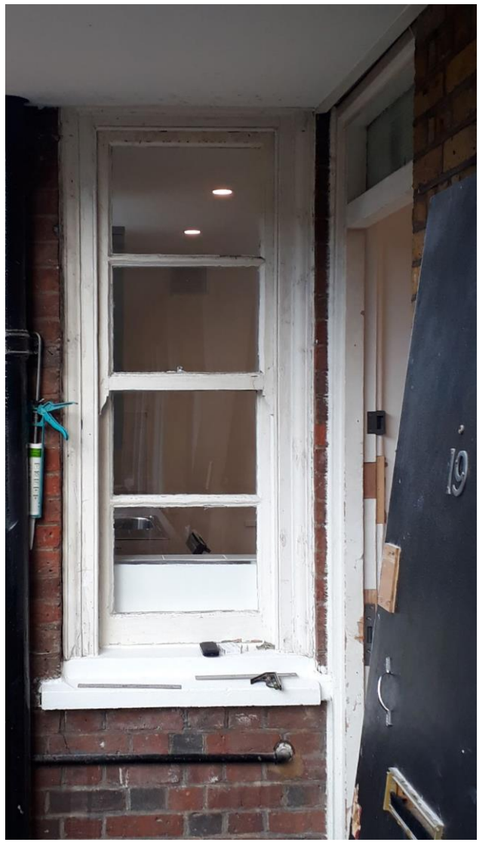
Problems experienced:

- **Cold during winter, overheating during summer**
- **High levels of heat loss**
- **Bitumen coating (waterproofing) is in poor condition**
- **Draughty dormers**

Poor ventilation

Problems experienced:

- **Manually operated (opening windows or fan)**
- **Unable to regulate overall flat temperature**
- **Leaky and draughty**
- **Extract ventilation produces high levels of heat loss**



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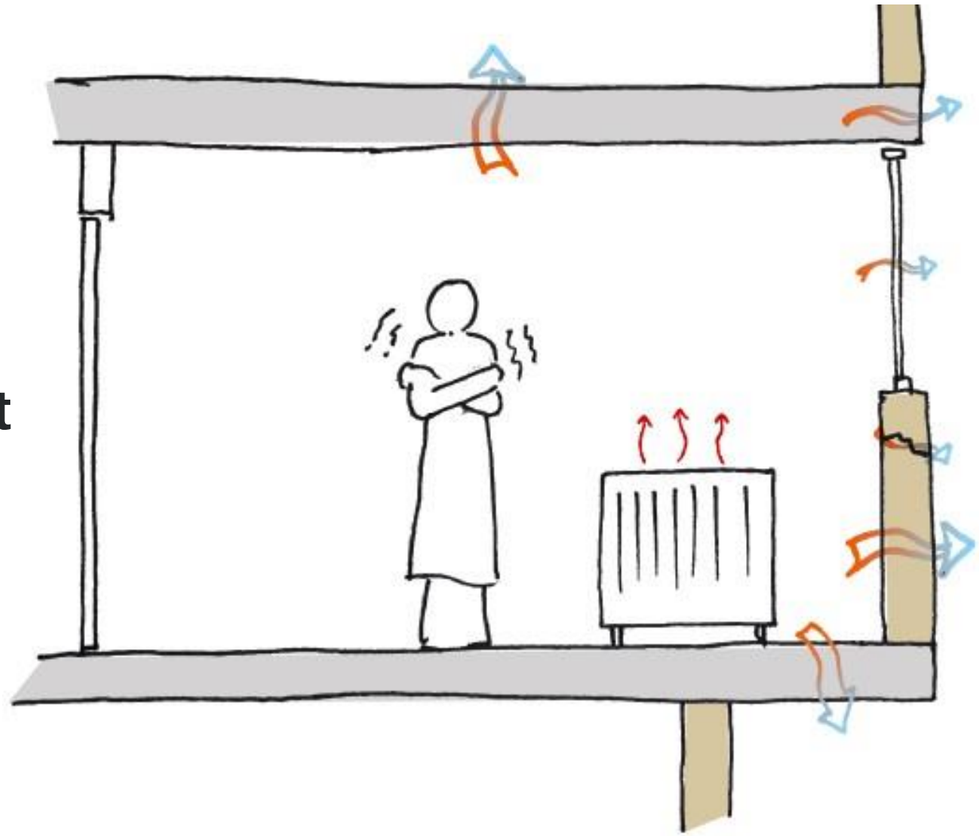
Let’s talk!

Before we continue:

- **Is there anything else we need to know regarding the comfort of your homes?**
- **What other things would you like to change about the external envelope of your flat and building?**

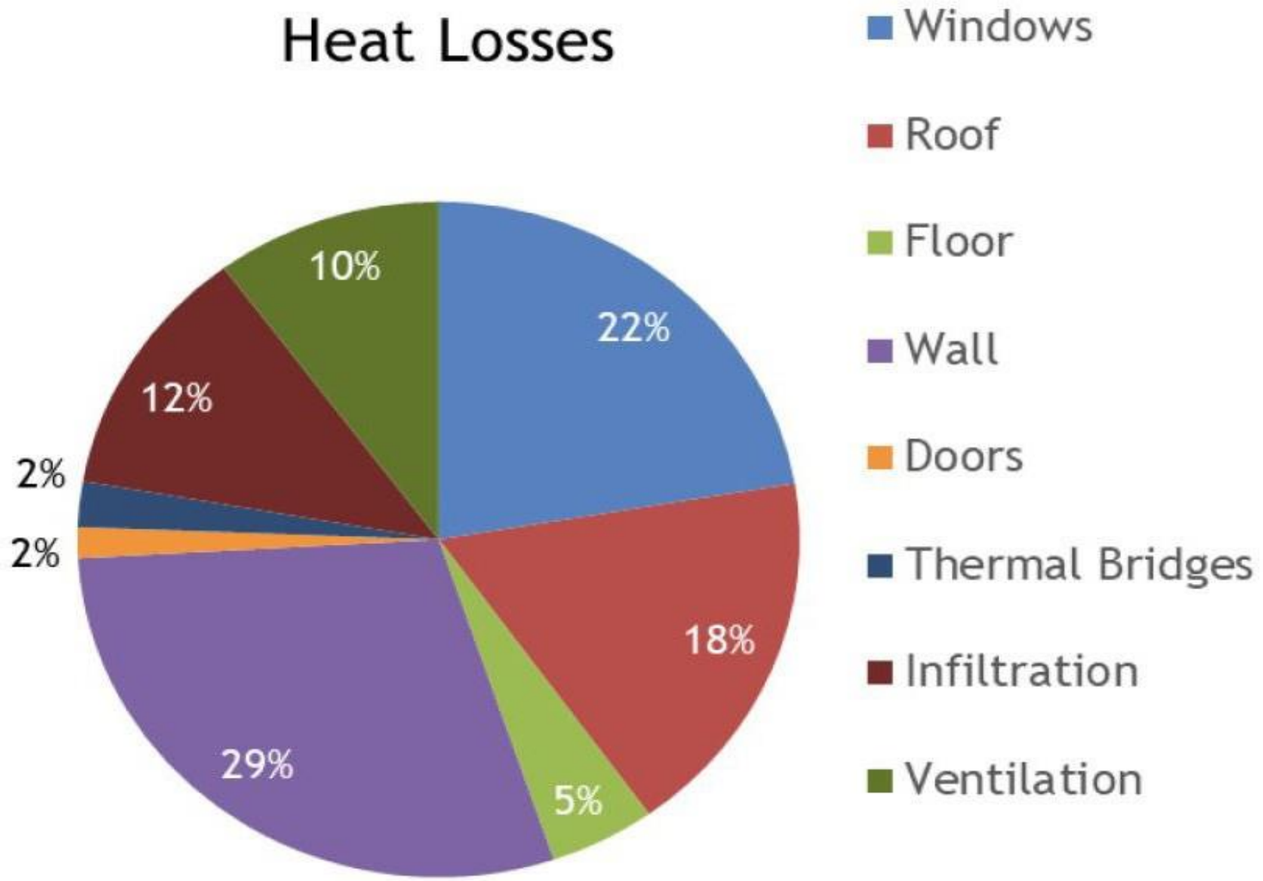
Why upgrade your home

- **Poorly insulated homes use lots of heat to keep warm i.e. expensive bills**
- **Summer overheating and very cold winters is an increasing problem with climate change**
- **Draughts and temperature swings with poor heat distribution i.e. cold ankles but hot head**
- **Cold spots in your walls that can lead to condensation and mould growth**



Heating demand:

