

Lancaster West Refurbishment Emerging **preferences** and **choices**



Verity Close

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Introductions

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Senior Refurbishment
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Project Manager

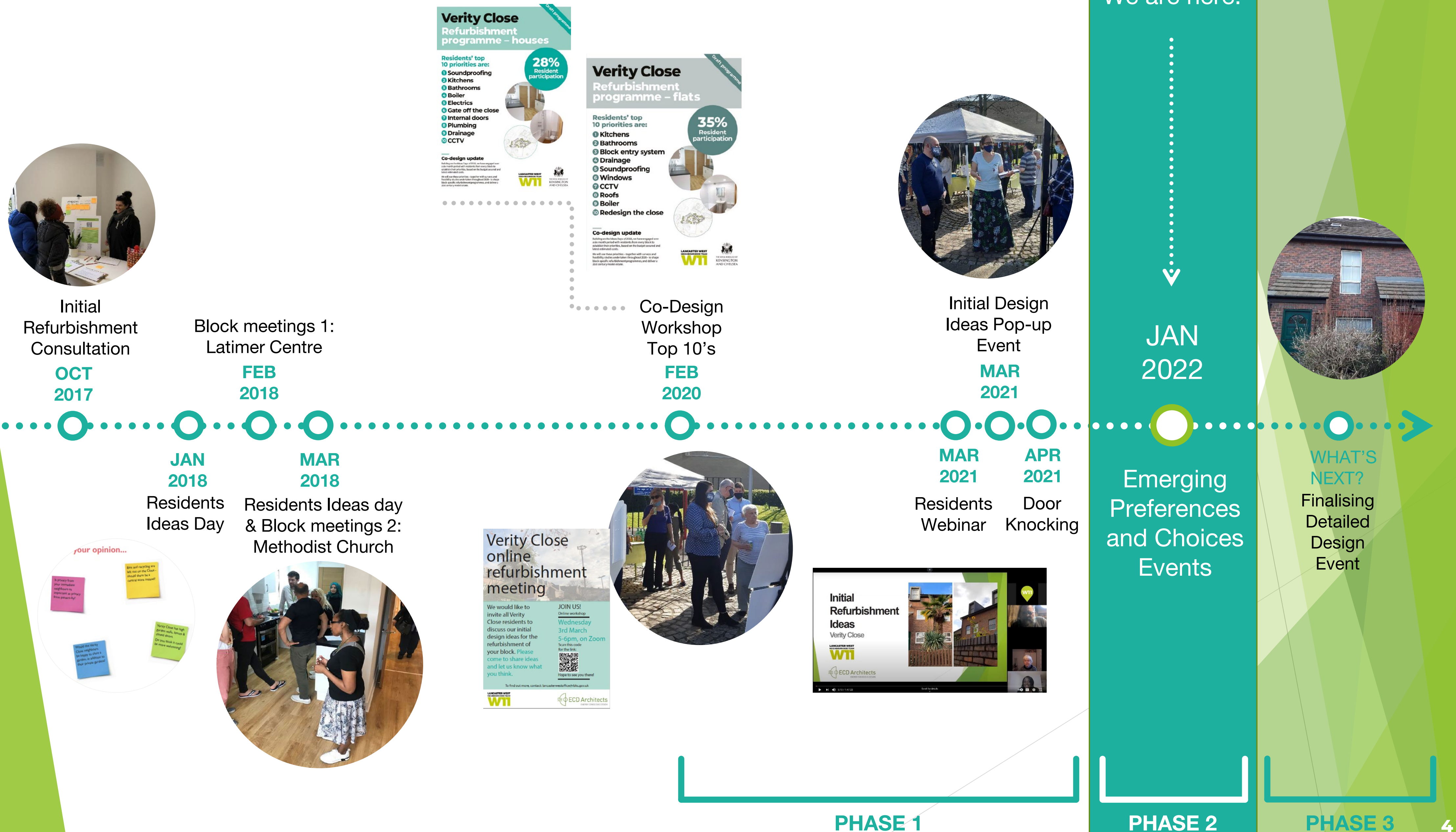


Alfie Peacock
Refurbishment
Design & Delivery
Assistant Project
Manager



Aonghus Dracup
Refurbishment Surveyor

Co-design Timeline



Your Top Ten Priorities

Verity Close Refurbishment programme – flats

Draft programme

Residents' top
10 priorities are:

- 1 Kitchens
- 2 Bathrooms
- 3 Block entry system
- 4 Drainage
- 5 Soundproofing
- 6 Windows
- 7 CCTV
- 8 Roofs
- 9 Boiler
- 10 Redesign the close

35%
Resident
participation



Co-design update

Building on the Ideas Days of 2018, we have engaged over a six month period with residents from every block to establish their priorities, based on the budget secured and latest estimated costs.

We will use these priorities – together with surveys and feasibility studies undertaken throughout 2020 – to shape block-specific refurbishment programmes, and deliver a 21st century model estate.

Verity Close Refurbishment programme – houses

Draft programme

Residents' top
10 priorities are:

- 1 Soundproofing
- 2 Kitchens
- 3 Bathrooms
- 4 Boiler
- 5 Electrics
- 6 Gate off the close
- 7 Internal doors
- 8 Plumbing
- 9 Drainage
- 10 CCTV

28%
Resident
participation

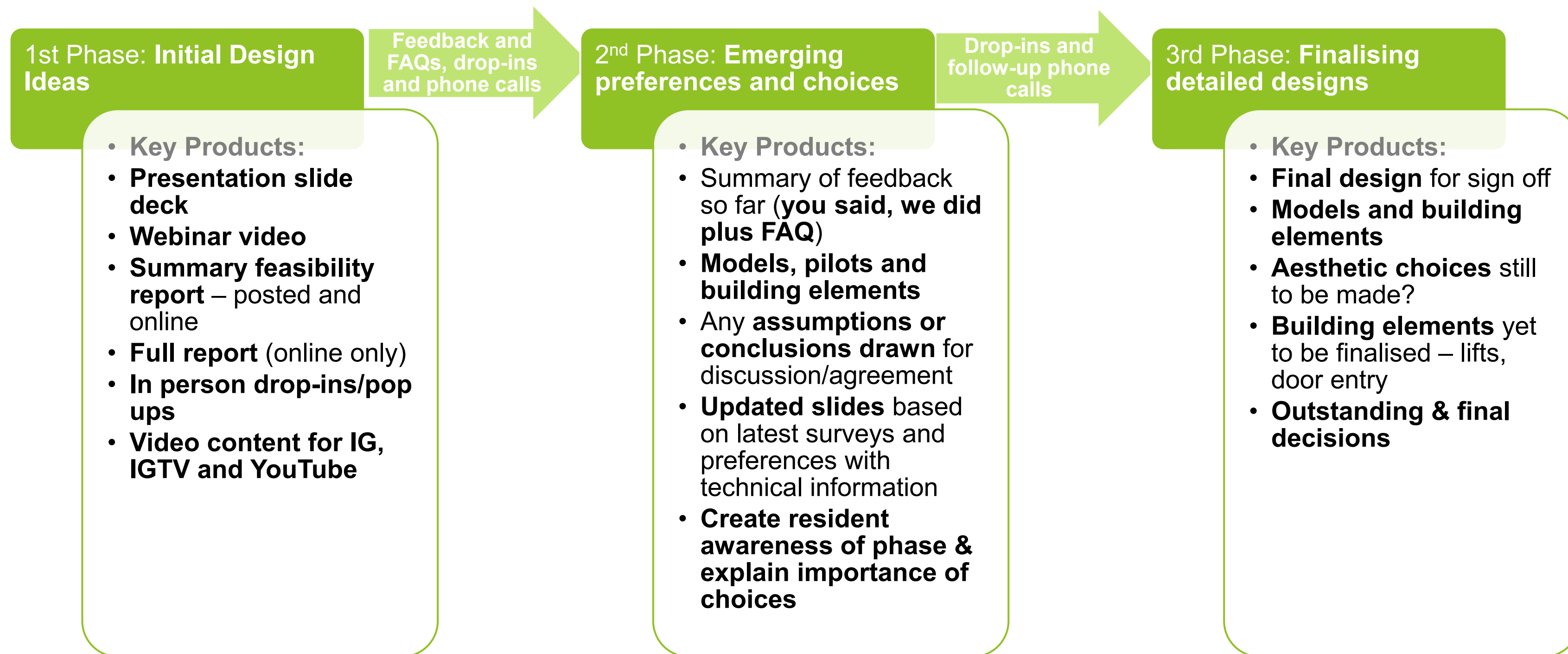


Co-design update

Building on the Ideas Days of 2018, we have engaged over a six month period with residents from every block to establish their priorities, based on the budget secured and latest estimated costs.

We will use these priorities – together with surveys and feasibility studies undertaken throughout 2020 – to shape block-specific refurbishment programmes, and deliver a 21st century model estate.

Overview of co-design process



Over 50% engagement for each lot

Initial design ideas: Resident feedback

You Said

The design proposals taken forward are based on feedback from residents who told us what ideas they want to take forward for the refurbishment of their homes.

Proposals

Insulate homes from the outside, replace windows and doors, and improve ventilation in order to improve thermal performance and comfort.

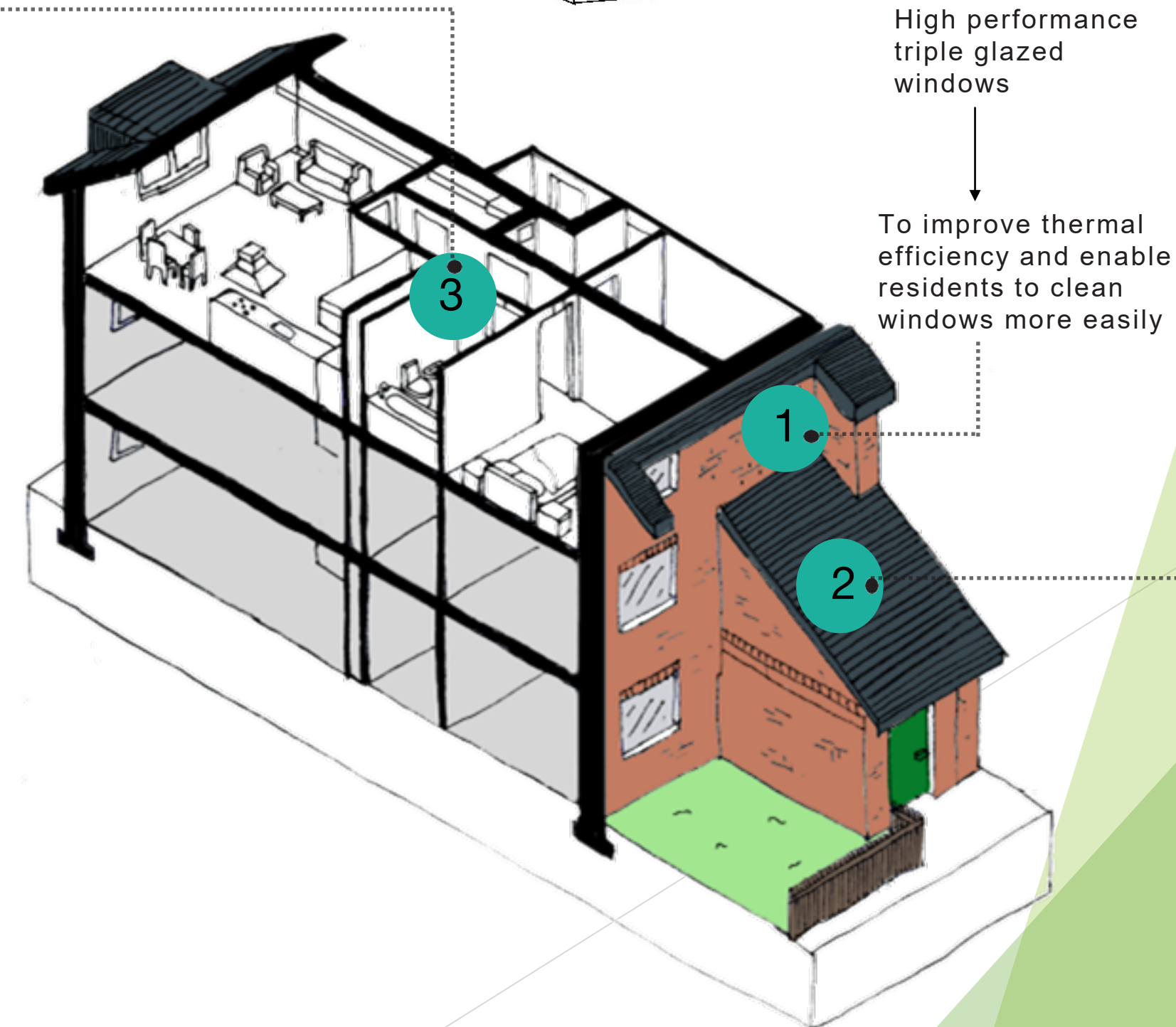
Components being refurbished

1. Windows
2. Walls and Roof
3. Ventilation system

Houses.



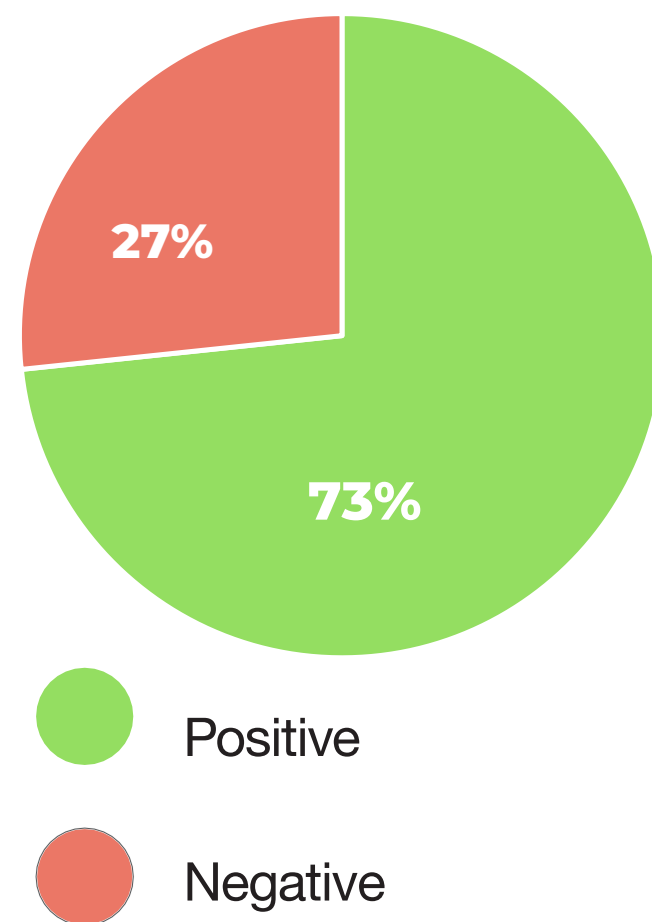
Flats



Initial design ideas: Resident feedback

The majority of respondents prefer triple glazed windows

Proportion of respondents positive about aluminium frames



74%

mainly positive
about aluminium framed
windows

15/21 responded

90%

mainly positive about
triple glazed windows

20/21 responded

94%

satisfied with whatever
type of glazing is most
efficient

20/21 responded



38%
**residents
engaged so far**

(21/68)

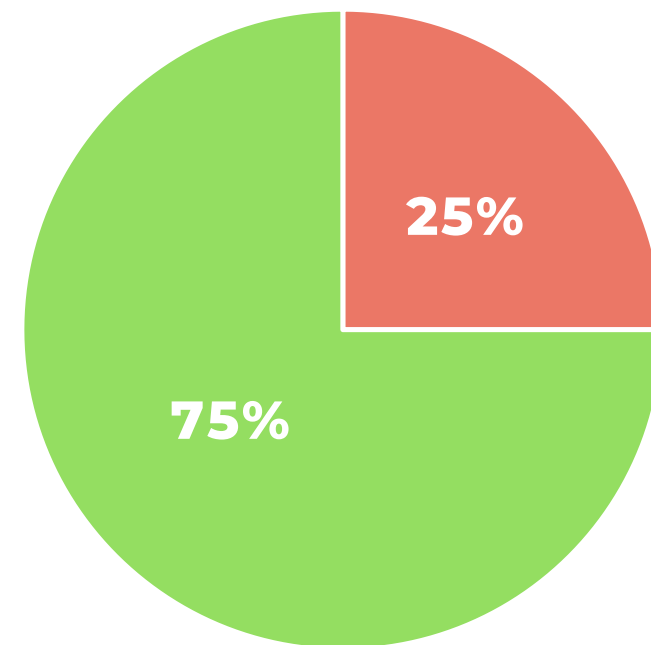
Of the 68 houses and flats at Verity Close, 21 completed the survey. 13 of these were council tenants, 2 were resident leaseholders and 1 was a resident freeholder.