Present and future

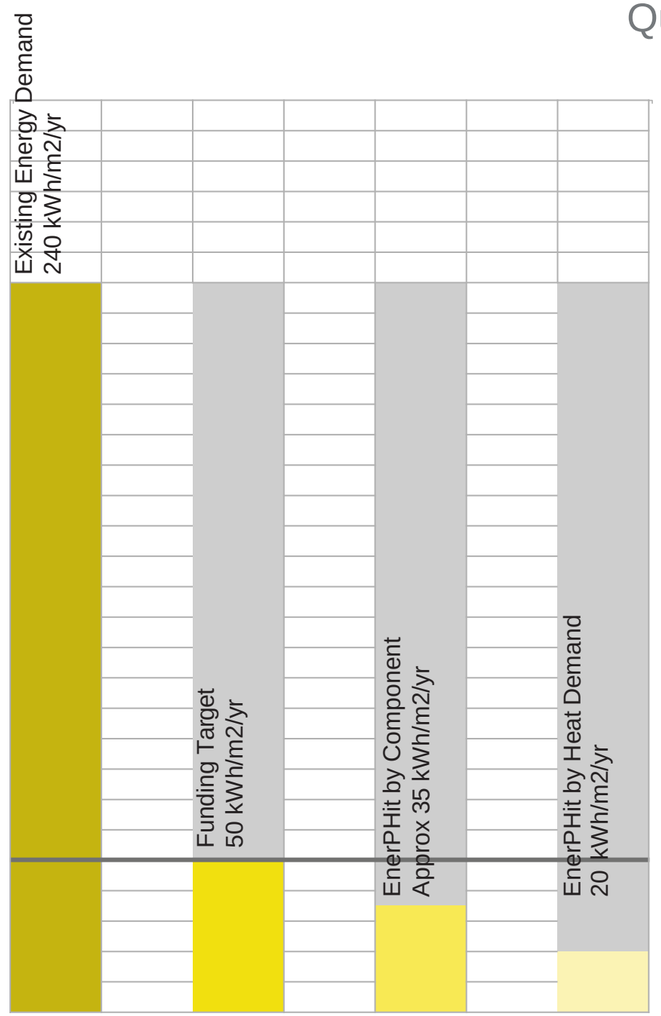


Heating demand:

Present and future

- Existing blocks are massively losing heat, as shown in the graphs
- Achieving EnerPHit would surpass new-build standards

This energy demand reduction will translate into more comfortable homes, reduced energy bills and lesser carbon emissions.

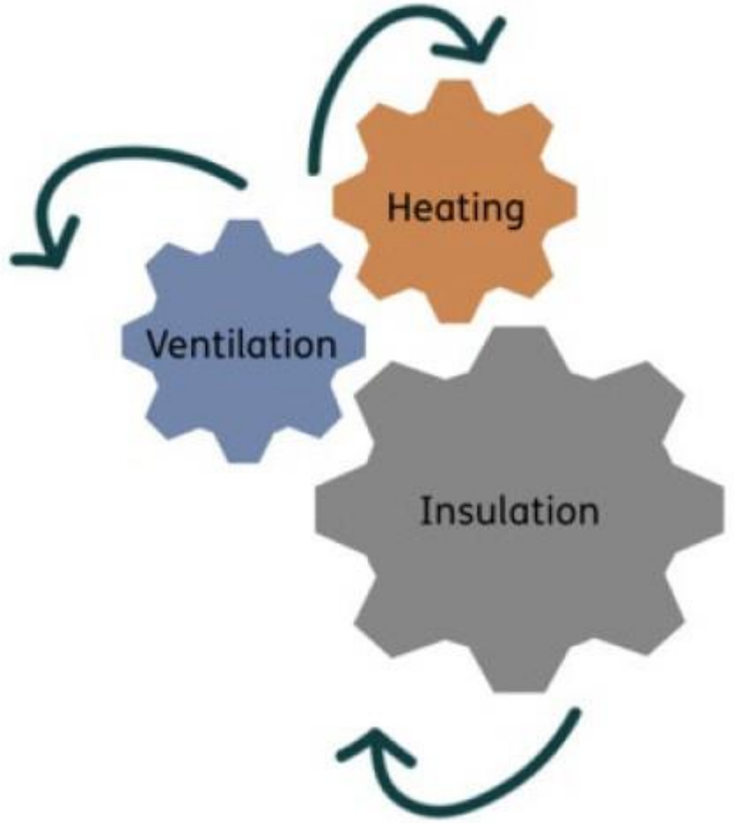


Taking a holistic approach

All the potential measures work together and complement each other:

- Improve your home insulation and windows
- Improve your home ventilation
- Improve your home heating

... to achieve better comfort whilst future-proofing your home!



Possible improvements

We will show you options to:

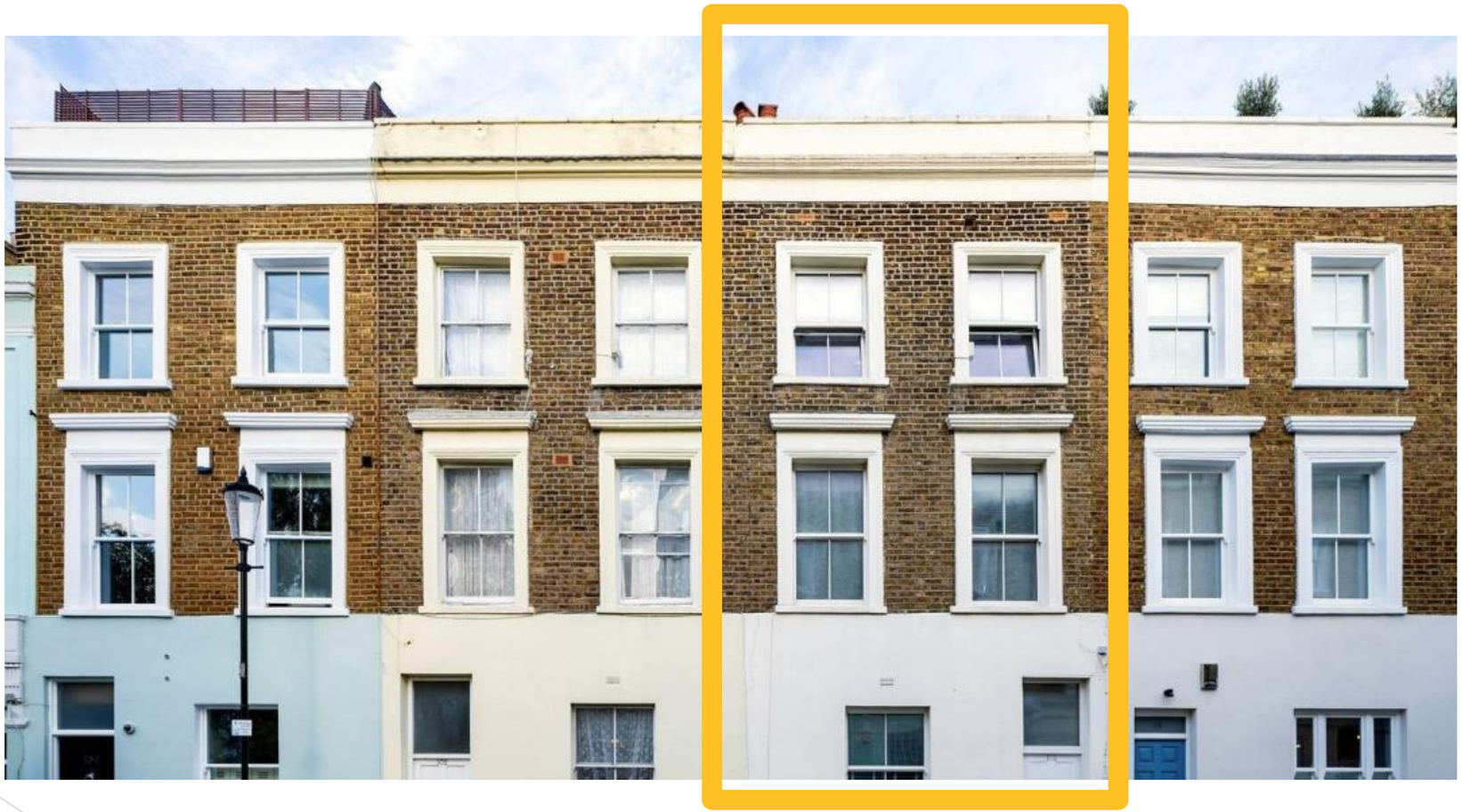
- **Upgrade windows**
- **Upgrade roof insulation**
- **Upgrade ventilation**
- **Install wall insulation (non-combustible only)**
- **Install ground floor insulation**

A game!

Which one do you think it's a super efficient, highly insulated house with triple glazed windows?

This one!

The period features of these brand-new windows are retained even if using triple-glazing!