Initial design ideas:

Resident feedback

Insulation and Finishes

Proportion of residents positive about a brick finish

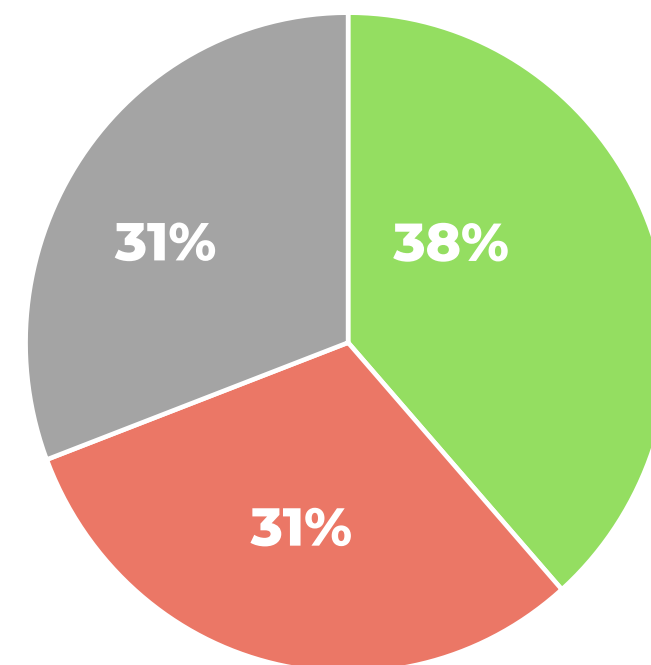


75%

mainly positive about a brick skin finish

16/21 responded

Proportion of residents positive about a render finish



38%

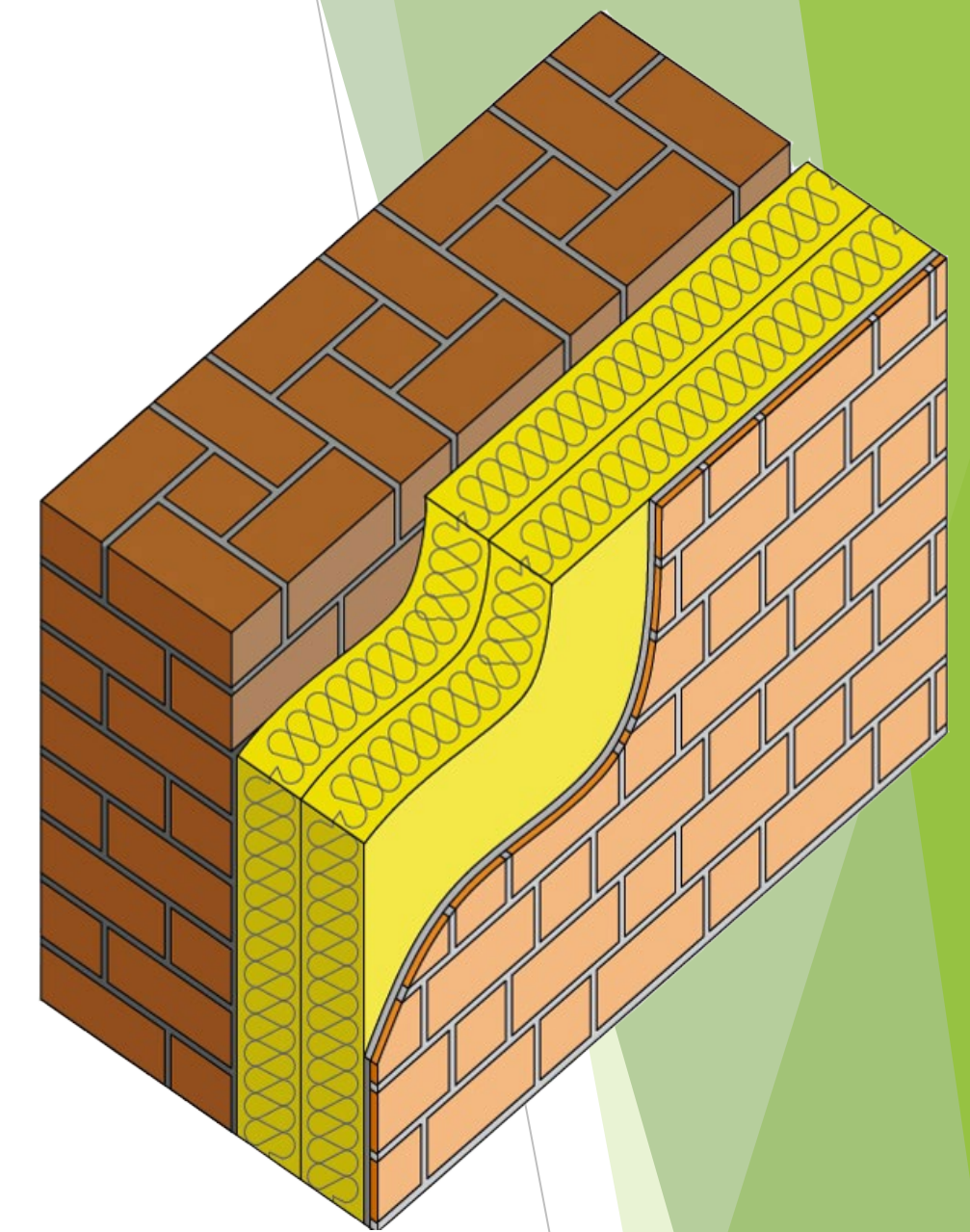
mainly positive about a render finish

13/21 responded

80%

mainly positive about external wall insulation

20/21 responded



38% residents engaged so far

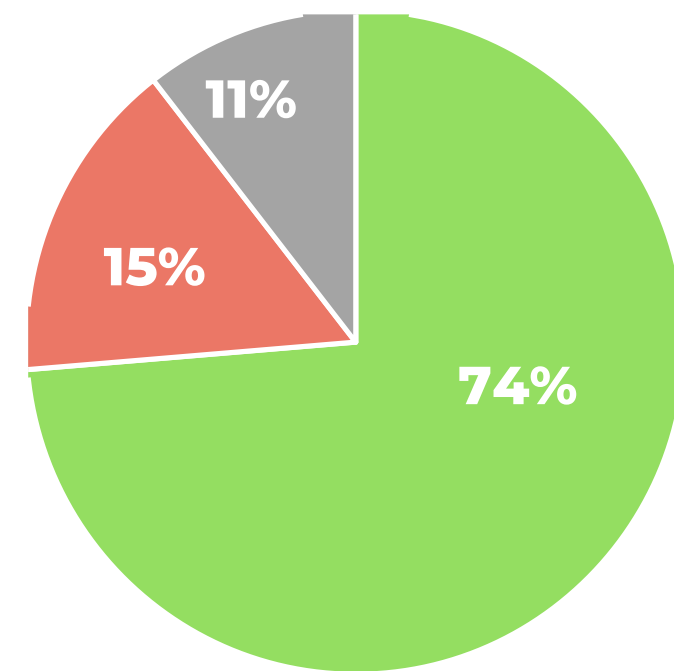
(21/68)

Of the 68 houses and flats at Verity Close, 21 completed the survey. 13 of these were council tenants, 2 were resident leaseholders and 1 was a resident freeholder.

Initial design ideas:

Resident feedback

Ventilation



19/21 responded

74%

Generally positive
at the idea of
having MVHR*
installed



38%










residents engaged so far

(21/68)

Of the 68 houses and flats at Verity Close, 21 completed the survey. 13 of these were council tenants, 2 were resident leaseholders and 1 was a resident freeholder.

*MVHR is Mechanical Ventilation (with) Heat Recovery

MVHR Options Overview

	Nu-aire	Nu-aire	Vent Axia	Vent Axia	Zehnder	Zehnder	Zehnder	Brink	Brink
Image									
Model	MRXBOXAB-ECO2	MRXBOXAB-LP2	Sentinel Kinetic BH	Sentinel Kinetic H	ComfoAir 155 WM	Comfoair Q350	Comfoair 160	Renovent sky 150 & 200	Flair 325
Ventilation rate	Fan Curve 3 provides 29l/s @100pa	Fan Curve 3 provides 29l/s @100pa	Fan Curve 20% provides 29l/s @100pa	Fan Curve 60% provides 29l/s @100pa	Fan Curve 40% provides 29l/s @100pa	Fan Curve 70% provides 110l/s @100pa	Fan Curve 70% provides 29l/s @100pa	Fan Curve 70% provides 29l/s @60pa	Fan Curve 70% provides 970l/s @100pa
Unit capacity	80l/s @100pa	55l/s @100pa	60l/s @100pa	50l/s @100pa	82l/s @100pa	29l/s @100pa	44l/s @100pa	44l/s@60pa	90l/s @100pa
Pros	SAP COMPLIANT, RH & LH MODELS, CONTROLS OPTIONS, 125 DIA DUCT CONNECTION	SAP COMPLIANT, RH & LH MODELS, CONTROLS OPTIONS, 204 X 60 DUCT CONNECTIONS	SAP COMPLIANT, RH & LH MODELS, CONTROLS OPTIONS, 150 dia DUCT CONNECTIONS		SAP COMPLIANT	PASSIVHAUS CERTIFIED LH & RH RANGE OF CONTROL OPTIONS INTEGRAL HUMIDISTAT 100% FULL AND FILTERED MODULATING SUMMER BYPASS	PASSIVHAUS CERTIFIED, LH & RH.WIRELESS CONTROL OPTION. THIS UNIT CAN BE USED IN THE HORIZONTAL AND VERTICAL SO CAN BE STANDRADISED ACROSS THE SITE IN THE SMALLER FLATS	PASSIVHAUS CERTIFIED, LH & RH.WIRELESS CONTROL OPTION. INTEGRAL HUMIDISTAT THIS UNIT CAN BE USED IN THE HORIZONTAL AND VERTICAL SO CAN BE STANDRADISED ACROSS THE SITE IN THE SMALLER FLATS	PASSIVHAUS CERTIFIED, LH & RH.WIRELESS CONTROL OPTION. INTEGRAL HUMIDISTAT THIS UNIT CAN BE USED IN THE HORIZONTAL AND VERTICAL SO CAN BE STANDRADISED ACROSS THE SITE IN THE SMALLER FLATS
Cons/Comments	G3 FILTERS,MAX AREA 150M2 Has additions available such as acoustic box and F7 NOT PASSIVHAUS CERTIFIED	G3 FILTERS,MAX FLORO AREA 150M2 NOT PASSIVHAUS CERTIFIED	G3	G3 FILTERS,MAX AREA 150M2 VERTICAL		G4 with F7 FILTER	HORIZONTAL & VERTICAL – G4 WITH F7 FILTER DOES NOT HAVE AN INTEGRAL HUMIDISTAT - ADDITIONAL REMOTE HUMIDITY SENSOR	HORIZONTAL & VERTICAL – G4 WITH F7 FILTER	HORIZONTAL & VERTICAL – G4 WITH F7 FILTER
Filter	G3 with F7	G3	G3	G3	G3	G4 with F7	G4 with F7	G4 with F7	G4 with F7
SFP (W/l/s) How much power is used to deliver the ventilation.	0..9	0.61	1.1	0.89	0.94	0.85	0.85	0.85	0.85
Sound Power	24 dBA @ 3m	23 dBA @ 3m	30.8 dBA @ 3m	29.7 dBA @ 3m	27.4 dBA @ 3m	19 dBA @ 3m	22.8 dBA @ 3m	33 dBA Install attenuators	33 dBA Install attenuators
Thermal Efficiency How much heat is recovered from the extract air	89%	79%	91%	82%	91%	96%	95%	83%	95%
Warranty	5 years	5 years	5 years	5 years	2 years	2 years	2 years	2 years	2 years
Future proof cooling							X		
Automatic Summer Bypass (to provide free cooling in the summer to reduce overheating)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Integral Humidistat (to avoid excessive moisture by automatically boosting the flow rate when humidity is high)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Min. 2 speeds (trickle and boost) to be set during commissioning for background and boost rates.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dimensions	607 W x 356 D x 507 H	900 L x 200 D x 700 W	550 W x 285 D x 640 H	895 W x 849 D x 200 H	546 W x 298 D x 644 H	725 W x 570 D x 850 H	670 W X 268 D X 864 L	1000W x 660D x 198H	650W x 750D x 560H
Approx. Cost per unit (incl. VAT)	£1,033	£1,200	£1,377	£1,320.00	£1,123	£2,277	£1,877	£1,114	£1,385
Lead times						10-12 Weeks	4-5 weeks	6-8 weeks	6-8 weeks

Initial design ideas:

MVHR Comparison

Zehnder Comfoair Q350

What we will install:

Zehnder Comfoair Q350



Key Features

- Standard or preheater models available
- Suitable for house sizes up to 200m²
- **Provides up to 90% heat recovery efficiency (reducing heating costs)**
- **2 x G4 filters and F7**
- **Passive House certified**
- Counter flow heat exchanger
- **A+ energy efficiency**
- Left or right-hand configuration via the unit's software
- **Noise reduction**

Technical Features

- **Thermal efficiency @ 96%**
- Features EC motors
- Airflow rate @ 100Pa - 350 m³/h/r
- Maximum airflow rate - 350 m³/h/r
- 4 Variable speed flow rate set points
- **100% full summer bypass**
- **Sound level @3m - 19 dB(A)**
- Dimensions W x H x D - 725mm x 850mm x 570mm
- Weight - 50kg
- Duct diameter internal - 160mm
- Duct diameter - 190mm
- **Controllability:** This unit can be controlled via ComfoSense LCD Controller, ComfoConnect LAN application interface or ComfoConnect KNX Building management interface
- Installation: Suitable for vertical wall mounting or floor stand with the ability to allow left or right-hand configuration through the unit's software
- Construction: This unit is constructed of powder coated sheet steel and is fully insulated using high quality EPP to maintain excellent thermal features

Various control options – Easy operation

- **The display** is the simplest controller – it is always available and is integrated directly into the ventilation unit.
- **ComfoControl app** - Whether you're on the move or on the sofa, control your ComfoAir Q conveniently via your smartphone or tablet. Just download the free ComfoControl app from the App Store.
- **Remote control** - The control panel ComfoSense C allows to control the ventilation unit ComfoAir Q via wireless communication.



Brink Flair 325

What we will install:

Brink Flair 325



Key Features

- Adjustable air flow rates via control panel
- Filter change indication
- Frost protection
- Summer by pass
- **Provides up to 91% heat recovery efficiency (reducing heating costs)**
- **2 x G4 filters and F7**
- Low energy consumption
- High efficiency
- **Passive House certified**
- **A+ energy efficiency**
- Left or right-hand configuration via the unit's software
- For humidifying, purifying, heating and cooling

Technical Features

- **Thermal efficiency @ 95%**
- Airflow rate range 69 m³/h - 251 m³/h
- 4 Variable speed flow rate set points
- **100% full summer bypass**
- Sound level 33dBA
- Dimensions W x H x D - 750 x 650 x 560
- Weight - 37kg
- Duct diameter - 160mm
- Installation and maintenance: The convenient **installation wizard** makes installation quicker. This tool guides you step-by-step through the installation process and makes it impossible to overlook anything. The appliance itself also offers you **smart help** by the maintenance wizard when maintaining and replacing filters.

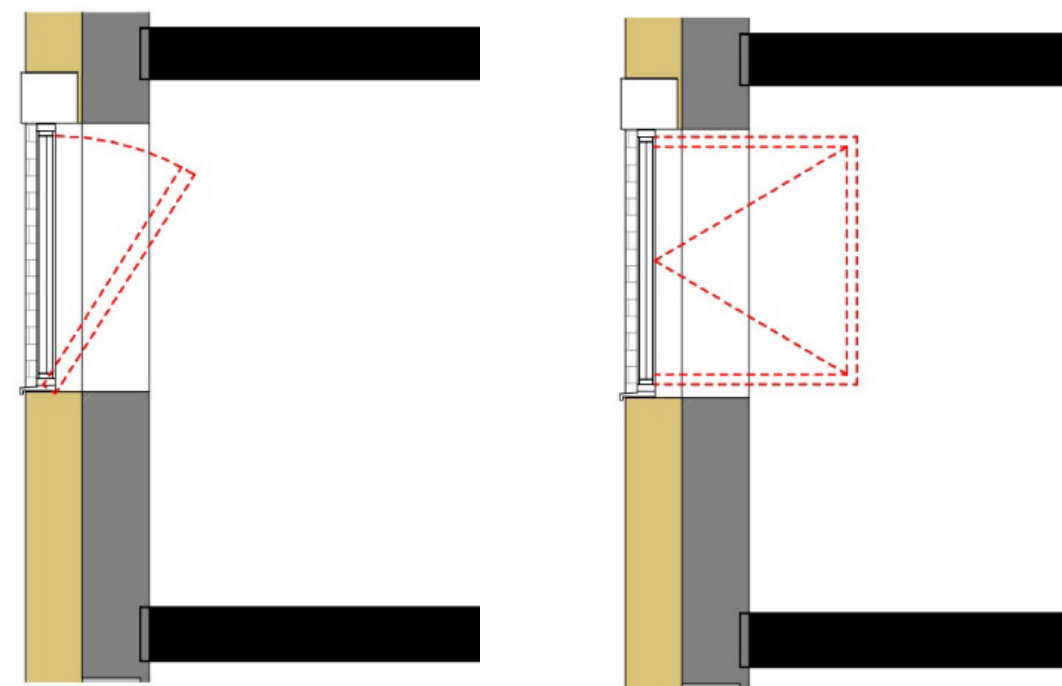
Various Control options – Easy operation

- **Easy display control panel** – includes smart help for maintenance
- **Modbus** - Ensures an easy link with building management systems
- **Brink Home** - Online control through an App or our web portal
- **Internet** - Extensive options for the Internet of Things



Window options

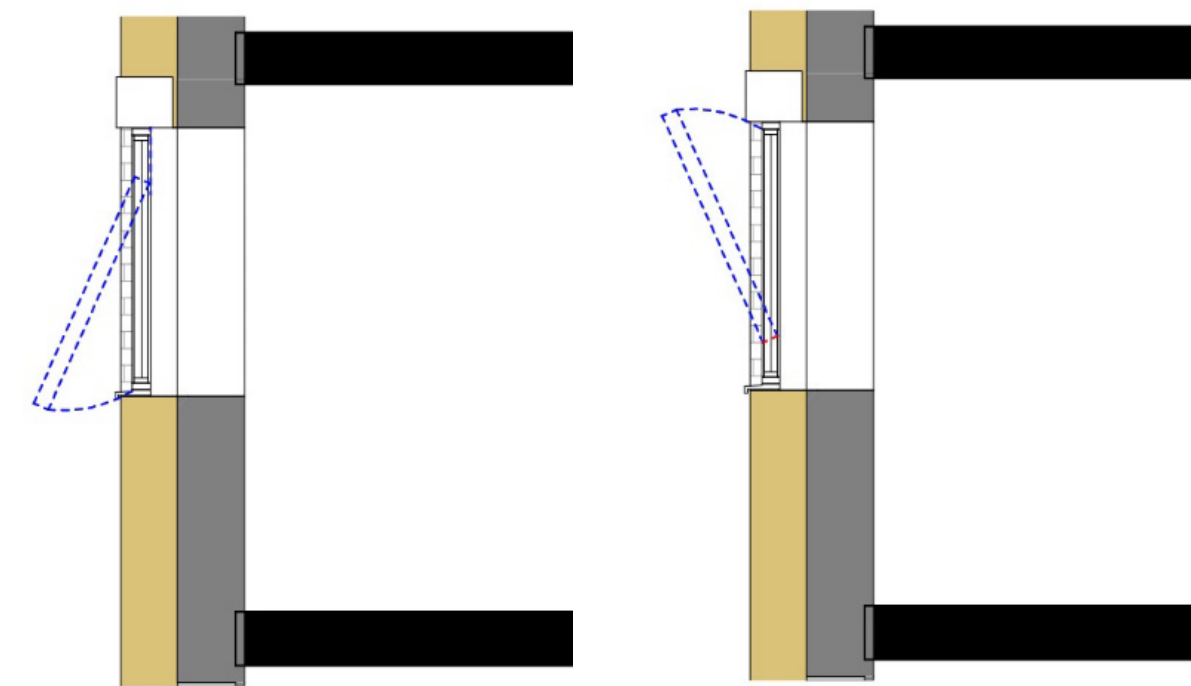
90% of survey respondents were positive about triple glazed windows. Triple glazed windows come with a variety of openings.



Tilt opening

Turn opening

Tilt and Turn Window

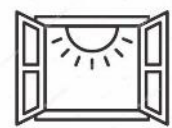


Top Hung opening

Reversible opening

Top-hung Reversible Window

Lighting



Ventilation



Ease of opening



Ease of cleaning



Thermal insulation



Security



Safety



Impact on floor area



Recommended

Windows options

Window Opening Types

Triple glazed windows will improve the thermal efficiency of your home. Windows come in a range of materials and frame thicknesses, with different performances.

Tilt and Turn Window



Idealcombi Futura + I



Velfac In

Top Hung Reversible



Idealcombi Futura+



Velfac 200E

The low energy home has been fitted with **IdealCombi Futura+:**

- Triple glazed
- Reduced heat loss through windows
- No draughts- more comfortable
- Quieter internal environment



Windows options

Window Performance

Tilt and Turn Window

Idealcombi Futura + I



Velfac In



Top Hung Reversible

Idealcombi Futura+



Velfac 200E



U-Value**
(W/m²K)

Security
accreditation

Frame
thickness

Internal
finish

External
finish

0.82

SbD*

54mm

Aluminium

Aluminium

0.94

None

93mm

Timber

Aluminium

0.87

SbD

53mm

Timber

Aluminium

0.83

None

53mm

Timber

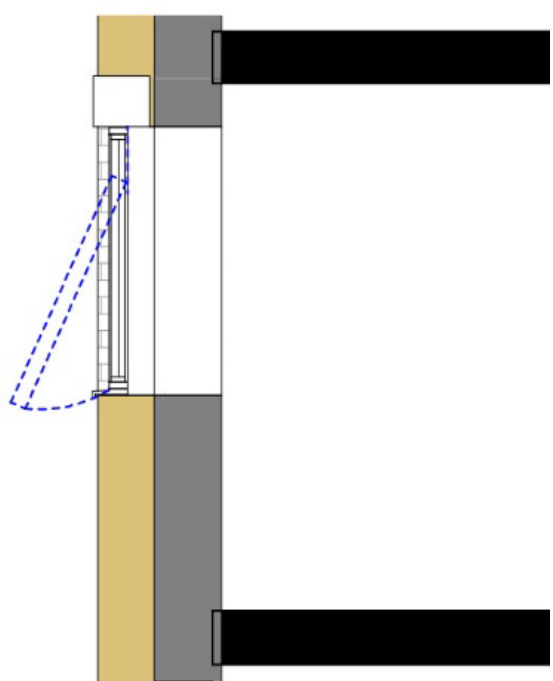
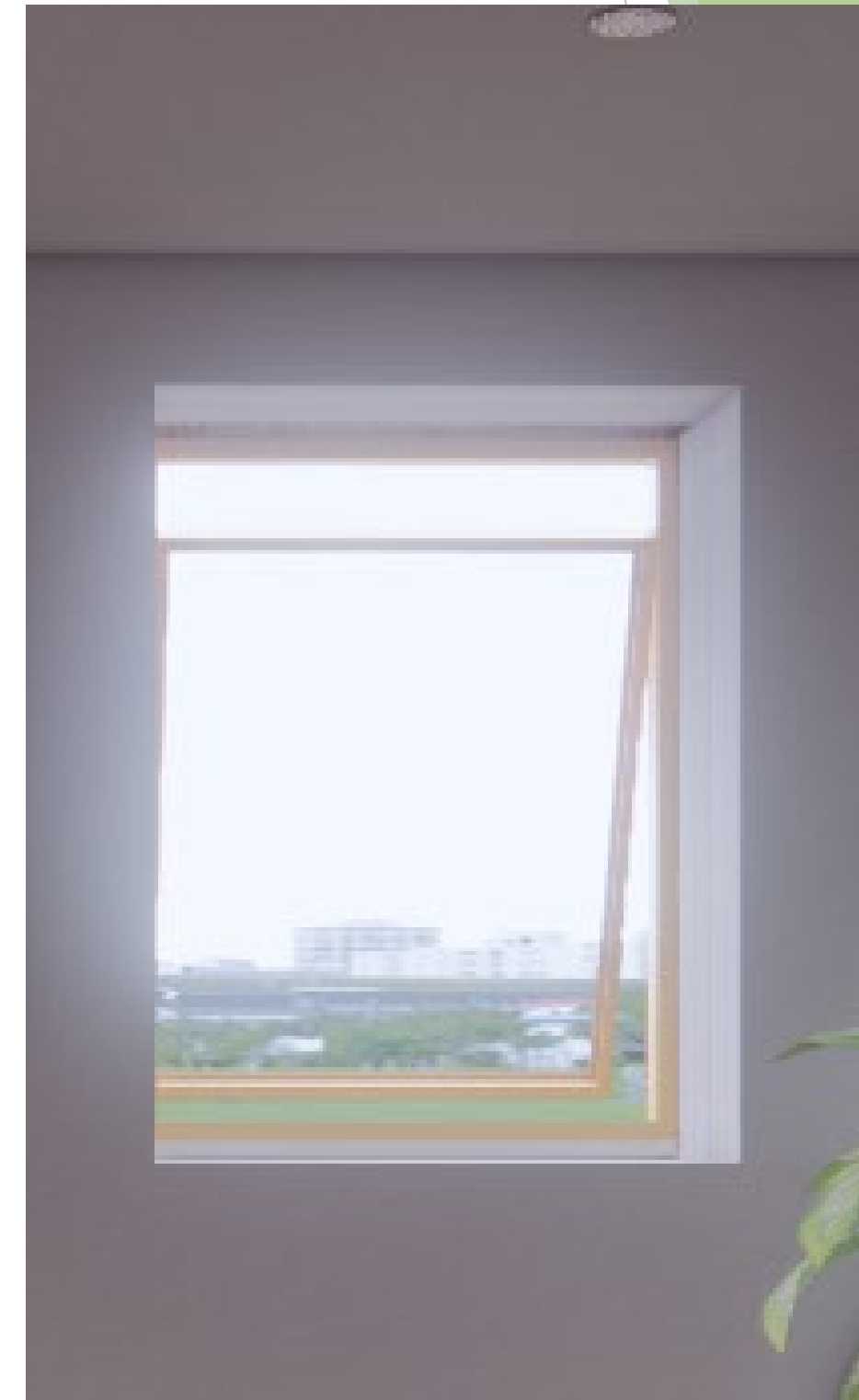
Aluminium

*Secured by Design (SbD) product accreditation provides a recognised standard for all security products that can deter and reduce crime.

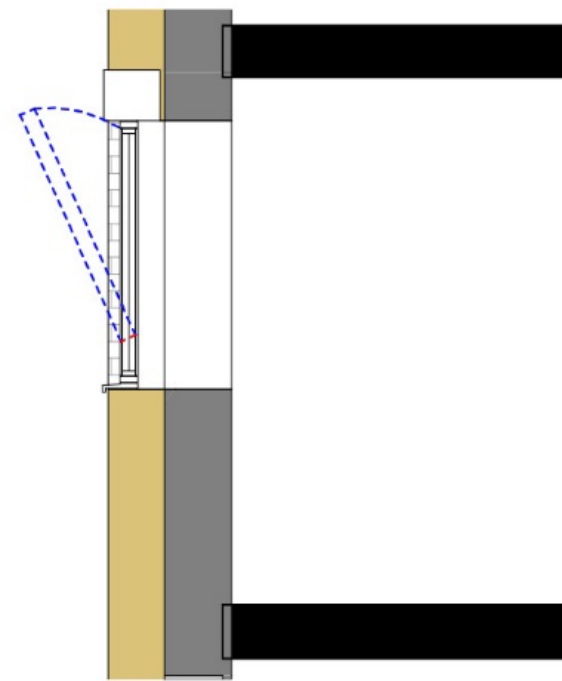
**U-value - the measure of heat transfer through an object or structure. U-Values are generally used to define thermal performance (heat loss) and assess the performance of a building. The lower the U-value the better insulated an element is.

Windows options

Visualisation showing **top hung reversible** windows



Top Hung opening



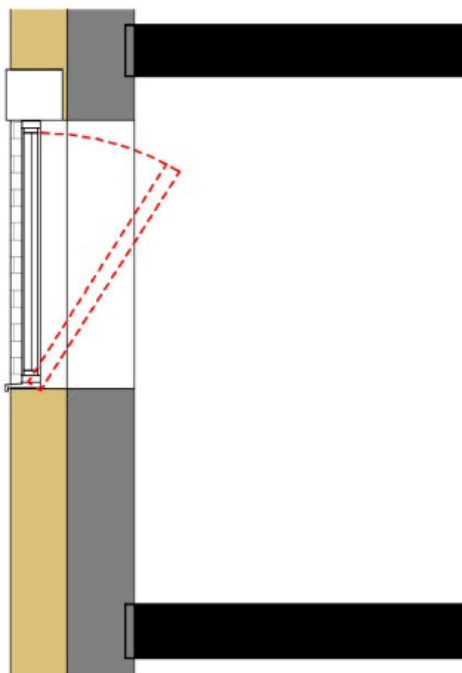
Reversible opening

Windows options

Visualisation showing **tilt & turn** windows

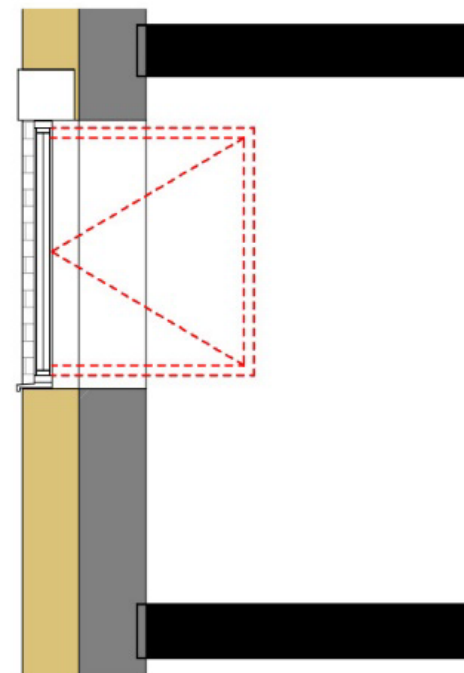


Turn opening



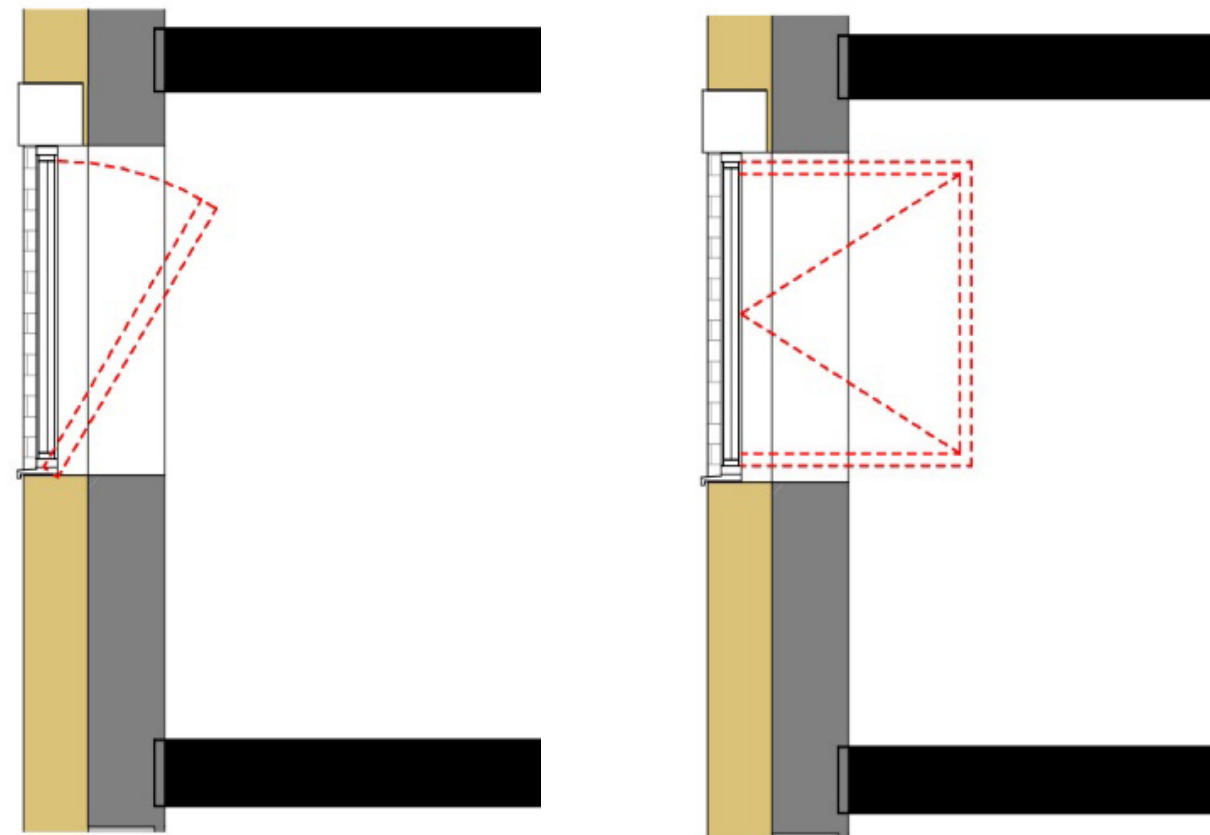
Tilt opening

Emerging preferences and choices - Verity Close



Turn opening

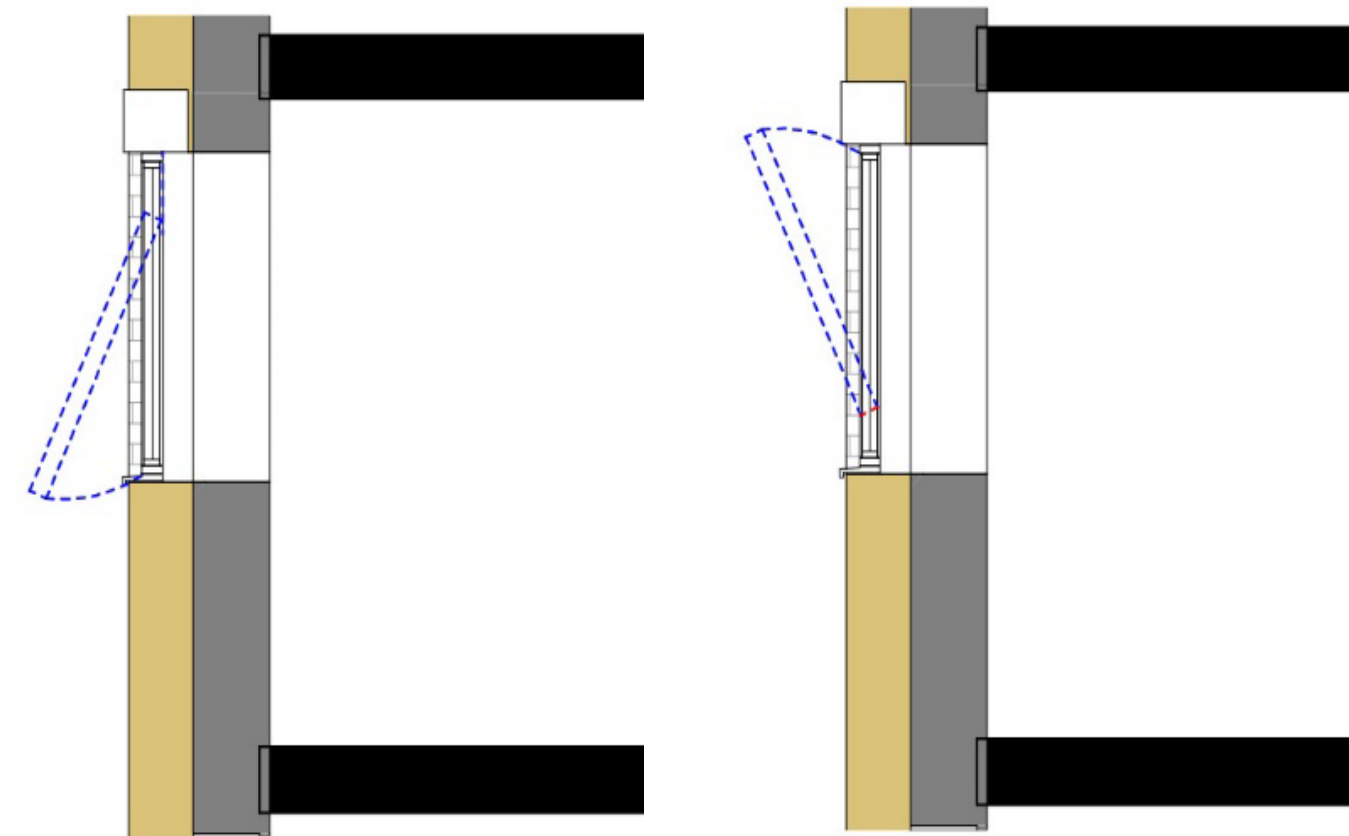
Windows options



Tilt opening

Turn opening

Tilt and Turn Window
(open inwards)



Top Hung opening

Reversible opening

Top-hung Reversible Window
(open outwards)

Which window mechanism do you prefer?

Windows options

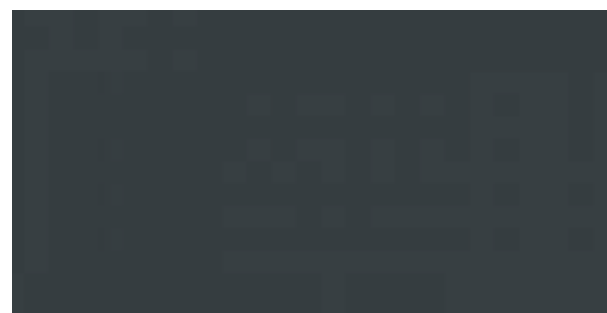
Window Frame Colour Options

Windows are available in a variety of external and internal colours.

External Colour Options



Silver grey (RAL 7001)



Signal grey (RAL 7004)



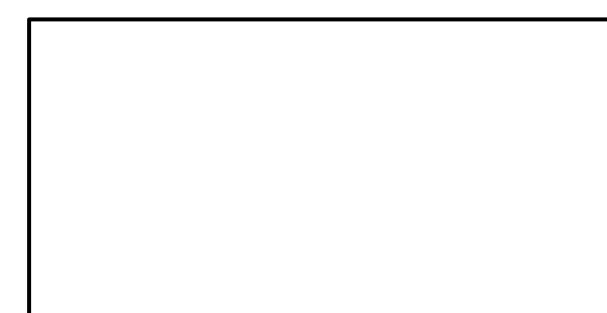
Anodised aluminium



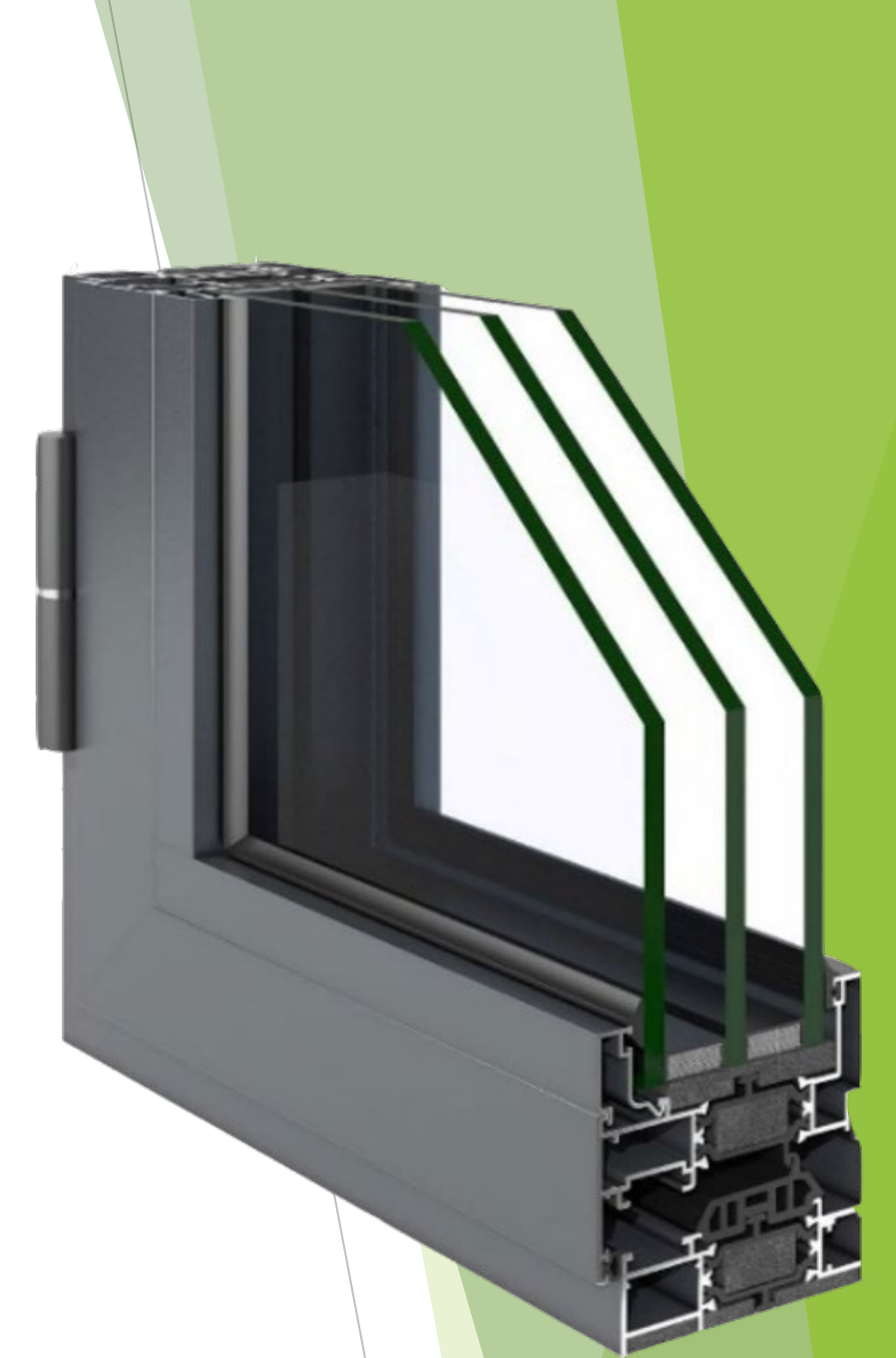
Anthracite grey (RAL 7012)



Basalt grey (RAL 7016)



White



Which window colours do you prefer?