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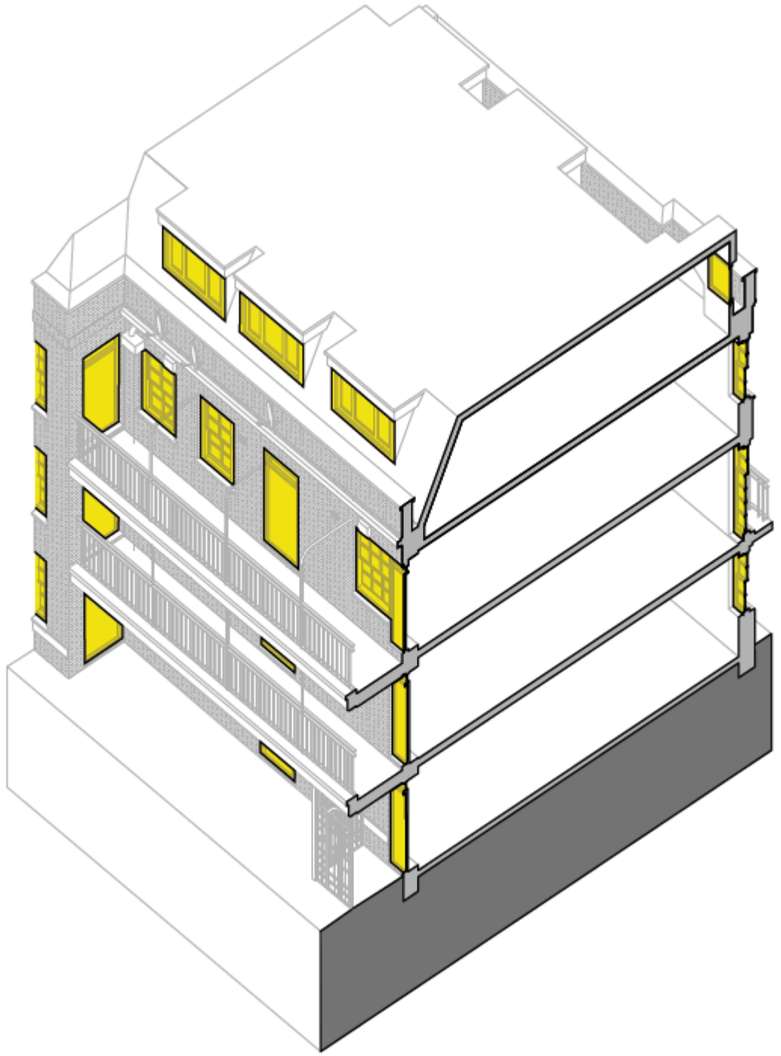
Improvements to windows

- Upgrade single-glazed to triple-glazed windows
- Triple-glazed windows are substantially better in terms of thermal comfort, energy savings, sound-proofing, and reducing energy bills



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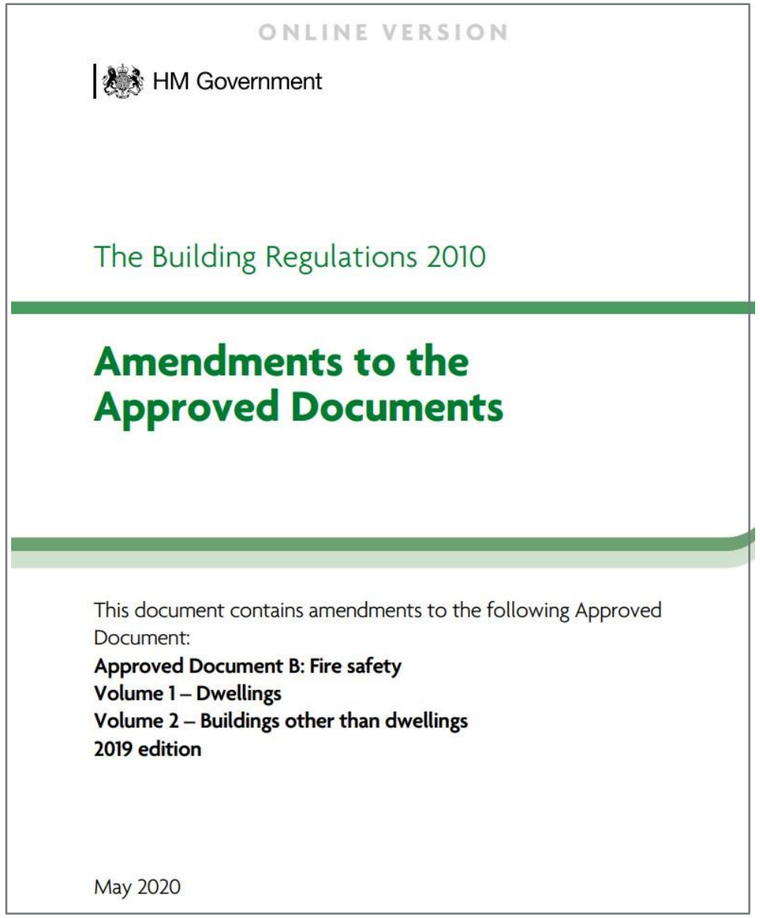
Improvements to windows

- **Heritage look can be retained**
- **Timber frame finish or powder coated aluminium (or both!)**
- **Tilt & Turn, top hung and swing opening options**
- **Better thermal comfort, lower bills**
- **Keep noise out**
- **Residents can stay in their flat during installation**

Maximising fire safety

- An independent Fire Consultant has been appointed, to ensure that fire standards not only meet but exceed current standards. All detailed design information will be reviewed by them and submitted to Building Control for approval before the start of the works
- The Building Regulations - Part B Approved Document, requires that all materials which are part of an external wall of buildings over 18m need to achieve European Class A2-s1, d0 or Class A1 (Non-combustible)

ECD Architects and LWNT have agreed to only recommend A1 materials on external building layers wherever possible and not less than A2.


ONLINE VERSION

HM Government

The Building Regulations 2010

Amendments to the Approved Documents

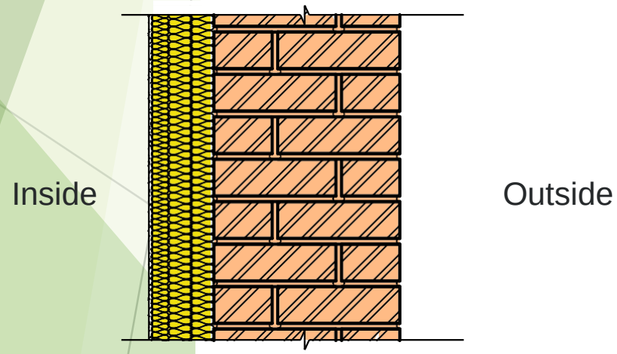
This document contains amendments to the following Approved Document:
Approved Document B: Fire safety
Volume 1 – Dwellings
Volume 2 – Buildings other than dwellings
2019 edition

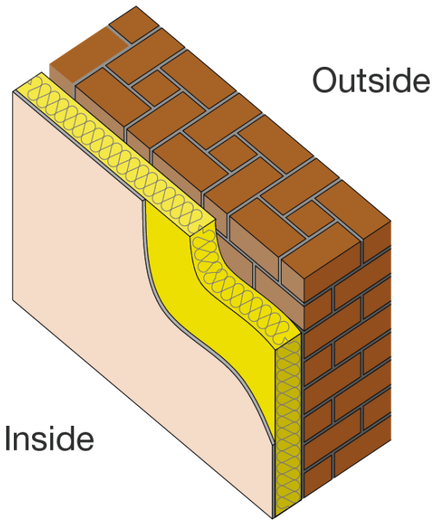
May 2020

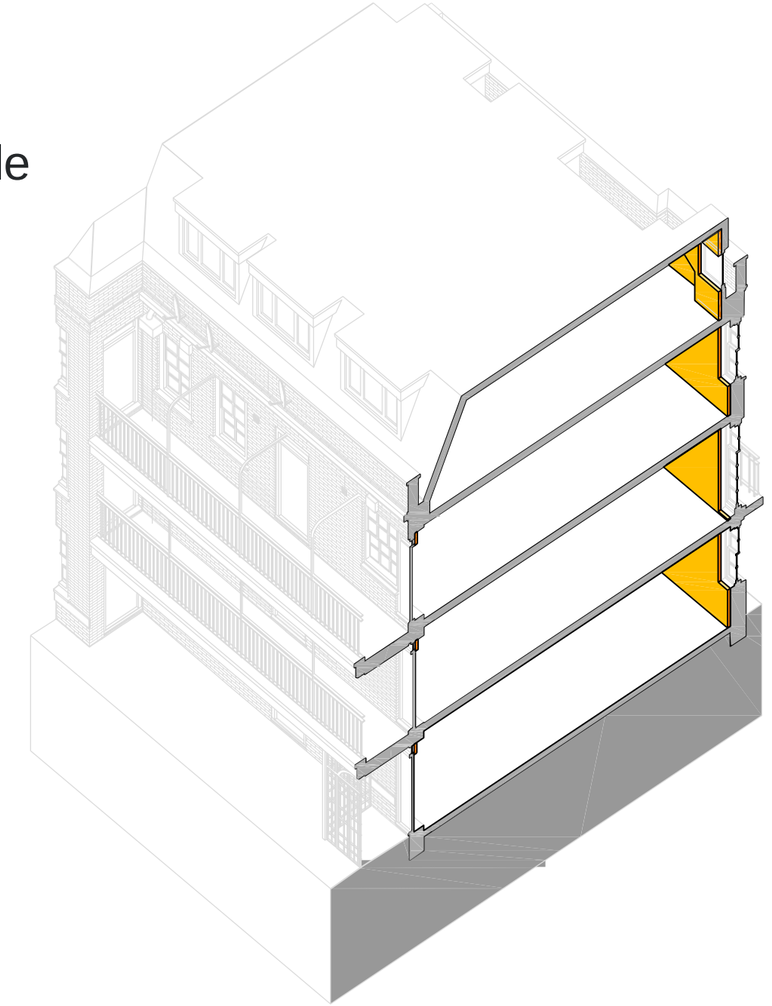
Improvements to walls

Internal Wall Insulation

Remove internal wall finishes to install a layer of non-combustible (A1/A2 rated) insulation to the internal face of the facade + new internal finishes







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Improvements to walls

Internal Wall Insulation

Pros

- **Improved thermal comfort**
- **No change to external facade**

Cons

- **Finishes to kitchens & bathrooms will need replacing**
- **Intrusive works, decant necessary**
- **Internal area loss: approximately between 3 to 5% in each flat**

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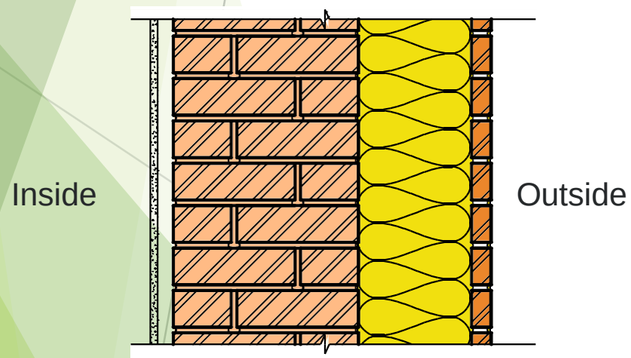
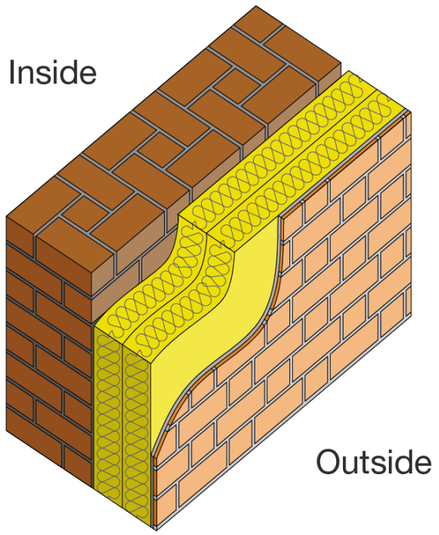
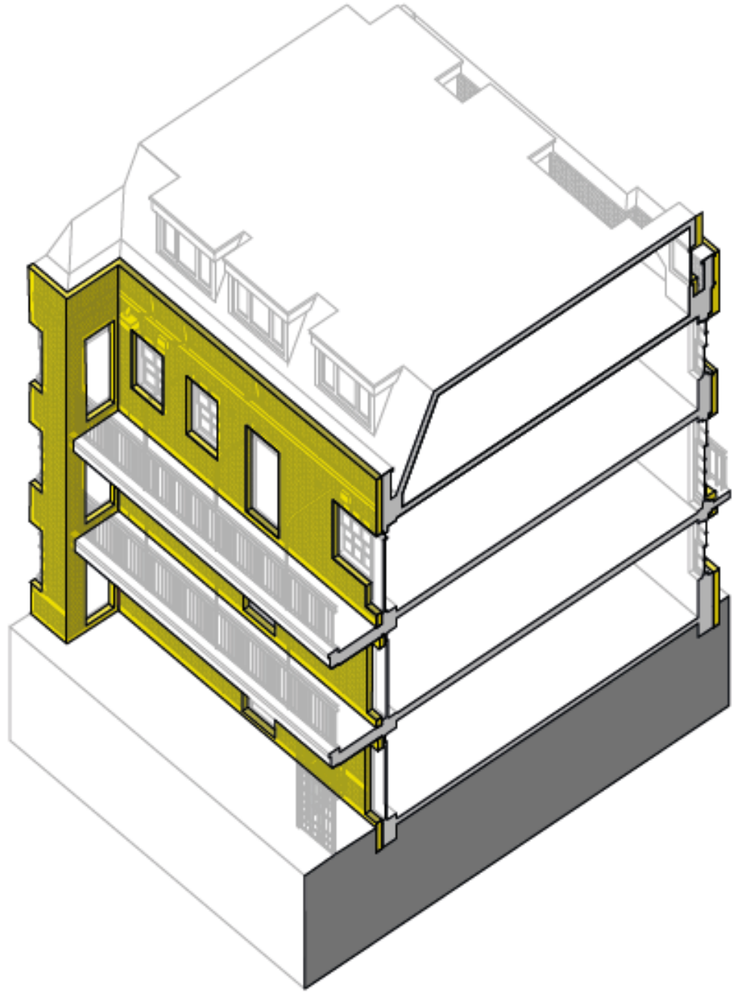
Improvements to walls

External wall insulation

Install a layer of non-combustible (A1/A2 rated) insulation to cover the external face of the facade with a finishing layer - brick slips, for a nice brick appearance.







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Improvements to walls

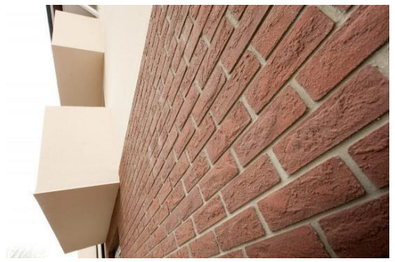
External wall Insulation

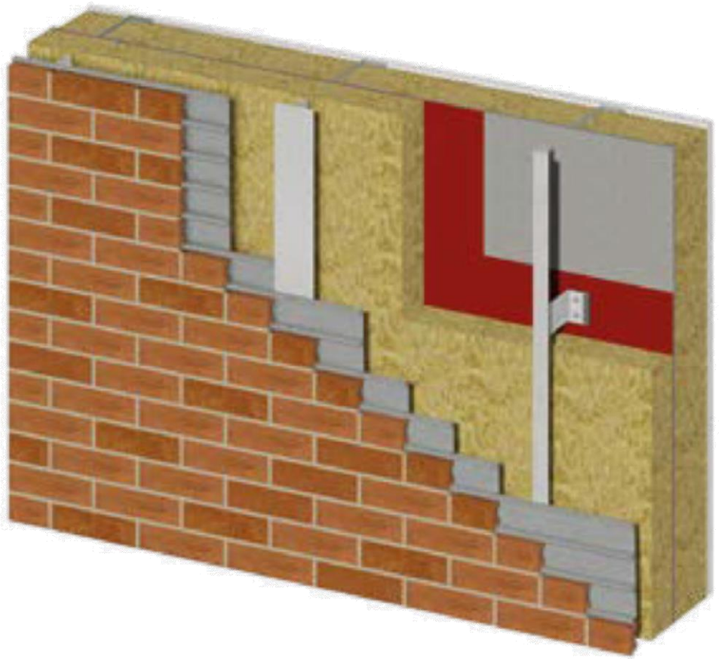
Pros

- **Improved thermal comfort**
- **No impact on recent internal kitchen and bathrooms works**
- **No internal disruption, no decant required**
- **No internal area loss**
- **Opportunity to co-design new facades**

Cons

- **All facade attachments (downpipes, gutters, etc) will need relocating**

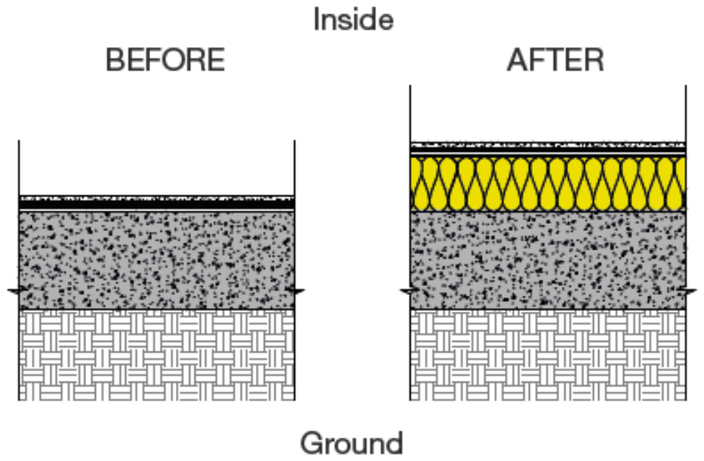




Improvements to ground floors

Option for insulation over slab

Floor insulation above the existing slabs (at Ground Floor only)