Windows options

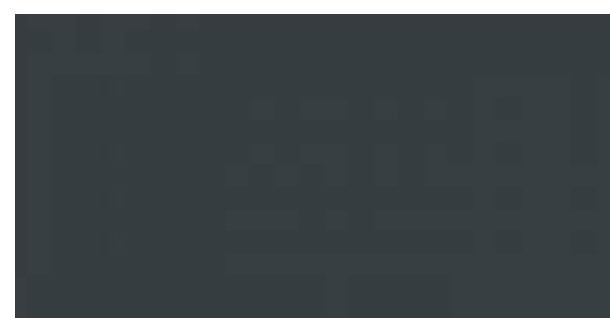
Window Frame Colour Options

Windows are available in a variety of external and internal colours.

Internal Colour Options



Silver grey (RAL 7001)



Signal grey (RAL 7004)



Anodised aluminium



Wood finish



Anthracite grey (RAL 7012)



Basalt grey (RAL 7016)



White



Other



Which window colours do you prefer?

External Wall Insulation

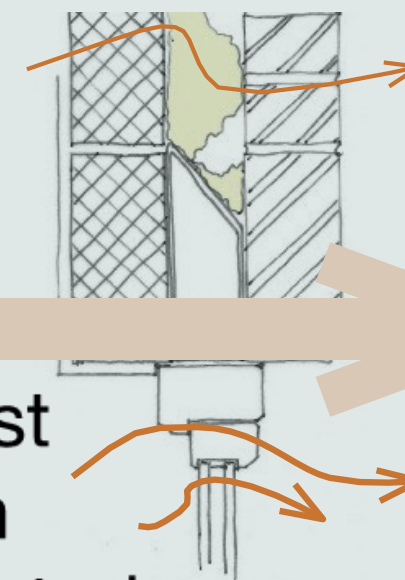
Current heat loss

Current heat loss

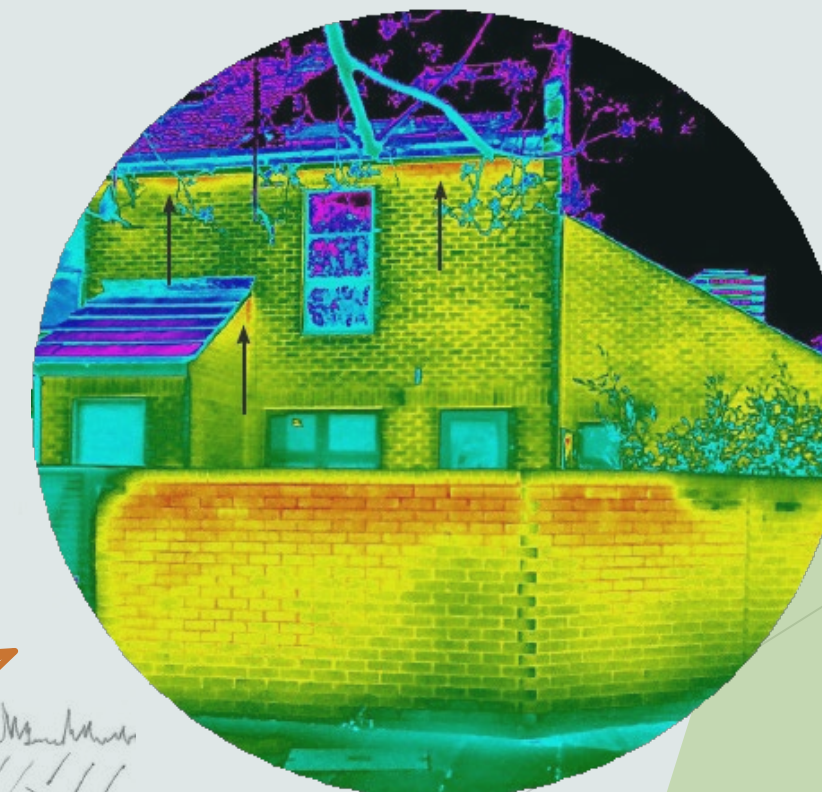
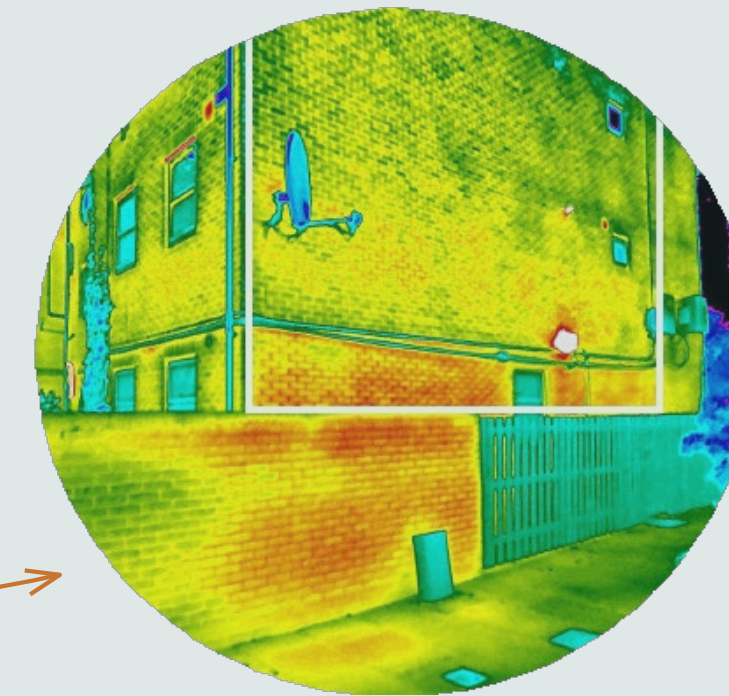
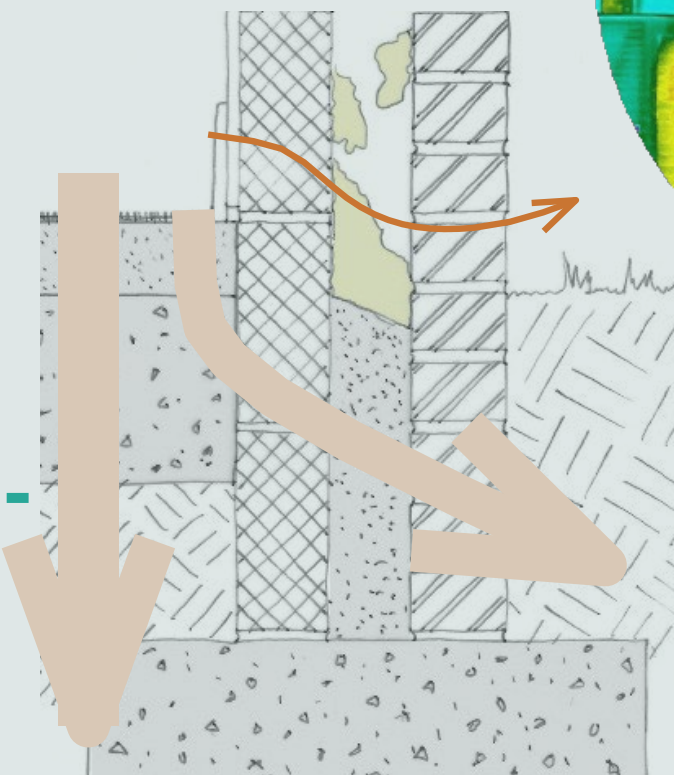
Heat lost
through poorly
insulated roof



Heat lost
through
gaps around
windows



Heat lost
through
uninsulated
lintels



Heat lost
through gaps
in construction

Red/yellow/green
areas show heat
being lost

External Wall Insulation

Impact on the Close

Visual Impact

Residents can choose whether the insulation is finished with brick or render. As only socially rented homes will be undergoing refurbishment, the details between the new and existing facades will need to be carefully designed to ensure a cohesive colour scheme across the close.



● Homes to be refurbished

External Wall Insulation

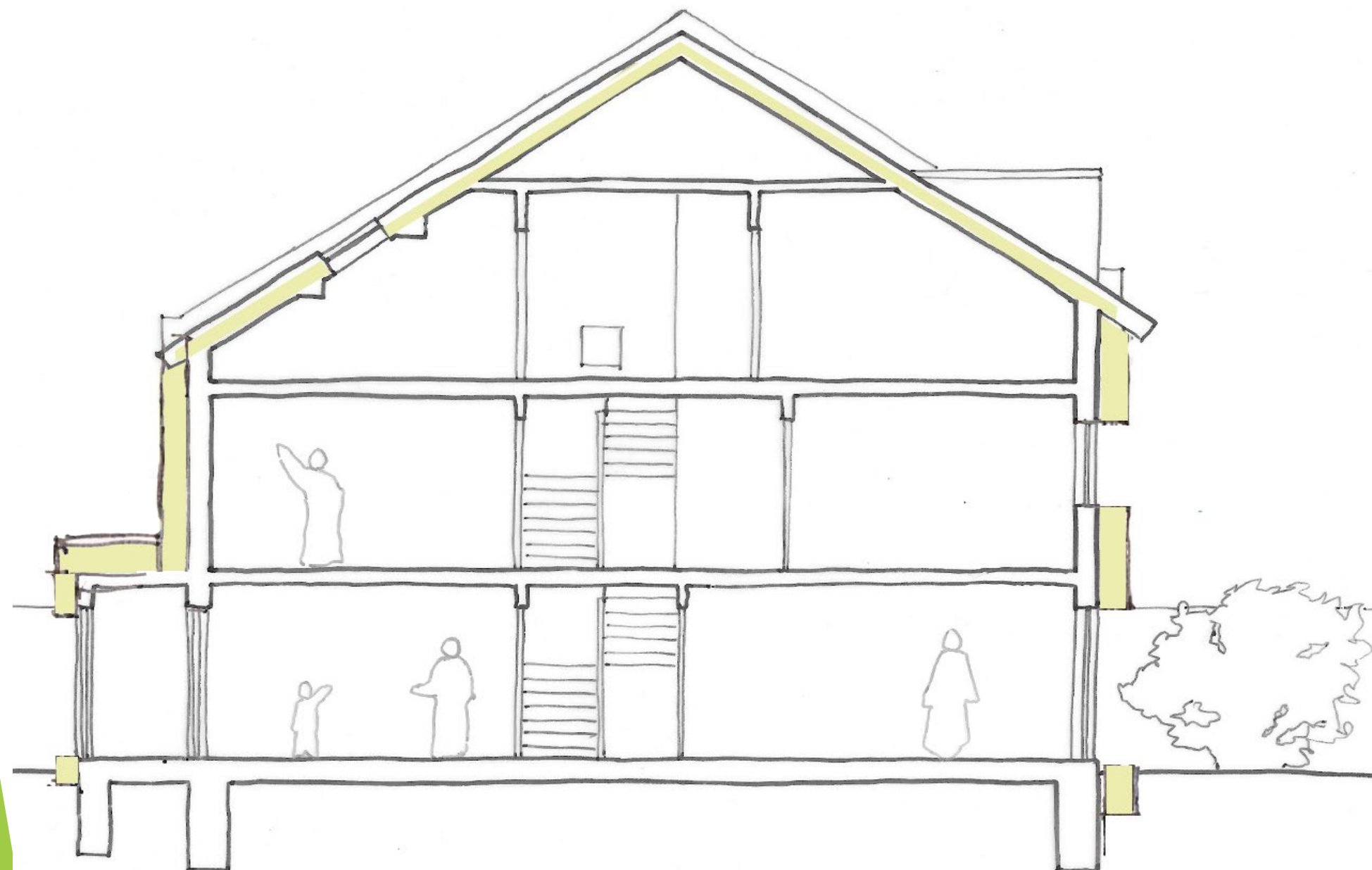
Benefits

External wall insulation

From your feedback we understand the majority of residents would prefer external wall insulation rather than internal.

This means your home would be insulated with A1/A2 rated insulation (of none or very limited combustibility) and a finishing layer. External Wall Insulation (EWI) can be fixed from the outside, with minimal disruption and no internal area losses.

The diagram shows the proposed line of insulation.



Emerging preferences and choices - verry close

80%
of respondents
**mainly
positive
about EWI**

20/21 responded

Benefits

- Improved thermal comfort
- Less energy required to heat home
- Reduced need for energy reduces bills
- Little internal disruption

External Wall Insulation

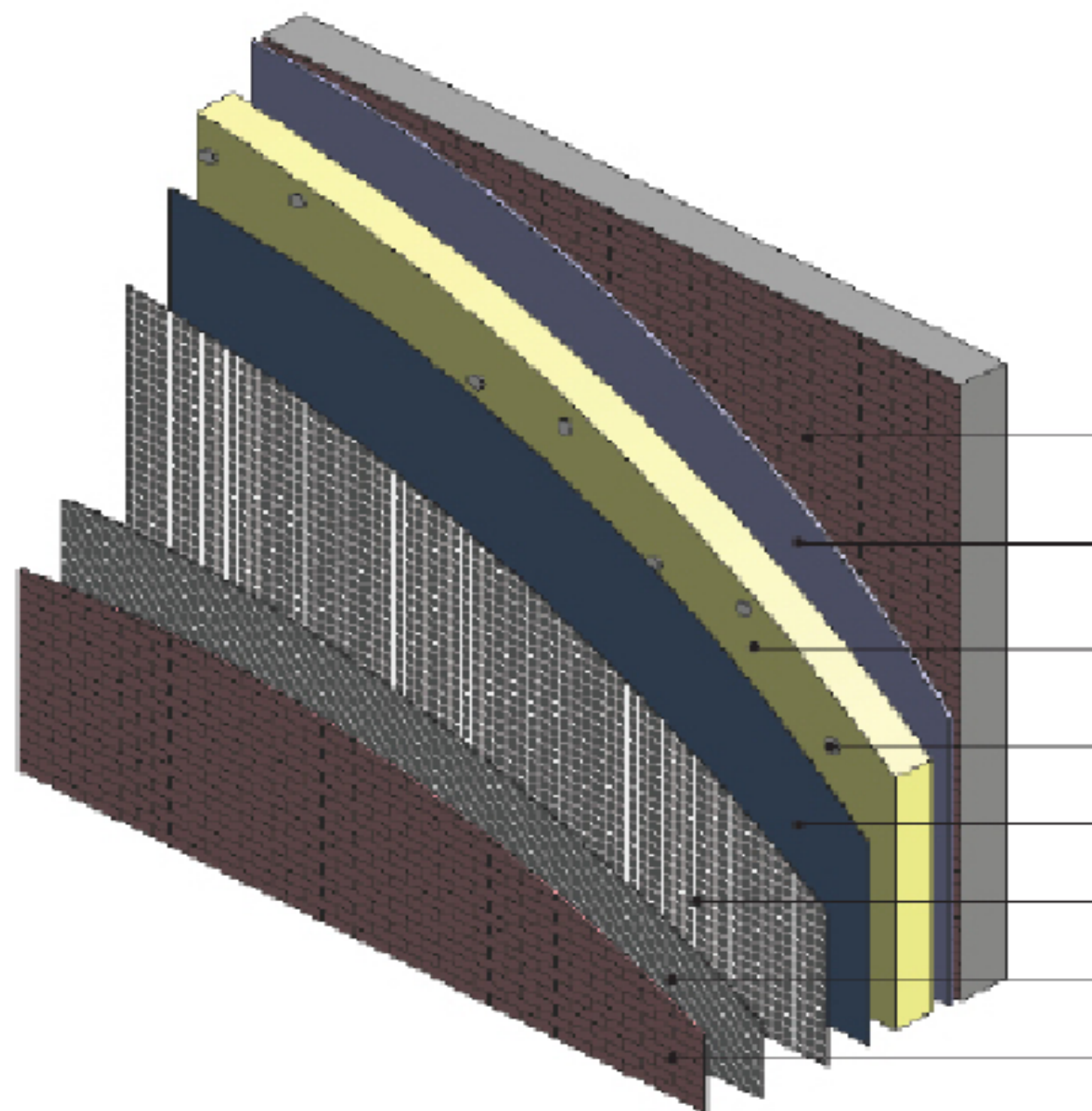
Technical summary

External wall insulation is designed to minimise a building's heat loss and improve air tightness. A frame is attached to the existing wall or roof which will contain an air tightness membrane and non combustible insulation. This frame will have a finish added to it – either a slip runner and brick slips, or render. New gutters and downpipes will need to be attached to the new façade.

At most:
300mm
added to
external
walls

EWI will reduce
acoustic impact
from outside noise

All materials
will be rated
A1/A2 for non-
combustibility



Proposed wall build up

Existing wall

Adhesive

250mm (max.) mineral fibre insulation

Plug fixture

Bedding mortar basecoat

Reinforcing mesh

Adhesive

Permarock brick slip
(available in a limited palette)

Brick finish
can match
existing
bricks

External Wall Insulation

Technical summary

Installation Process

External wall insulation can be installed while residents remain in situ. It will be installed by constructors who are trained in achieving a continuous airtight and insulated layer. This will ensure that there are no joints or leaks where heat can escape.