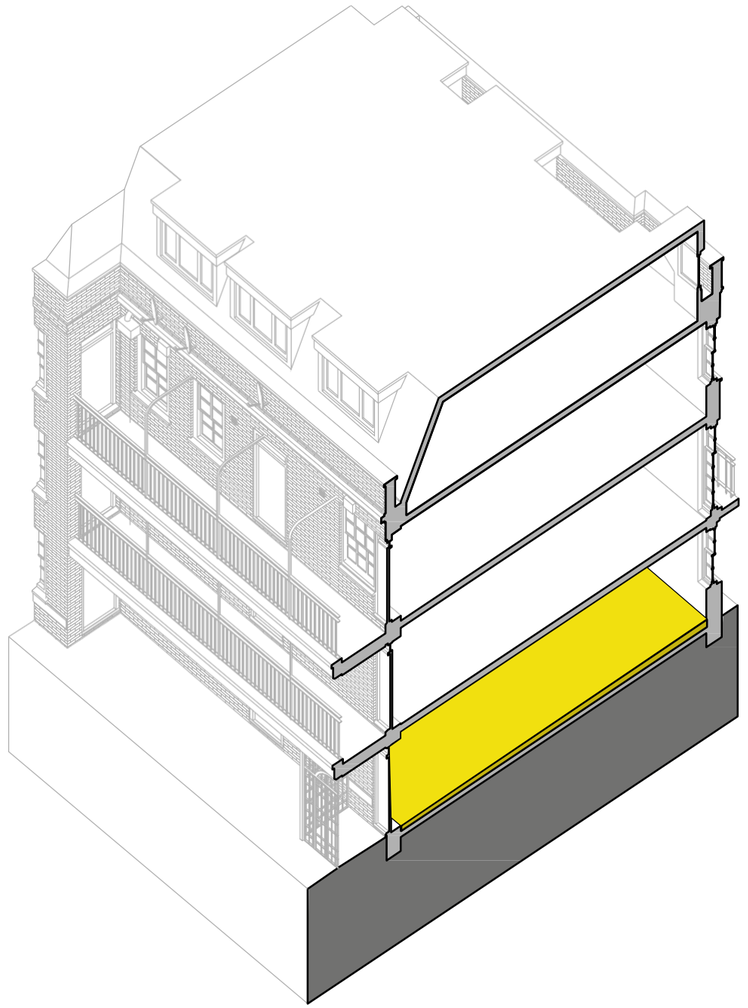


Pros

- Improved thermal comfort

Cons

- Disruption during installation, finished floor level to be increased, which impacts on kitchens, bathrooms and fixed elements.



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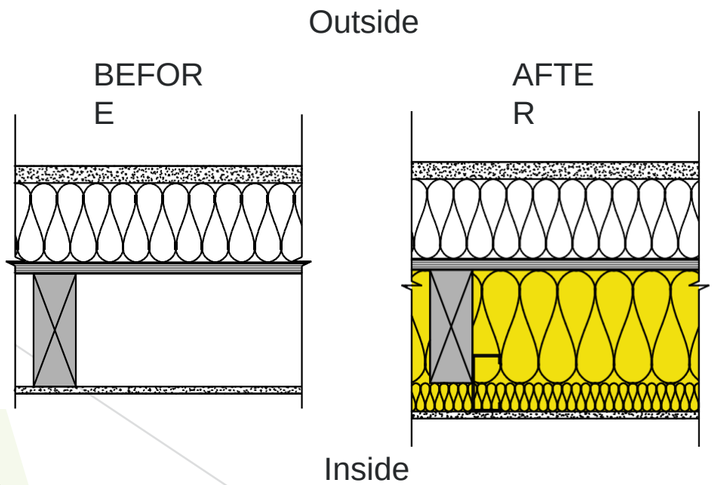
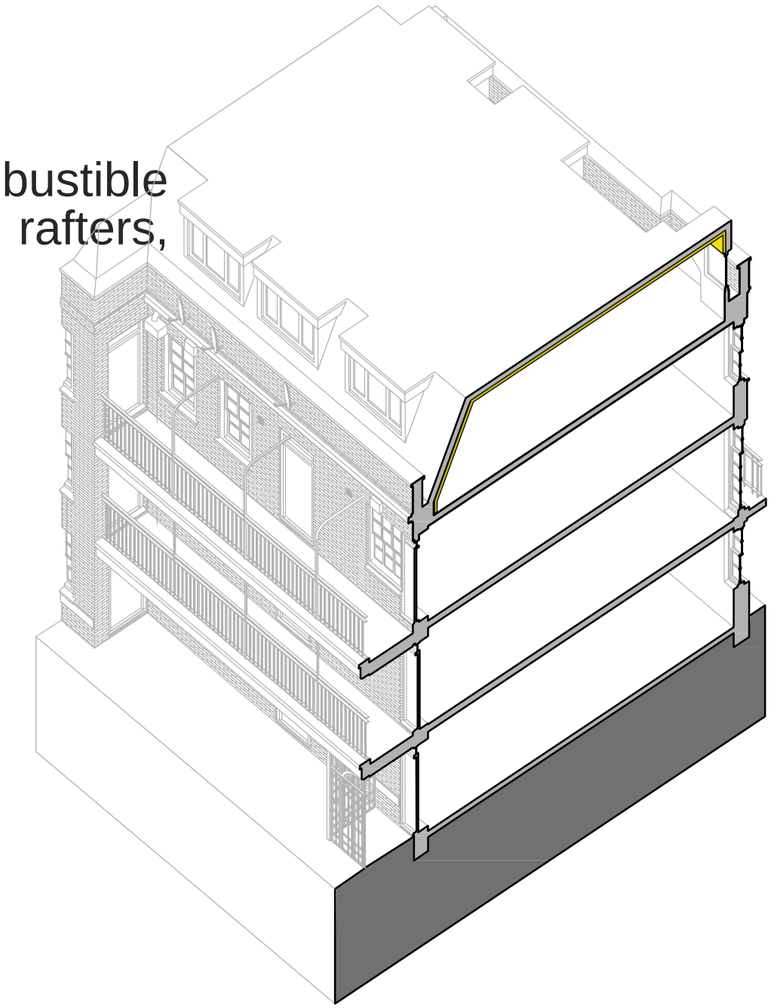
Improvements to roof insulation

Internal installation

Opening ceilings from the inside, to install a layer of non- combustible (A1/A2 rated) insulation between and below the existing rafters, reducing the ceiling height.





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Improvements to roof insulation

Internal installation

Pros

- **Improved thermal comfort**
- **No change to existing roof structure**

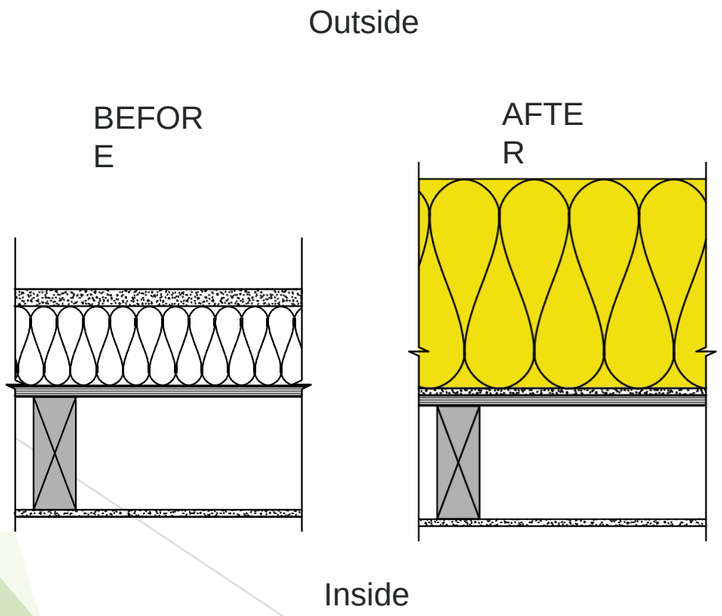
Cons

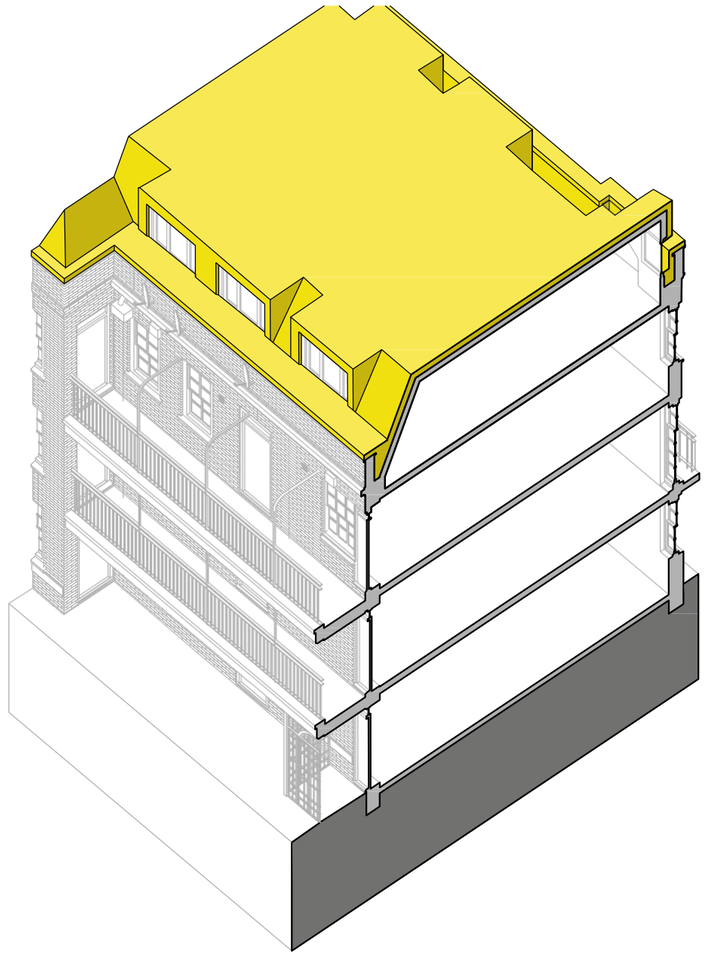
- **Invasive works, full decant will be required**
- **No improvement to roof waterproofing condition (which needs replacing)**
- **Ceiling height loss**

Improvements to roof insulation

External Insulation

Remove existing roof insulation and finishes, and replace with new non-combustible (A1/A2 rated) insulation and waterproof layer, from the outside.





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Improvements to roof insulation

External Insulation

Pros

- **Improved thermal comfort**
- **No ceiling height loss**
- **Works done from the outside, i.e. not intrusive and decant will not be required**

Cons

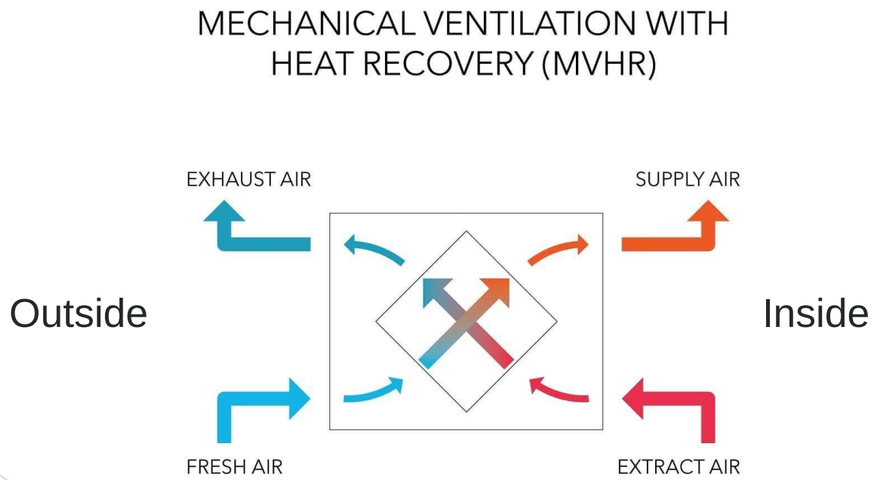
- **Existing timber frame may need strengthening to take new load**
- **New gutters to be formed**

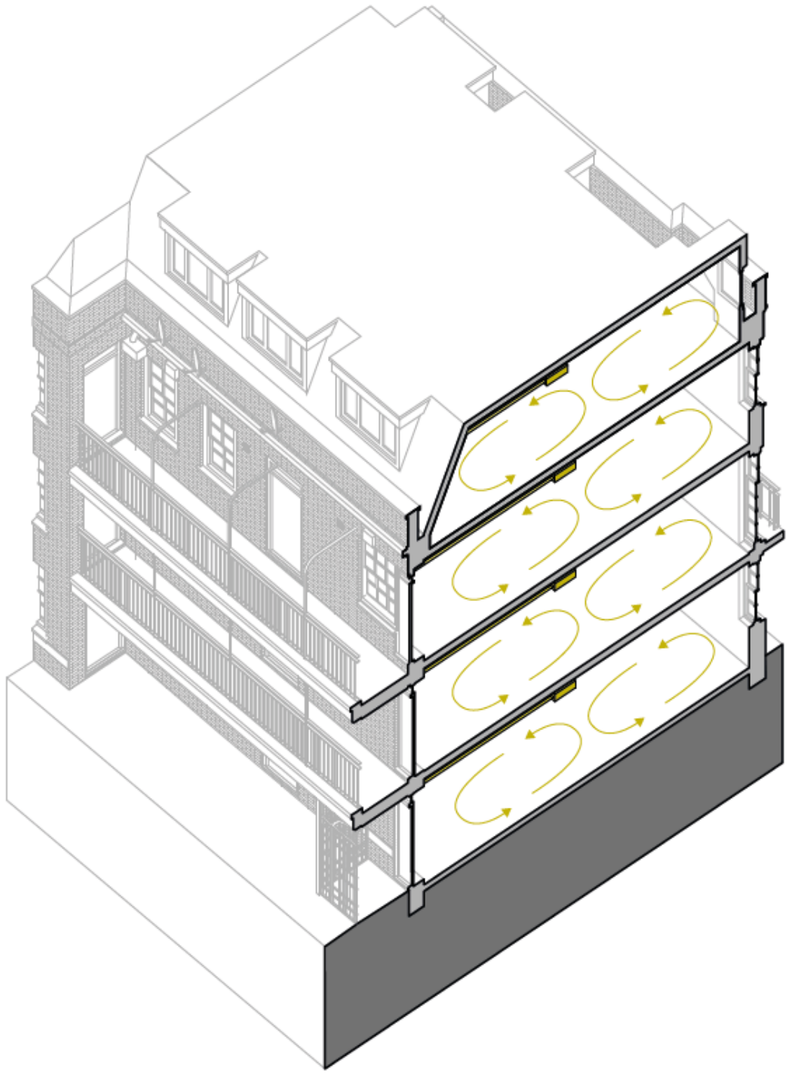
TALBOT GROVE & MORLAND HOUSE

Improvements to ventilation / heating

We are looking at options to renew the district heating system

If wall and roof insulation is installed, then a Mechanical Ventilation with Heat Recovery (MVHR) unit will need to be fitted into all flats to improve the ventilation and heating





Improvements to ventilation

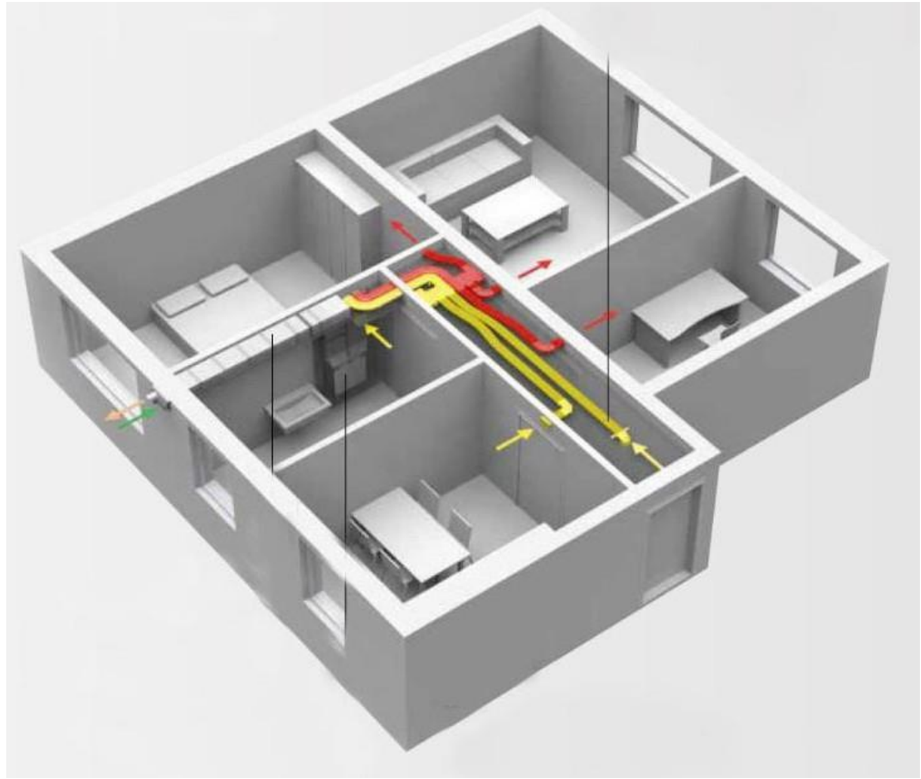
Mechanical ventilation with heat recovery (MVHR)

Pros

- Constant supply of incoming fresh air, without the need of opening windows and letting warm air out
- Better air quality thanks to fresh filtered air, particularly good for vulnerable residents and people with respiratory diseases
- The flat's heating demand will be reduced resulting in less energy required to heat your homes