External Finish: Visualisation

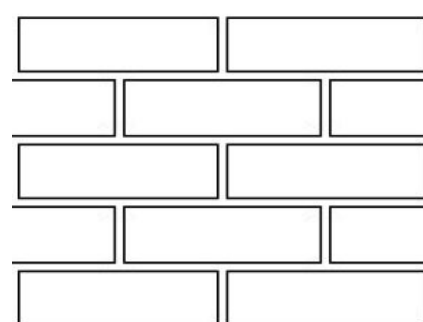
Option 1: Match Existing Facade

Pros

- Brick is a sustainable building material with a long life of 50yrs+
- Low maintenance
- Matching the existing façade will ensure a cohesive appearance across the Close

Cons

- Although we intend to find a bespoke blend, it is likely that small differences will be unavoidable
- Over time, brick slips will require re-pointing with new mortar.



Stretcher Bond



Bespoke Blend

The brick slip or render finishes are part of the external wall insulation system (EWI) which fixes onto the existing walls.

External Finish: Visualisation

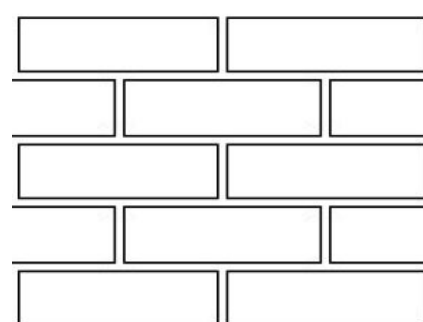
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Stretcher Bond



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External Finish: Visualisation

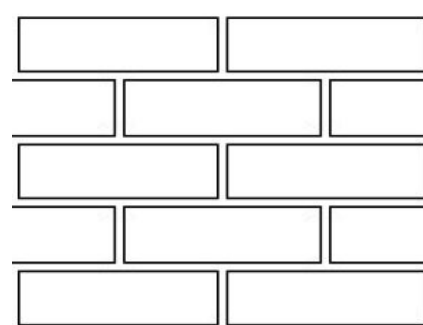
Option 2: Contrasting Brick Slips

Pros

- Brick is a sustainable building material with a long life of 50yrs+
- Low maintenance
- Introducing new colours to the Close is an opportunity to refresh its appearance
- Using multiple colours makes the most of the fact not all homes will be being refurbished

Cons

- Over time, brick slips will require re-pointing with new mortar.



Stretcher Bond



Brunswick



Finniestone

The brick slip or render finishes are part of the external wall insulation system (EWI) which fixes onto the existing walls.

External Finish: Visualisation

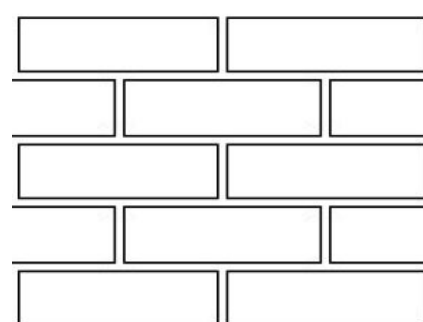
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- Using multiple colours makes the most of the fact not all homes will be being refurbished

Cons

- Over time, brick slips will require re-pointing with new mortar.



Stretcher Bond



Brunswick

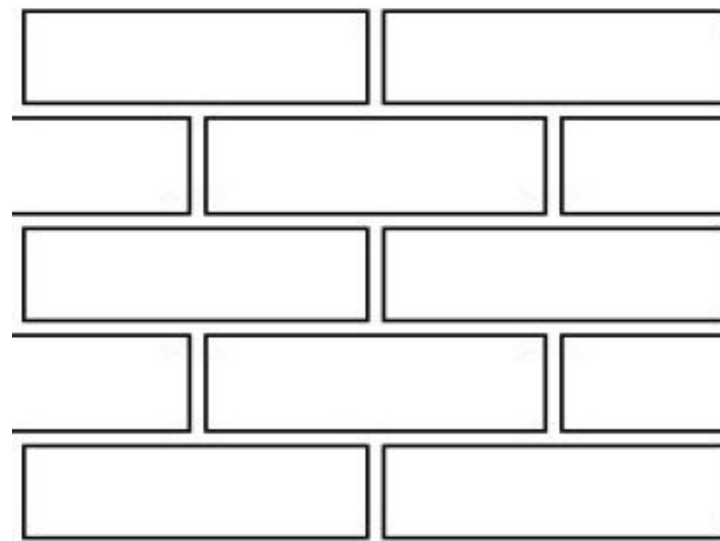


Finniestone

The brick slip or render finishes are part of the external wall insulation system (EWI) which fixes onto the existing walls.

External Finish: Visualisation

Option 2: Contrasting Brick Slips- Colour samples



Stretcher Bond



Existing
Brickwork



Brunswick



Finniestone



Engineering Blue



Ice White

The brick slip or render finishes are part of the external wall insulation system (EWI) which fixes onto the existing walls.

External Finish: Visualisation

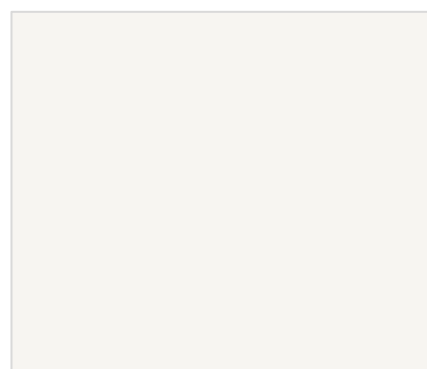
Option 3: Smooth Render

Pros

- Versatile, available in a wide range of colours, textures and finishes
- Opportunity to change the appearance of the Close

Cons

- Render is vulnerable to weathering which over time can cause staining and fading to the façade
- It requires regular maintenance



White, smooth

The brick slip or render finishes are part of the external wall insulation system (EWI) which fixes onto the existing walls.

External Finish: Visualisation

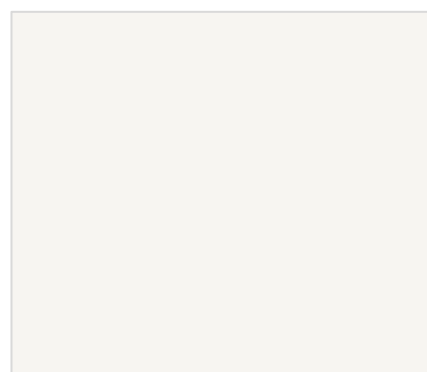
Option 3: Smooth Render

Pros

- Versatile, available in a wide range of colours, textures and finishes
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White, smooth

The brick slip or render finishes are part of the external wall insulation system (EWI) which fixes onto the existing walls.

External Finish: Visualisation

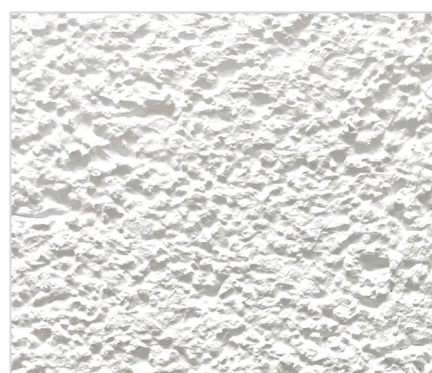
Option 4: Dual Texture Render

Pros

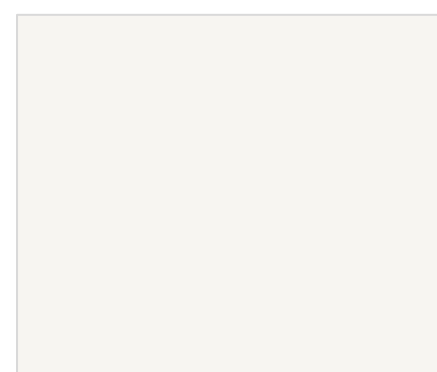
- Versatile, available in a wide range of colours, textures and finishes
- Opportunity to change the appearance of the Close

Cons

- Render is vulnerable to weathering which over time can cause staining and fading to the façade
- It requires regular maintenance



White, rough



White, smooth

The brick slip or render finishes are part of the external wall insulation system (EWI) which fixes onto the existing walls.

External Finish: Visualisation

Option 4: Dual Texture Render

Pros

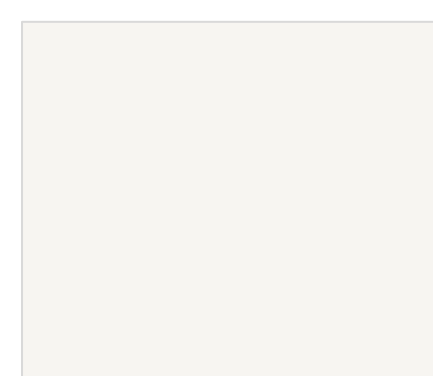
- Versatile, available in a wide range of colours, textures and finishes
- Opportunity to change the appearance of the Close

Cons

- Render is vulnerable to weathering which over time can cause staining and fading to the façade
- It requires regular maintenance



White, rough



White, smooth

The brick slip or render finishes are part of the external wall insulation system (EWI) which fixes onto the existing walls.

External Finish: Choices

Option 1:
Match existing facade



Option 2:
Contrasting brick slips
Eg. Buff and soft grey



Option 3:
Smooth Render



Option 4:
Dual texture render

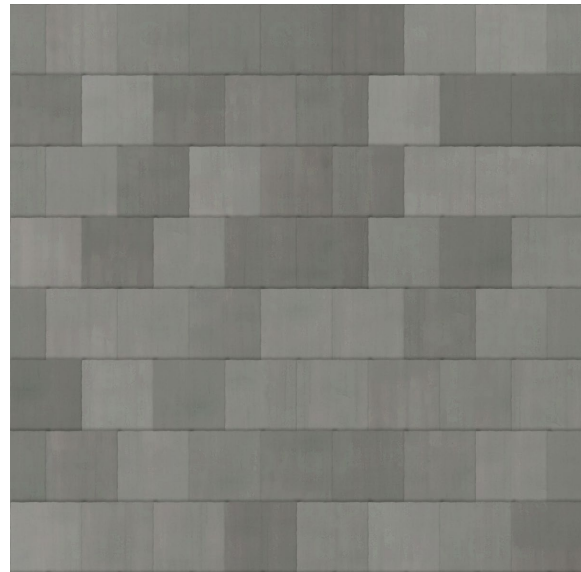


Which wall finish do you prefer?

Roof Finish: Choices

Option 1:

Slate roof tiles as featured on the low energy home



Option 2:

Concrete tiles to match the existing



New slate roof tiles

Existing roof tiles



Which roof finish do you prefer?

Dormer window upgrades

Existing surround



- Lead flashing
- 120mm thickness

Upgrade - Bevelled edges

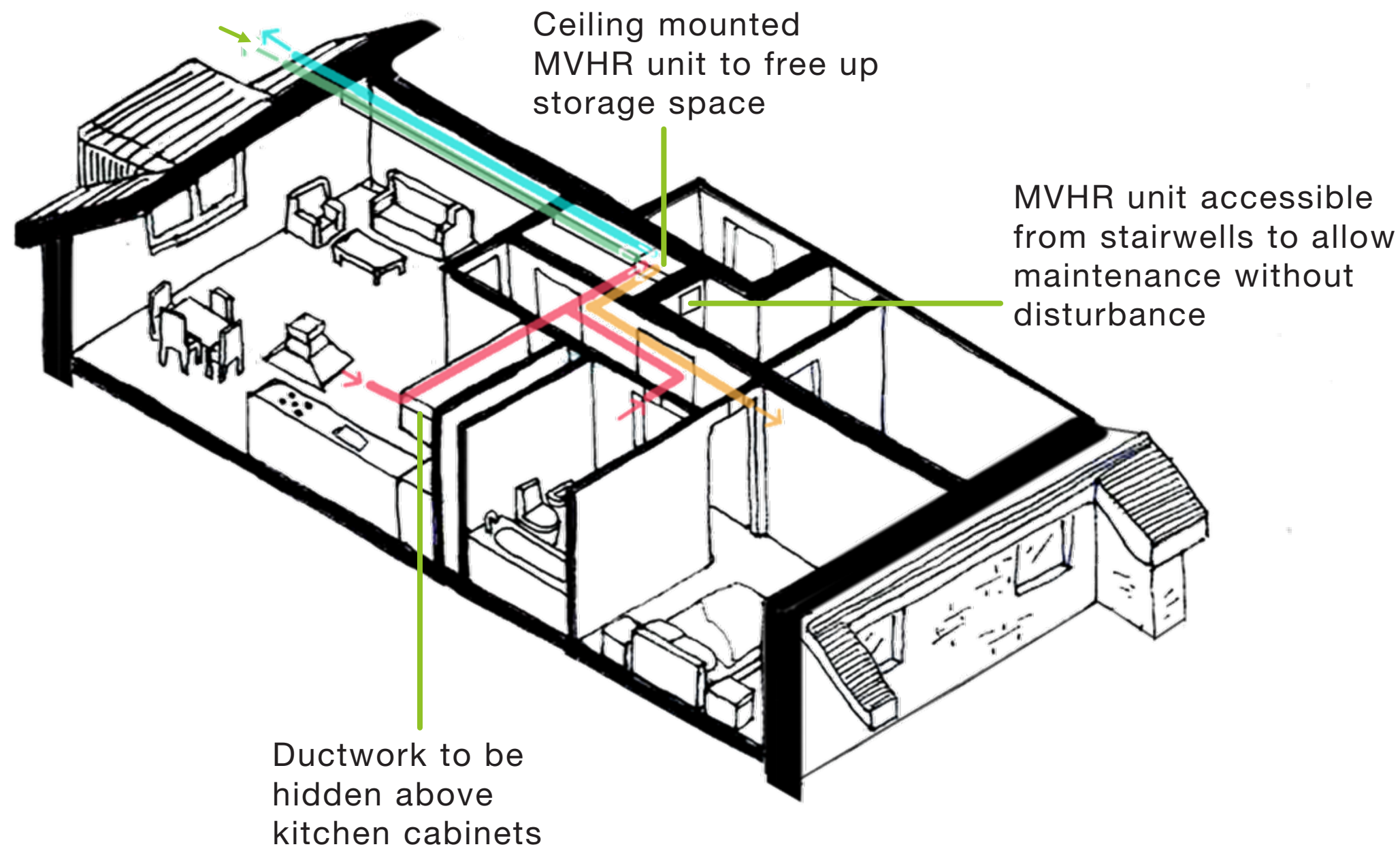


- Improved sun shading, thermal performance and sound proofing
- Lead flashing
- 250mm thickness

Ventilation - MVHR

Overview

Typical Flat MVHR Layout

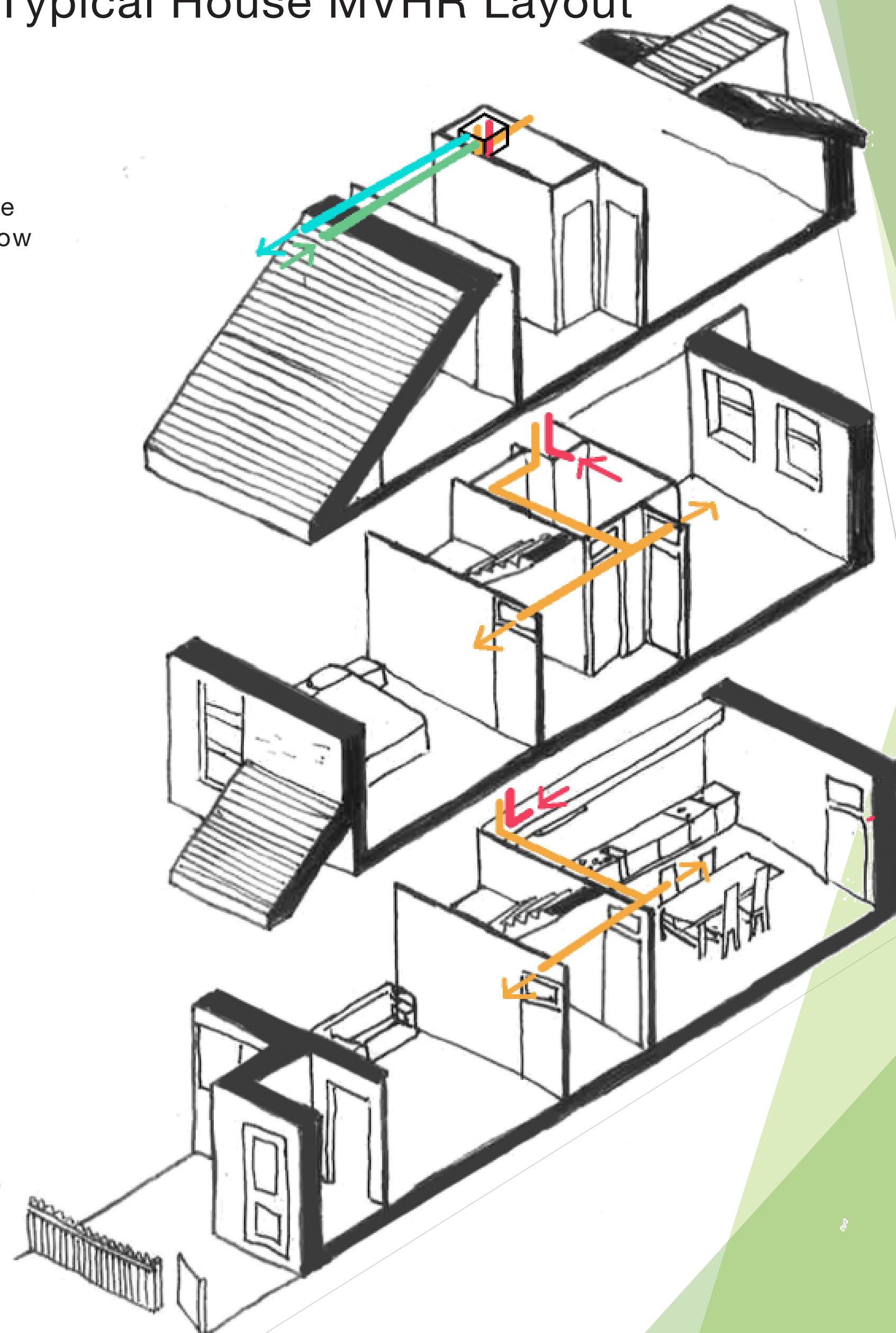


Legend

- Intake – fresh air
- Supply – fresh warm air
- Extract – stale warm air
- Exhaust – Stale air

76.7% of survey respondents were generally positive about the idea of having MVHR installed. MVHR transfers the heat from stale air being extracted from the home to fresh incoming air from outside. This means that homes can be ventilated to a high standard while avoiding loss of heat.