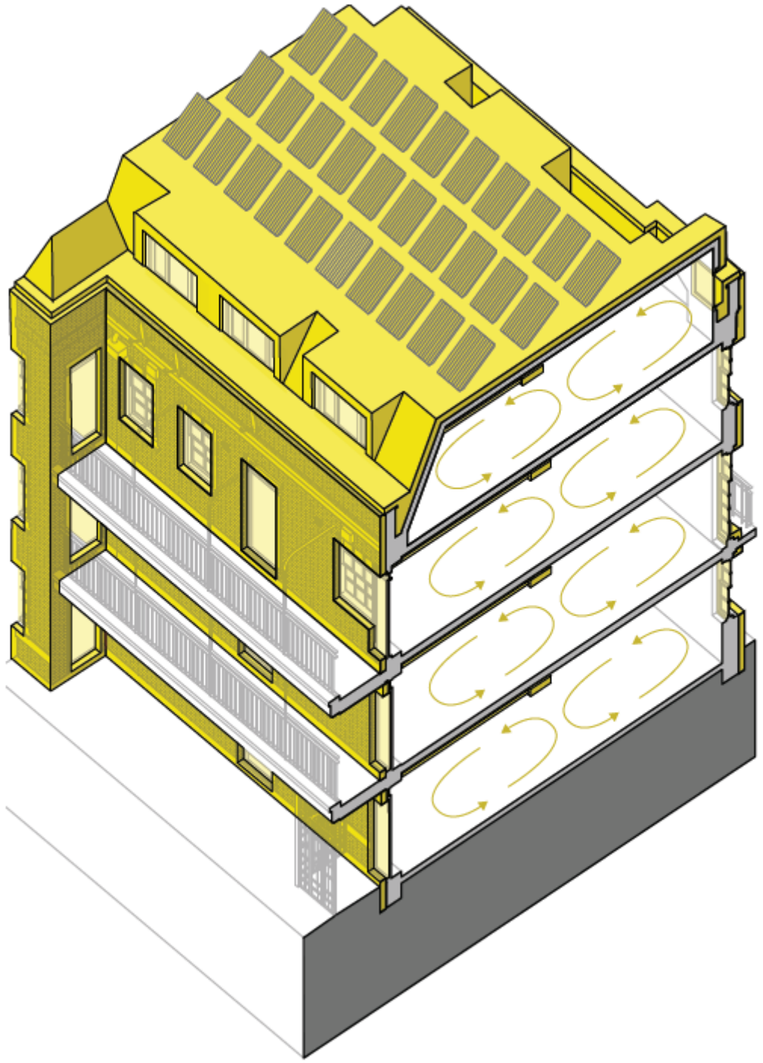
Cons

- Depending if mounted on a ceiling in the internal corridors of the flats or in a cupboard, there might be loss of ceiling height in the corridors and/or a cupboard.
- Some disruption during the installation works but residents can remain in their flats



Summary of proposals

	Proposed measures
Bronze	Upgrade single-glazed to double-glazed windows Repair existing roof Repair existing heating Repair and redecoration of communal area No insulation to existing walls No insulation to existing ground floor slab
Silver	Upgrade single-glazed to triple-glazed windows New waterproofing to roof and insulation (Internal or External) New wall insulation (Internal or External) New insulation installed over existing ground floor New Mechanical Ventilation with Heat Recovery
Gold	(In addition to silver standard) PVs on roof & battery storage



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Next Steps

Your opinion matters

Do you have any initial ideas, concerns or questions for us to consider?

What more information do you think you would need to come to a decision on different building elements?

Next Steps

Future surveys

- All alternatives will be considered before requesting access and strict and safe protocols will be in place where necessary
- The 4 types of surveys still needed:
  - Intrusive survey of a top-flat ceiling (to check the structure) - only one flat.
  - Measured Surveys on the inside of some flats
  - Thermal monitoring
  - External thermographic images
- We will need your help to get access to your flats so we can work together to deliver the best possible solution to improve the comfort of your homes

TALBOT GROVE & MORLAND HOUSE

Call for volunteers #1

Intrusive survey of a top-floor flat (ceiling only)

- We have sent out letters asking for volunteers over the top-floor flats in both blocks (only 1 flat needed)
- We will need to open up a small section of your ceiling (750 x 500mm) to inspect the spacing between the rafters. Then the ceiling will be sealed and decorated back again.
- This work can be done in one day with minimal disruption

Call for volunteers #2

Measured survey of the inside of flats

- A measured survey involves taking measurements of a building externally and/or internally using beams of light (laser scan)
- We have already surveyed the outside walls and communal areas, but we now need to survey the inside of some flats
- The process is quiet and fast. Only one surveyor will need to go into your flat, and will only take approximately 5-10 minutes per room
- The surveyor will follow strict COVID-19 guidance and all health and safety procedures
- You can stay in your flat (keeping 2mts distance) or wait just outside, as you prefer
- The results will allow us to understand the floor to ceiling heights and internal layouts, which will assist us in our design process

Call for volunteers #3

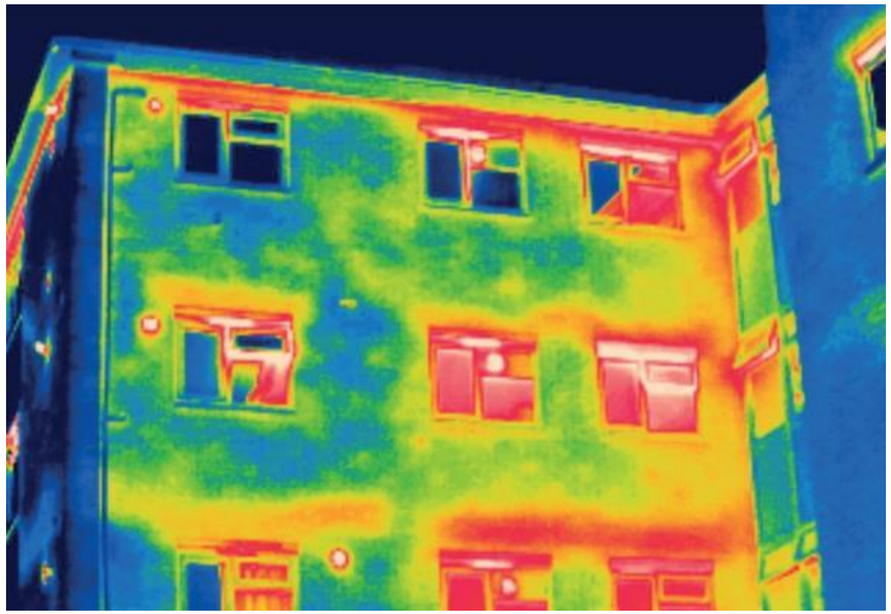
Thermal and humidity sensors

- Build Test Solutions (BTS), who are monitoring thermal and energy data across the whole Lancaster West Estate, will need to install small temperature and humidity sensors in occupied flats
- BTS are already installing these in Treadgold House and there is a video in Instagram explaining the process
- The installation should take between 5-10 mins
- The temperature/humidity sensors will need to be in your flat for approximately 3 weeks
- BTS will carry out further surveys in empty flats: thermal conductivity of walls, air permeability tests, etc

Other surveys

External thermographic images

- A thermographic survey can help identify problems, using infrared cameras to reveal differences in surface temperatures, and specific areas with high heat losses. These areas where heat is lost can cause cold spots on the inside, leading to internal condensation
- The process is quick and non-disruptive. The survey is carried out from the outside, using thermographic cameras. The surveyors will use drones to survey inaccessible areas. The results are easily shown in pictures
- The flats need to have a 10ºC temperature difference between the inside and outside, so it needs to be done when it's cold outside
- We will let you know before the survey takes place to ask you to keep your flat warm and keep windows closed

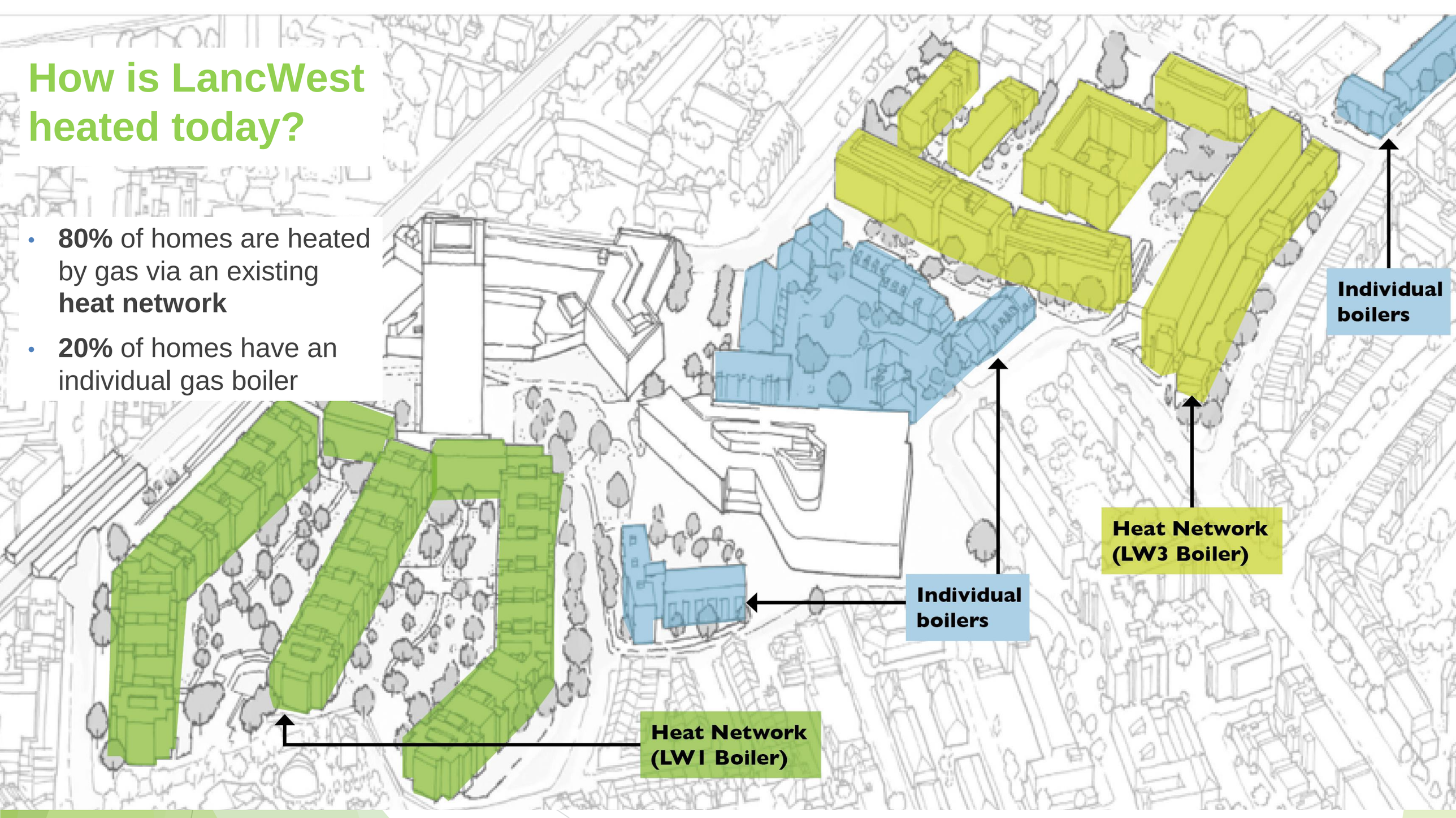


Your future heating and hot water solution

Janet Hall
Heat Network Engagement Manager

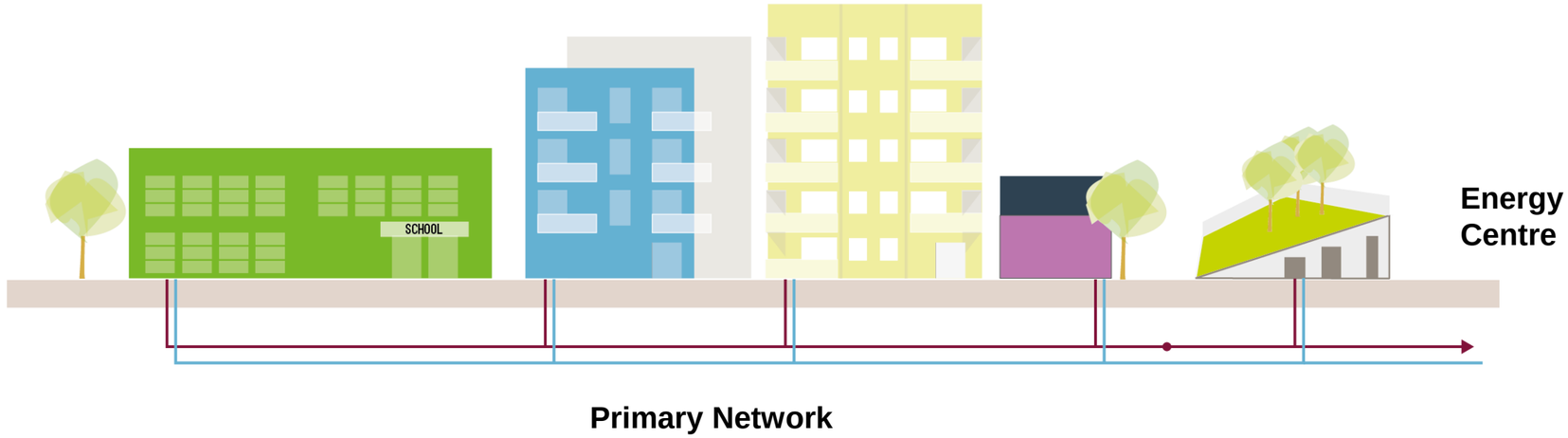
How is LancWest heated today?

- **80%** of homes are heated by gas via an existing **heat network**
- **20%** of homes have an individual gas boiler



What is a heat network?

It is a system that supplies heat to several buildings via pipes connected to a local energy source



Renewal and replacement is required of the two heat networks, which today supply 80% of LancWest heating

Future Heating Co-Design

Feb / March 2021

Technical teams are doing surveys to find out *what is possible*. Here we are testing if we can take heat from waste water!

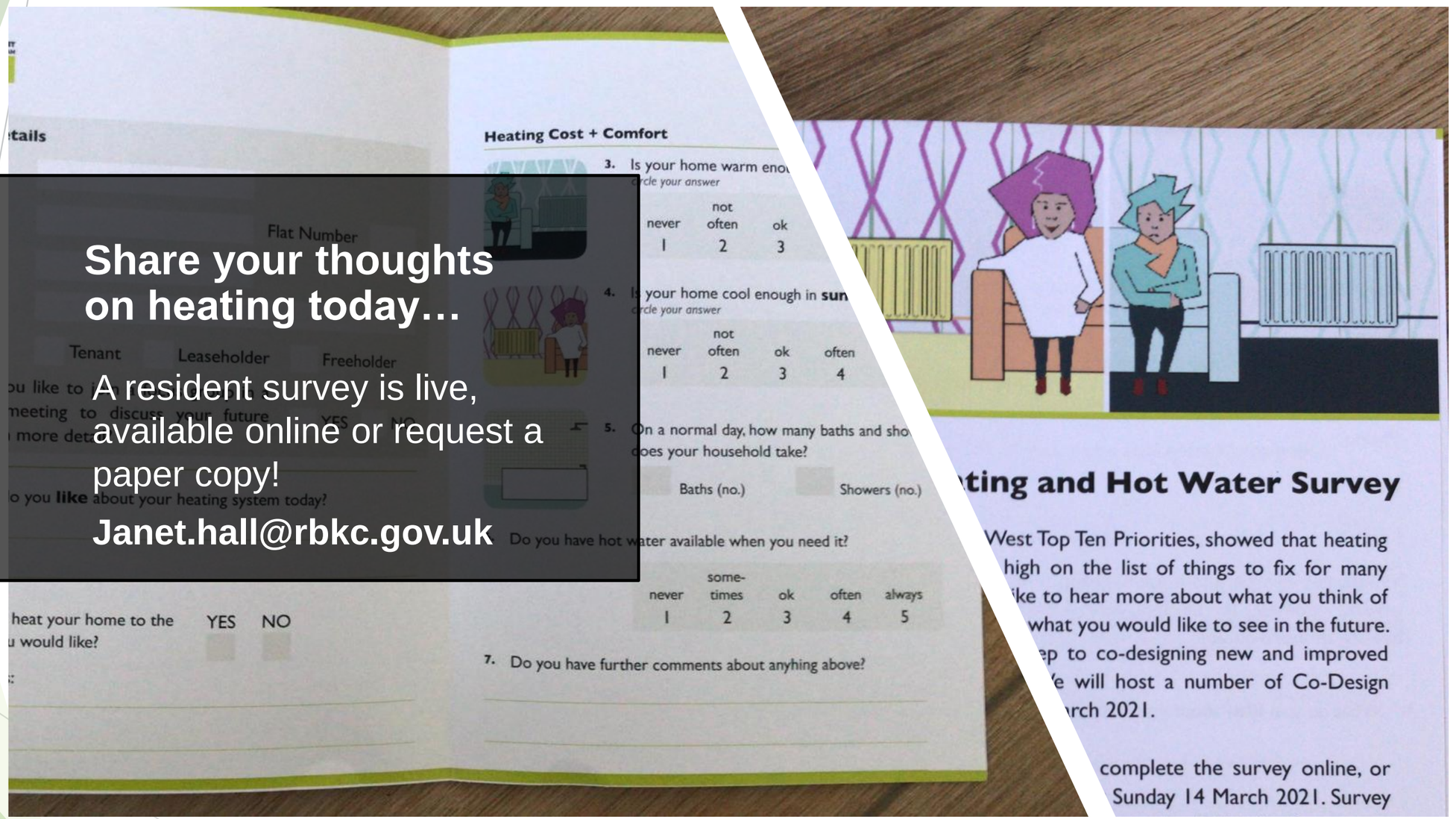
March / April 2021

We will share the heating options for resident review and co-design

Share your thoughts on heating today…

A resident survey is live, available online or request a paper copy!

Janet.hall@rbkc.gov.uk



Next Steps

Continuing the conversation...

- **Today and over the next few weeks we want to discuss your thoughts, ideas and concerns about insulation option (internal or external) for walls and roofs**
- **Future co-design meetings will focus on preferred options as these emerge**
- **We will assess with you how much disruption is acceptable in exchange of the benefits of the design proposals**
- **We have already carried out several surveys but we need to work together to carry out further surveys to understand the existing condition of your homes**

Next Steps

Continuing the conversation...

Before our next meeting we will share with you:

- Letter to residents
- This presentation
- Feasibility Report
- Pop-up event

Resident Enewsletter

SCAN ME

Please specify which block you live in when subscribing, to allow us to send out block newsletters in the future.

LANCASTER WEST NEIGHBOURHOOD TEAM
W11

Thank you for joining us!

Any final questions, thoughts or ideas?

Your feedback is important for us to co-design the refurbishment of your homes.

If you'd like to follow anything up, contact:
Telephone: **0800 389 2005**
Email: lancasterwestoffice@rbkc.gov.uk