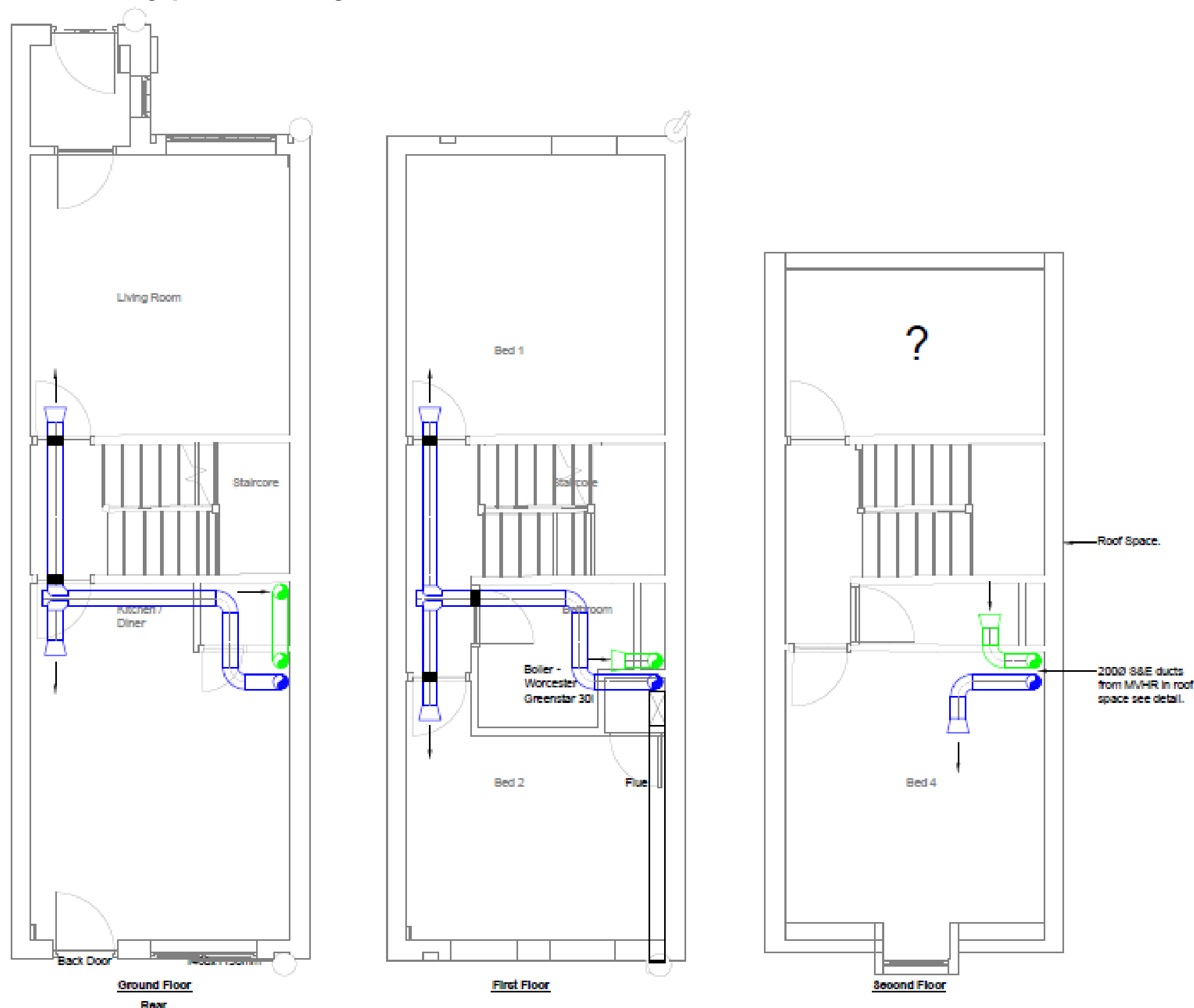
Typical House MVHR Layout



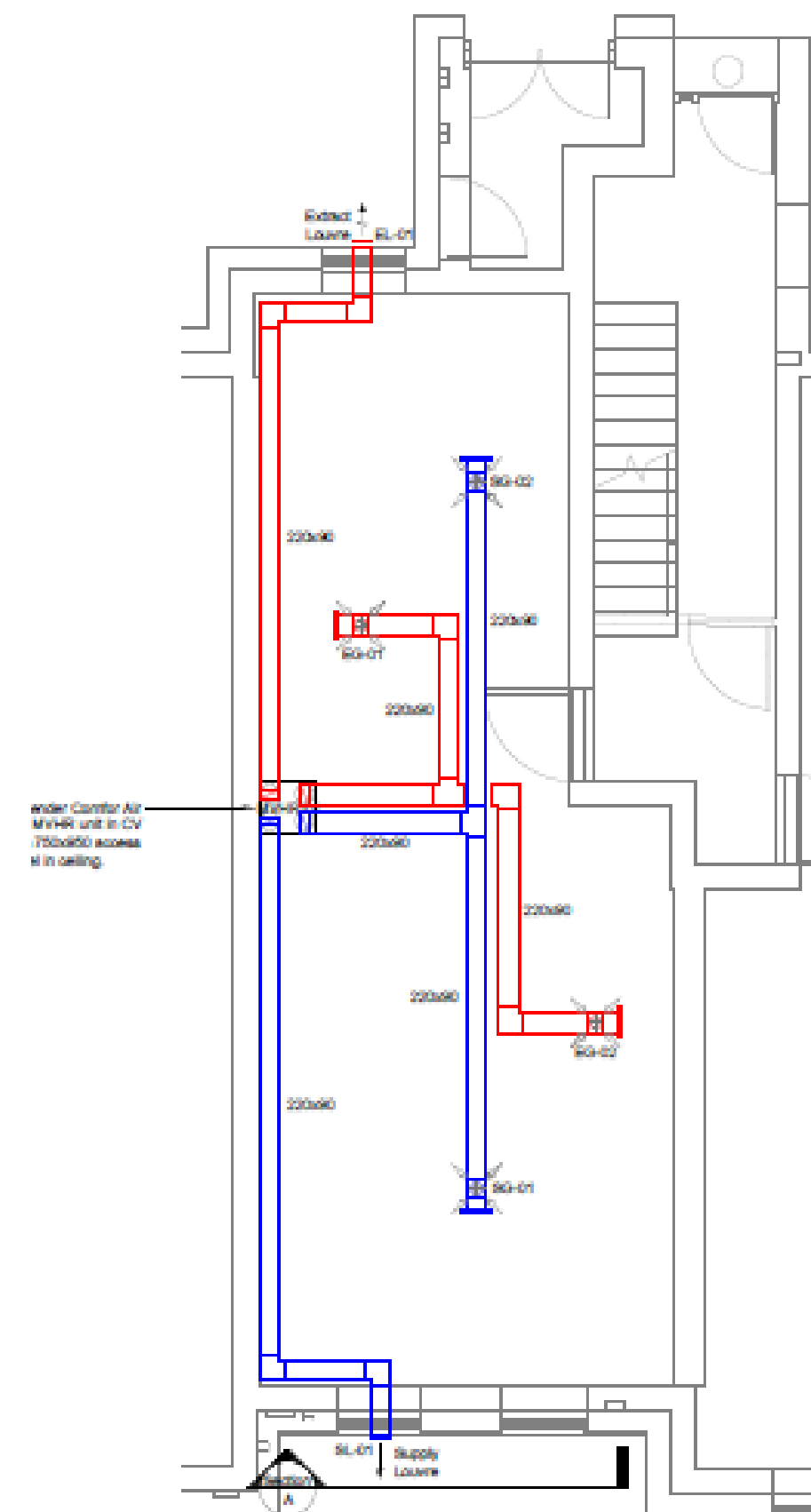
Ventilation: Technical

Mechanical Ventilation with Heat Recovery units will involve adding ductwork and acoustic attenuators in all bedrooms, living rooms, kitchens and bathrooms. The design of MVHR systems for homes on Verity Close has been carefully considered to minimise visual impact and enable maintenance.

Typical Layout: House



Typical Layout: Flat



Ventilation - Ducts Walkthrough

The design team will work with residents to identify the best possible locations to install ventilation units inside each home. In flats, the units can be mounted at ceiling height or in a cupboard depending on the available space. In houses, it may be possible to mount the units in the roof space.



Visualisation showing ductwork inside a kitchen



Unit inside cupboard



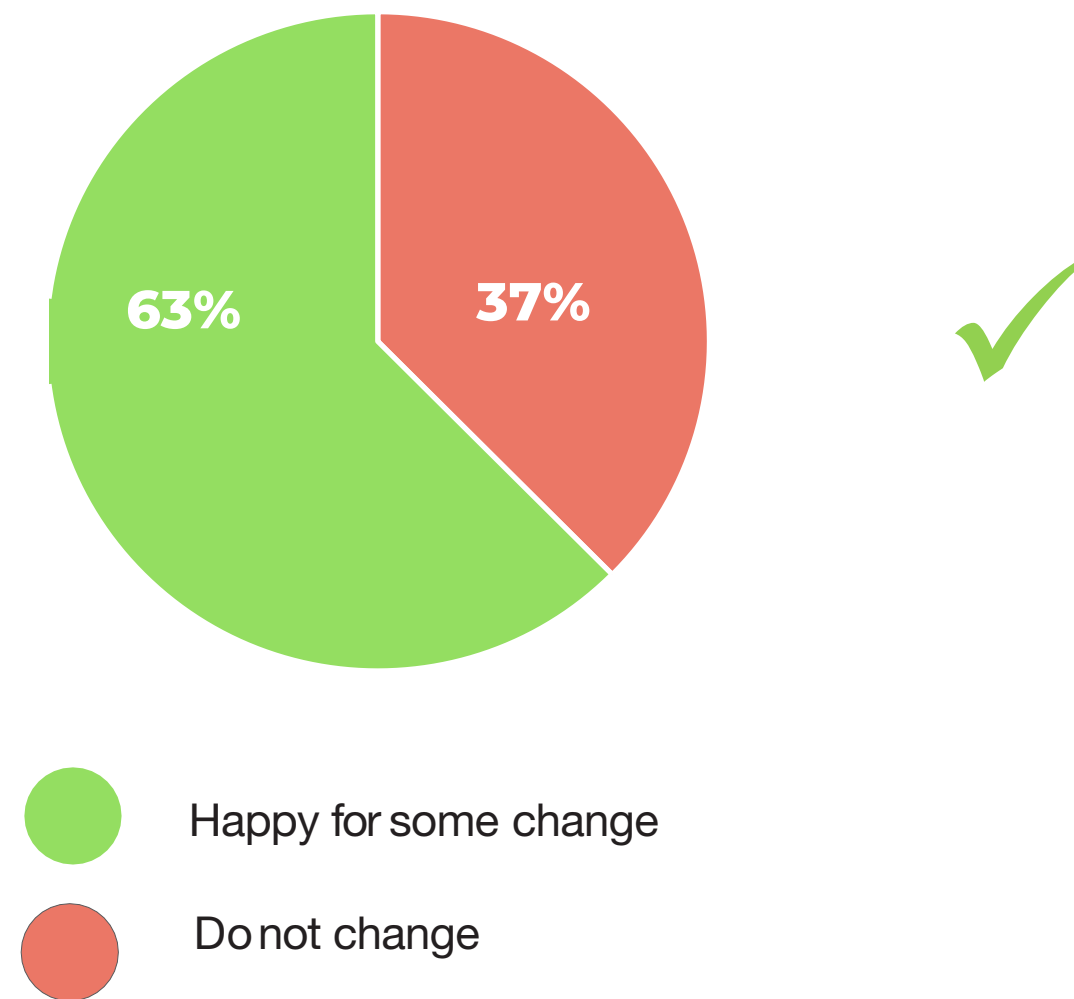
Unit mounted in roof space

Initial design ideas:

Resident feedback

Waste and Recycling

Proportion of flat respondents positive about change to waste management



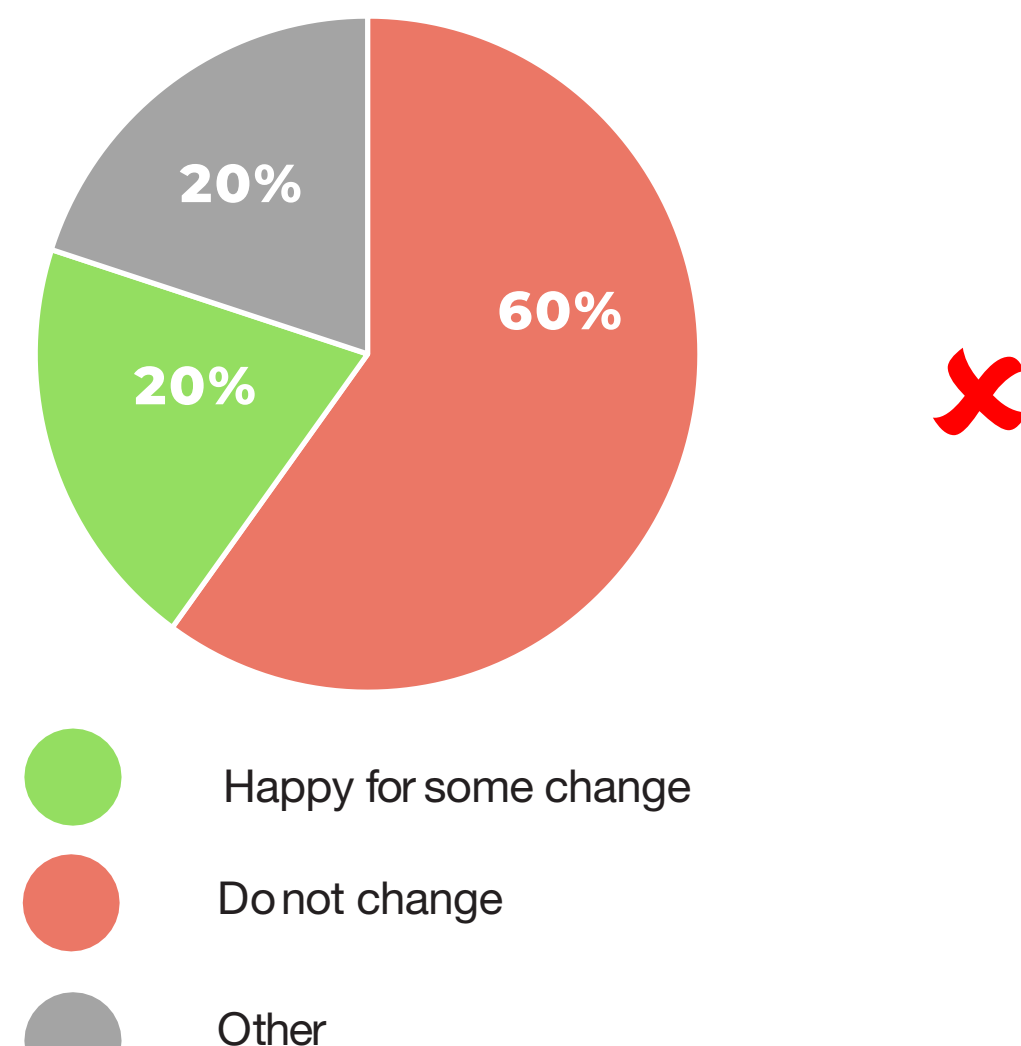
63%

happy for **some**
change to waste
management for
flats

8/21 responded



Proportion of house respondents positive about change to waste management



60%

do not think
waste
management at
houses needs to
change

15/21 responded

38%

residents
engaged so far

(21/68)

Of the 68 houses and flats at Verity Close, 21 completed the survey. 13 of these were council tenants, 2 were resident leaseholders and 1 was a resident freeholder.

Waste Strategy and Entrances to Flats

- More welcoming appearance focused on entrance door
- New front door with video entry system
- Enhanced approach to food waste and recycling



63%

**happy for
some change
to waste
management
for flats**

8/21 responded

Waste Strategy Options




- Opportunity to encourage recycling and food waste composting
- Options to be presented in detail at the next Phase

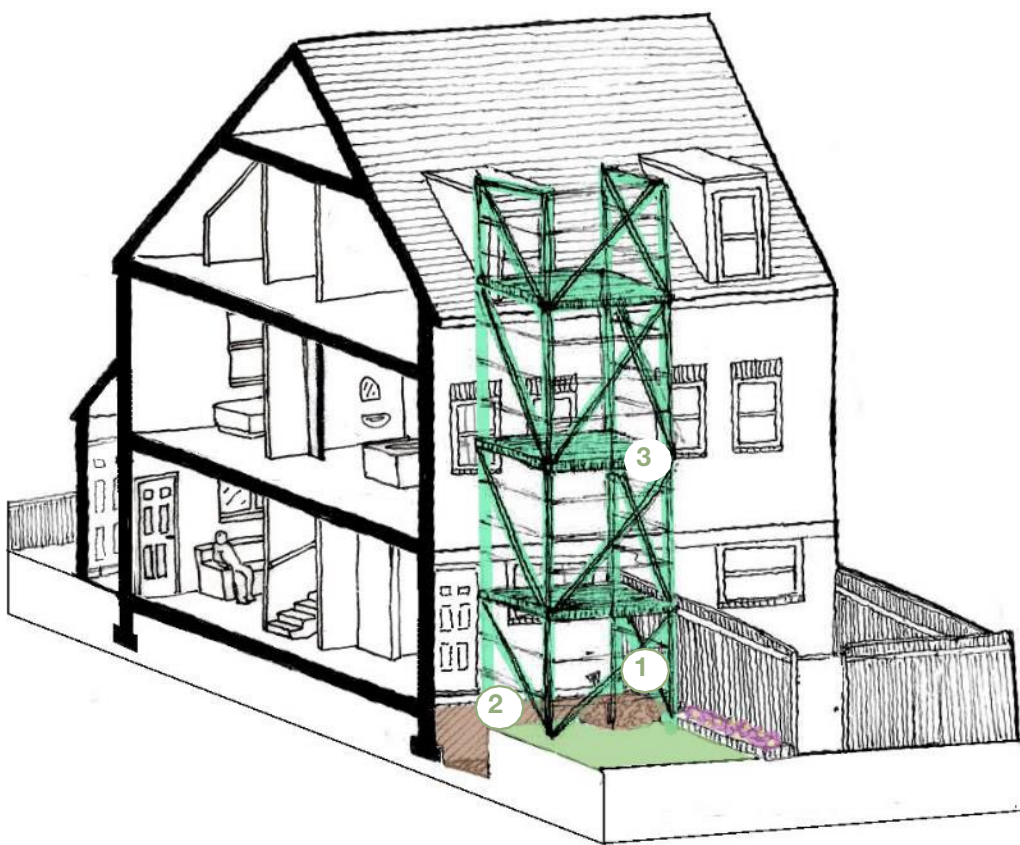


Minimising Disruption Houses

Approximate time scale: 5-10 weeks per property for **external façade and ventilation**




Stage 1: Site Prep

External disruption	
Disruption within the home	
General Acoustic Disruption	



- 1 Clearing vegetation and other obstacles
- 2 Digging trench
- 3 Installing scaffolding




Stage 2: Building Prep

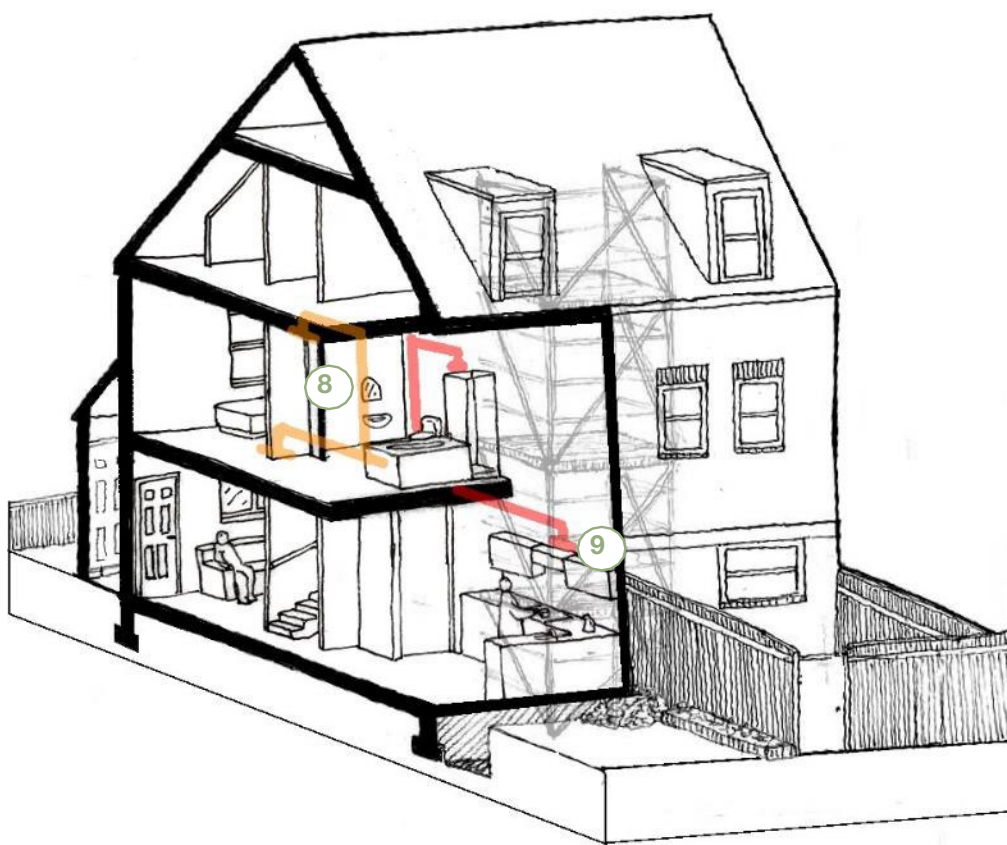
External disruption	
Disruption within the home	
General Acoustic Disruption	



- 4 Removing roof tiles and adding airtightness layer
- 5 Preparing the external wall for insulation
- 6 Remove existing drains to be repositioned during retrofit
- 7 Airtight membrane sprayed on




Stage 3: MVHR (time frame ~2 days)

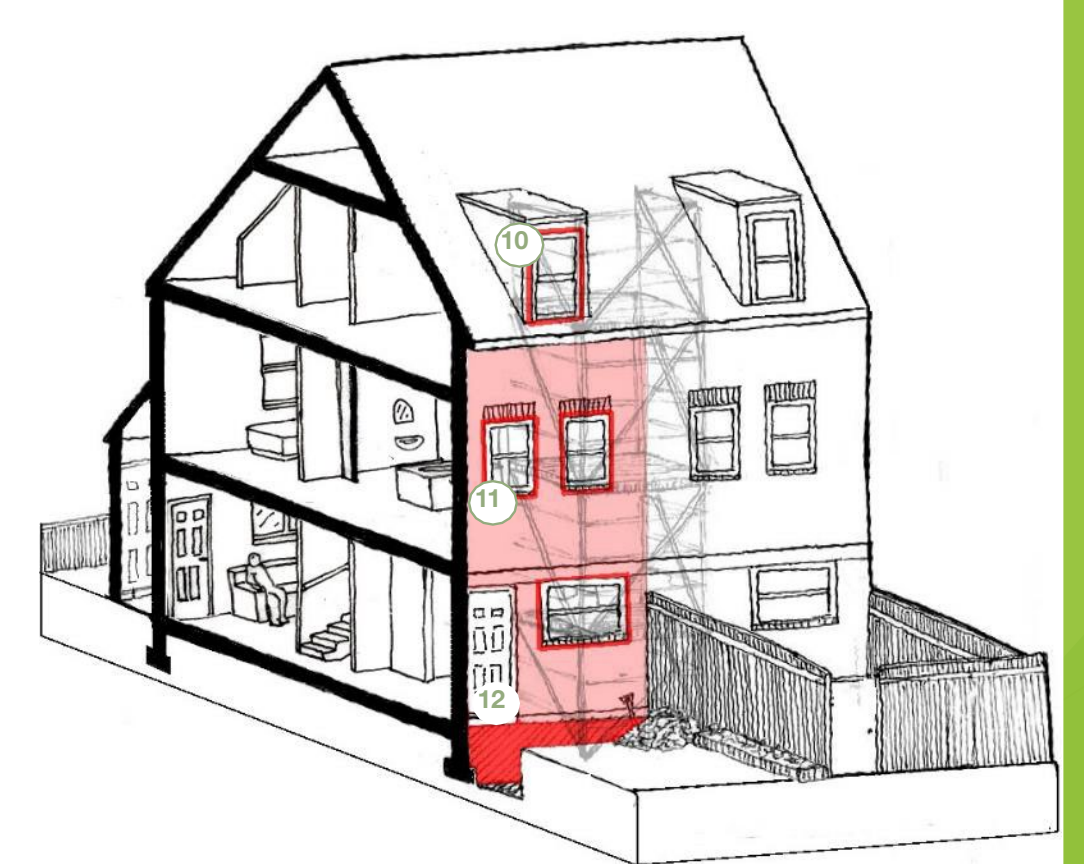
External disruption	
Disruption within the home	
General Acoustic Disruption	



- 8 Installing MVHR System
- 9 Ensure ducts are airtight: block holes with concrete

Stage 4: Maximising Fire safety

External disruption	
Disruption within the home	
General Acoustic Disruption	




- 10 Window reveals protection to enhance fire safety
- 11 Fire-rated non-combustible boards around building
- 12 Barrier in trench around bottom of building


Minimising Disruption


Houses

Approximate time scale: 5-10 weeks per property for **external façade and ventilation**

Stage 5: External Wall Insulation

External disruption 

Disruption within the home 

General Acoustic Disruption 

Stage 6: Windows & Doors

External disruption 

Disruption within the home 

General Acoustic Disruption 

Stage 7: Final Touches

External disruption 

Disruption within the home 

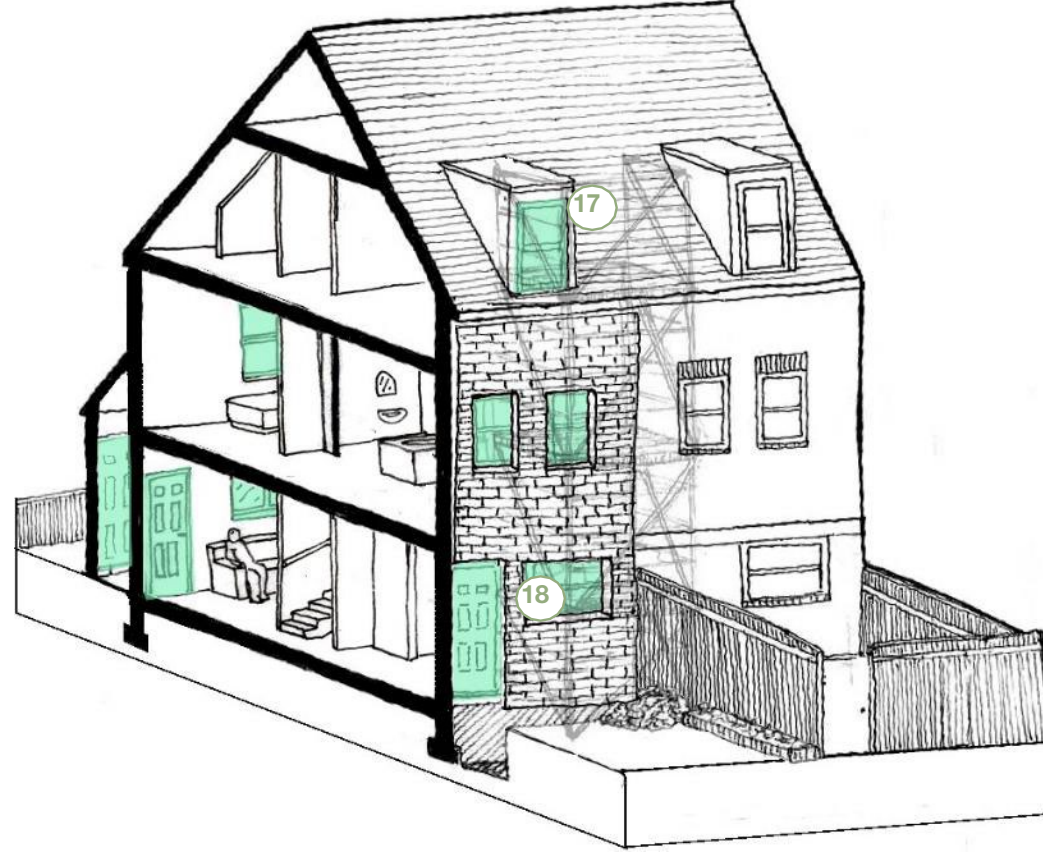
General Acoustic Disruption 

Stage 8: Completion

External disruption 

Disruption within the home 

General Acoustic Disruption 



- 13 External wall insulation installed
- 14 Roof Insulation installed - gutters and downpipes attached
- 15 Brick slip installation
- 16 PVC skirt around perimeter to protect the damp proof membrane

- 17 Replace current windows with triple glazing
- 18 Replace current doors

- 19 Optional: add PV panels
- 20 Take down scaffolding
- 21 Tidy the site

- 22 Happy residents

Maximising Fire Safety

Maximising Fire Safety is a priority in all decisions made during the refurbishment. Our independent fire consultant IFC continue to have oversight of all design proposals. The proposed fire safety provisions will exceed those recommended for compliance with the Building Regulations.



Maximising Fire Safety Strategy:

1. Rigorously assess the current fire safety of existing buildings
2. Improve fire safety of existing buildings where assessment indicates that change is required
3. Ensure that wider refurbishment utilizes materials that are of limited or no combustibility

Maximising Fire Safety

Fire compartments : Houses

Requirements

The staircases of houses must be protected escape routes, and houses must be separated by fire compartment walls.

Solutions

Appropriate fire doors will need to be installed where needed.

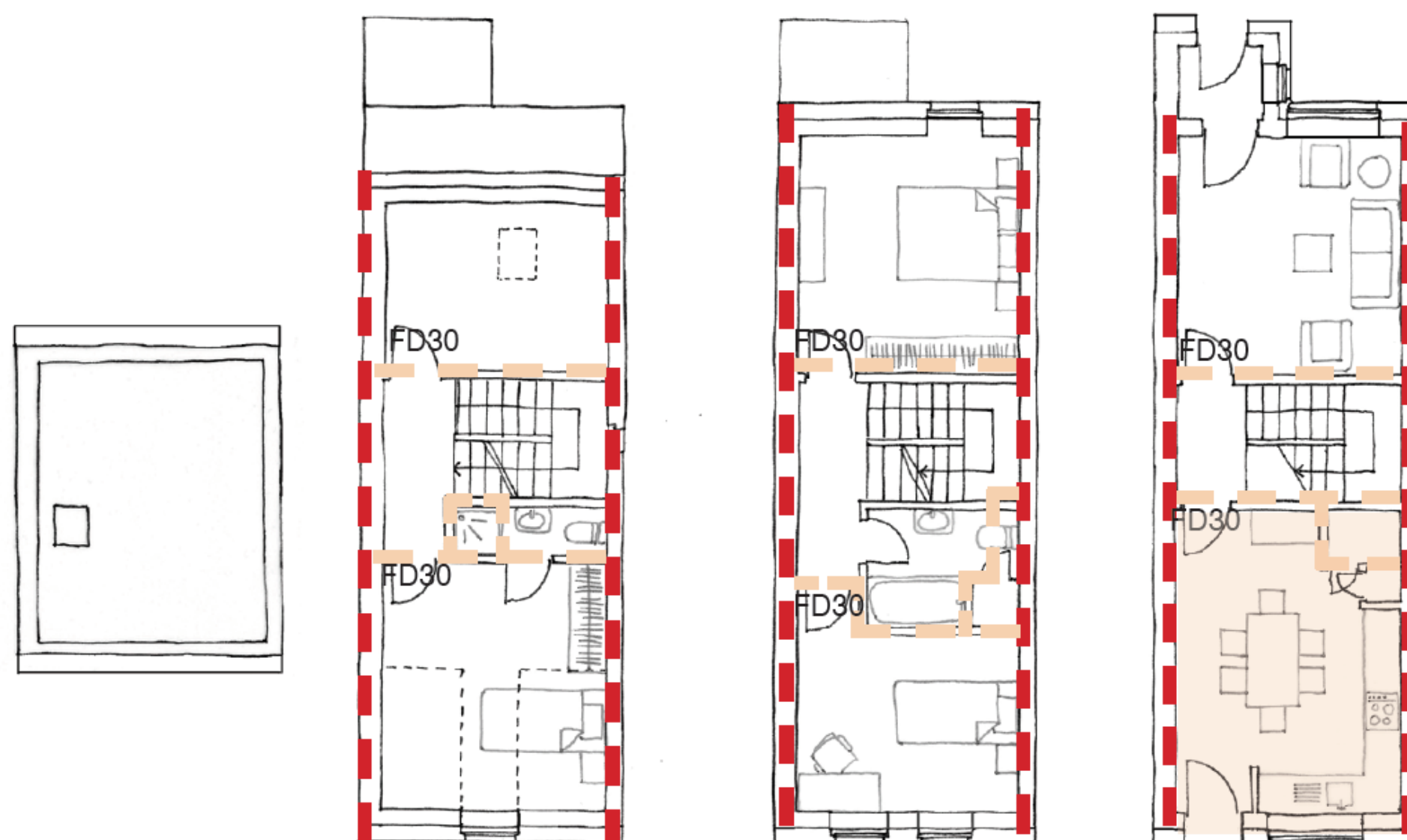
Walls of staircases will be checked, and improved where necessary, to ensure they have the correct fire stopping capability.

Second floor plan

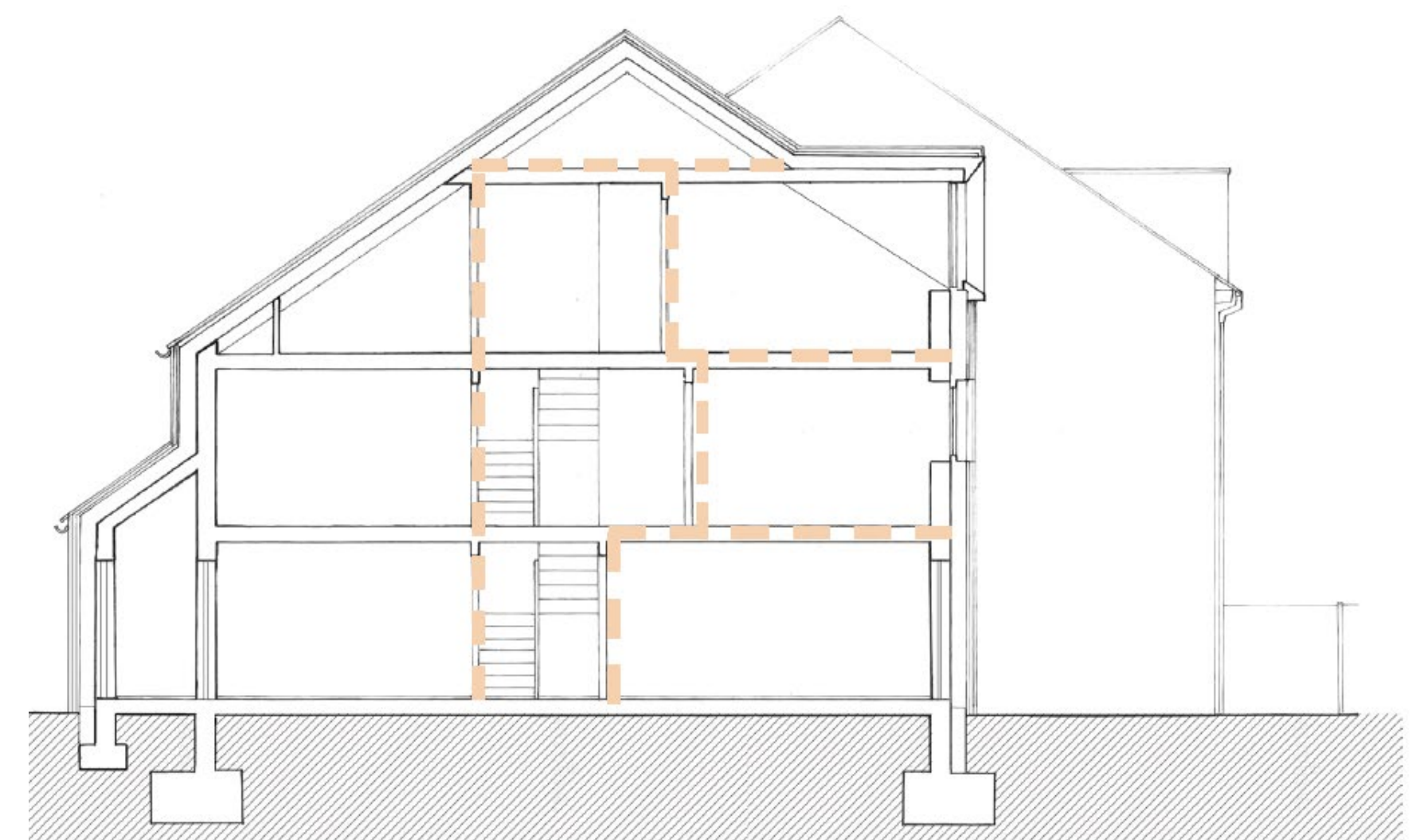
First floor plan

Ground floor plan

--- 60 min fire compartmentation required
--- 30 min fire compartmentation required



Ceiling over
store and kitchen
to be 30 minute
fire resistant



Maximising Fire Safety

Fire compartments : Flats

Requirements

The staircases of flats must be protected escape routes, and flats must be separated by fire compartment walls.

Solutions

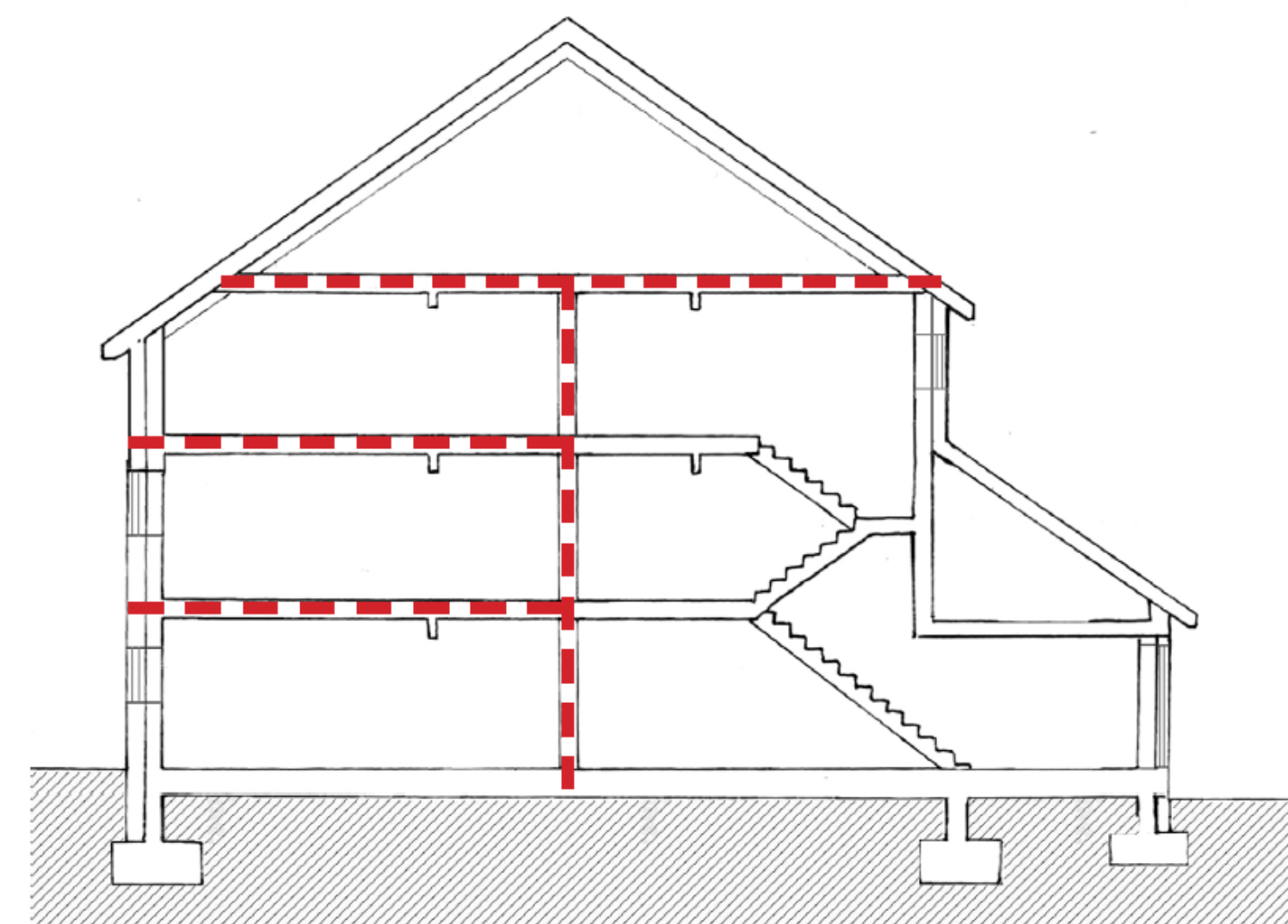
Appropriate fire doors will need to be installed where needed.

Walls of staircases will need be checked, and improved where necessary, to ensure they have the correct fire stopping capability.

Marked up typical block of flats- floor layout



--- 60 min fire compartmentation required
- - - 120 min fire compartmentation required



Using non-combustible materials

- Record all materials to be added to external walls with fire classification & certification
- Note exclusions in Regulation 7(3)

Ref	Building Element	Minimum Required Combustibility Rating (Building Control Compliance)	Manufacturer	Product	NBS Clause	A1 Rated	Fire Classification	Comments	BBA / CE Certification	Third Party Testing/Data/Accreditation e.g. BBA / CWCT / Data Sheet + Rating
					(Refer to Relevant Drawing)	Y/N			Y/N	
1.0	General External Wall Finishes									
1.01	EWI Wall	A2 - s1, d0 or A1	Brictec	Brick slips		Y	A1	A1 Non-combustible EN13501-1 EN 13823:2010, EN 11925-2:2010+AC:2011 and EN 13501-1	N	BOBAS Accreditation, Warrington Fire Certification and soon to have LABC Type Approval
1.02	EWI Wall	A2 - s1, d0 or A1	Brictec	Aluminium U channel acting as batten		Y	A1			
1.03	EWI Wall	A2 - s1, d0 or A1	A Proctor Group	Frametite Breather membrane		Y	E - d2	Classified as Class E, d2 in accordance with BS EN 13501-1 : 2002	Y	BRE Certificate no: 14/5153 https://www.bbacerts.co.uk/search/?doc=%2F1AoZ8k4K9cXrKX4FeBEV%2BU9pC4mAzbOPIM%3D
104	EWI Wall	A2 - s1, d0 or A1	Magply	Magply MgO Sulphate board		Y	A1	A1 Non-Combustible EUROCLASS EN13501 / Reaction to Fire BS EN ISO 1716	Y	https://asset-source.thenbs.com/api/v1/02766759-a817-4464-b7f5-b4c04ff66606
105	EWI Wall	A2 - s1, d0 or A1	Cosmos Aluminium	Aluminium rail		Y	A1	BS EN 13238: 2010		
106	EWI Wall	A2 - s1, d0 or A1	Rockwool	Rockwool Energysaver Insulation		Y	A1	Class A1 in accordance with BS EN 13501-1 : 2007. BBA approved for use up to 25m in height	Y	BRE Certificate no: 89/2316 https://www.bbacerts.co.uk/search/?doc=%2F1cqZ846KdQ3jKX4FeBFXuU8pC4mAzbOPIM%3D
107	EWI Wall	A2 - s1, d0 or A1	Enviroform	Slentex Slender-Line Insulation Panel		Y	A2 - s1, d0	Insulation: Slentex Aerogel Material made in layers. Glue: Minkon Flame Bond Grade 4 adhesive. Reaction to fire tests: BS EN 13501-1 : 2002	Y	
108	EWI Wall	A2 - s1, d0 or A1	Beattie Passive	GRP hanger frame		Y	A1	Tested in accordance with BS 476: Part 7: 1997. Class 2		
109	EWI Wall	A2 - s1, d0 or A1	Beattie Passive	Passive Purple vapour and air tightness vapour membrane		Y	E	BS EN 13501-1 : 2007.	Y	BRE Certificate no: 18/5505 https://www.bbacerts.co.uk/search/?doc=%2F1AsZ8k8KNc3jKX4Fa8EC7M%3D

Verity Close Low Energy Home



What we learnt:

✓ Through adding internal wall insulation, new windows and doors, MVHR, an air source heat pump, and photovoltaic panels, we significantly reduced the energy required to keep the home warm and comfortable.

✗ While internal wall insulation was acceptable in this scenario because the property was vacant, the pilot made clear that it would be disruptive to install with residents in situ.

Energy reduction
4136 kWh/year
Annual cost saving:
£221

Verity Close Pilot 2.0



Aiming for:
EPC A standard

What we want to learn:

- How best to install measures when adjacent properties are not being refurbished
- How can we maximise efforts to reduce disruption
- What energy savings are possible for houses on Verity Close

Add external wall insulation

Additional sustainable measures

Refurbishment of the rest of the Close to come



- The refurbishment of the rest of the Close will be informed by the lessons we learn through the pilot projects. They will help ensure the most effective designs are taken forward and disruption is minimised as much as possible.

Real Life Examples – Houses

Nottingham Energiesprong Homes, 2017

Nottingham City Homes, Melius Homes & Studio Partington



“It’s made a lot of difference. It’s warmer. I don’t need my dressing gown now. All the draughts have gone. Before it [the home] looked like a rabbit hutch – it looks like a proper home now”

- **Joan Warbuton, Nottingham City Homes tenant**

“Because these are old buildings... they were hard to keep warm. Now it is easier. One of my kids is autistic and he’s happy as well because he loves the warm. When [friends and family] ask me about my bill they wish the council did their houses as well!”

- **Huseyin Sahin, Nottingham City Homes tenant**

Birmingham Retrofit Project, 2017

Beattie Passive & Birmingham City Council



“We have a great atmosphere in the house now and we don’t need to have the heating on unless it is very cold outside.”

- **Elisabete, resident**

Some of the room used to feel cold so to keep warm, we would often spend most of our time in the living room with blankets. Now we don’t use very much heating at all and the rooms stay warmer for much longer.”

- **Catherine, resident**

Real Life Examples – Flats

Enerphit Retrofit Project, Great Yarmouth

Beattie Passive, Enhabit, Oxford Brookes University



“I used to have mould and condensation in my living room, kitchen and bedroom, but now that’s all gone. I don’t have to use the heating very much now either, and when I do its only for an hour or so.”

- Lina Resident of King Street, Great Yarmouth

“I used to get condensation on my windows, so much that I had to use a dehumidifier, but since the retrofit I’ve been able to put that away as it doesn’t happen anymore”

- Mrs Mitchell Resident of King Street, Great Yarmouth

“I haven’t had to use my heating all year. I’ve even had my energy supplier call me up to enquire why my energy use is so low”

- Peter Resident of King Street, Great Yarmouth

Wilmcote House Residential Refurbishment, Portsmouth

ECD Architects



“It is better because before all this was old. We had draughts, condensation and mould everywhere but now because of the new windows that’s gone, it’s a lot better.”

- Resident of Wilmcote House, Portsmouth

“Before you had heaters in every room and it was storage heaters which cost a lot.”

- Resident of Wilmcote House, Portsmouth

“In the winter its much, much better and warmer, the heater provides heat for the whole flat not like before.”

- Resident of Wilmcote House, Portsmouth

Gascoyne Estate, Hackney

Wetherby



The 10-storey thermally inefficient tower blocks have been transformed into modern, insulated, energy efficient homes, finished in brick slip. The retrofit has significantly brought down the average running costs by approximately two-thirds

“It’s good to see the improvement of the blocks. It’s much quieter and warmer since the works have taken place and we are really happy with the results.”

- Veronica Davis, Secretary for the Tenant and Resident Association

Home Survey Requests

We are currently looking for more volunteers to have surveys carried out in their homes. Surveys are a very important tool for us to understand your homes and ensure that our design meets your needs. The surveys required include:

- **Damp**

To locate any damp and mould issues and identify the source of the problem

- **Internal dimensions**

To measure the inside of your home to provide accurate information for the design team

- **Party walls**

To carry out an inspection of an adjoining owner's property, to ensure any possible damage caused by construction works is identified and attributed

- **Structural survey/trial pits**

To provide crucial information to understand your homes' foundations and internal structural capacity

- **Condition survey**

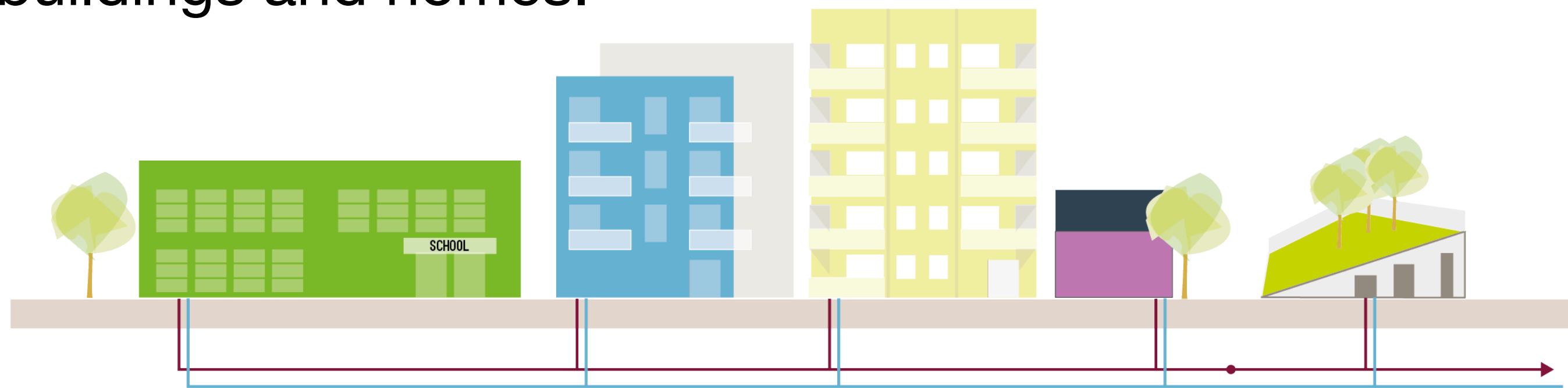
To assess your home and its current condition; based on occupancy, size, and physical condition.

Would you like to volunteer for any surveys?

Heating and hot water

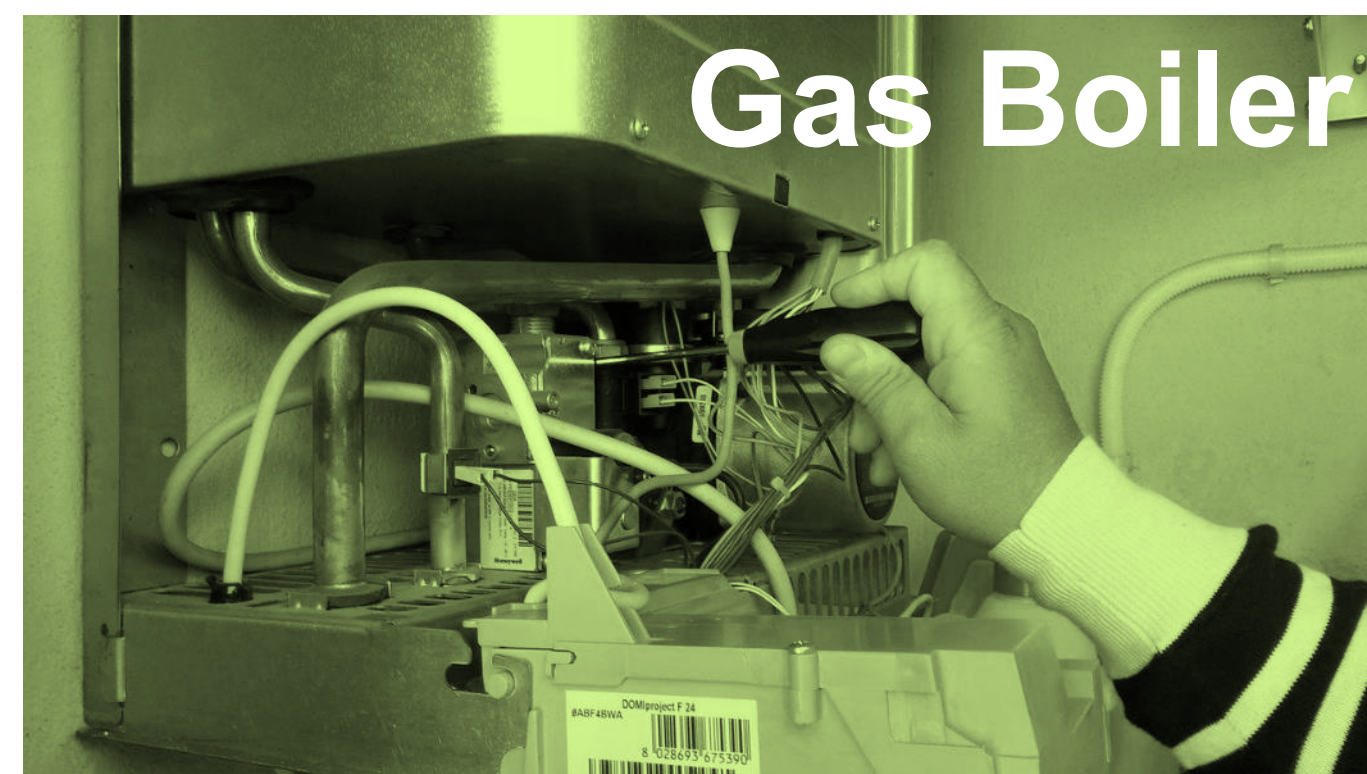
What is a renewable heat network?

Heat is produced by renewable technology at a local energy centre. Heat is then delivered through underground pipes to individual buildings and homes.



Replaces gas boilers

A heat network can replace gas boilers and will work with 'wet radiators', like those in Verity Close today.



Heating and hot water

How does it work?

Local Energy Centre

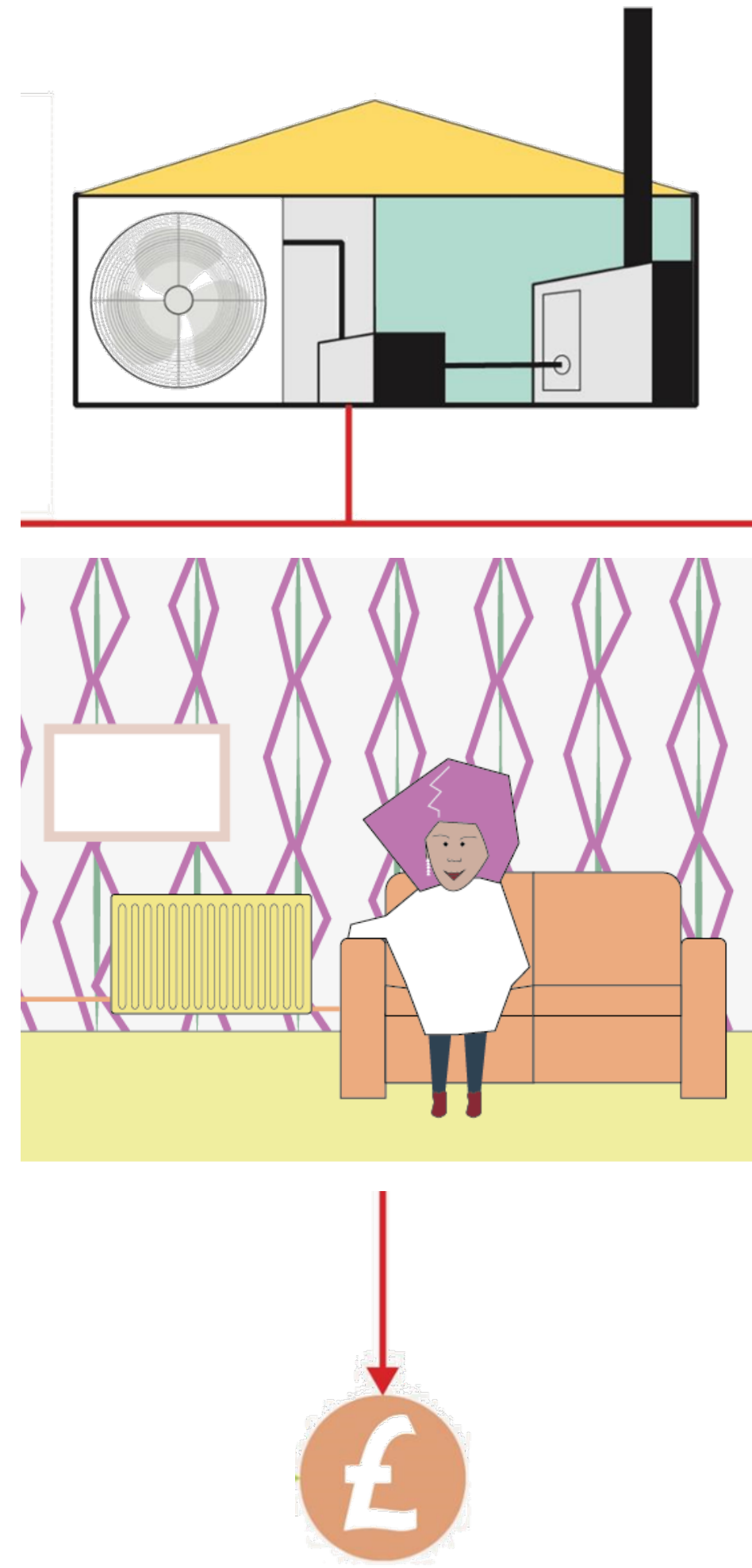
Based at LWE, the energy centre will supply renewable heat using large air source heat pumps. These pumps require some electricity to produce heat.

Heat Delivery

Hot water is delivered through underground pipes, to each block, and each home for space heating and hot water.

Billing

You will pay for the heat you use, this will be measured in each home.



Heating and hot water

What will be installed in your home?

New plumbing + heat controls



Heat Interface Unit

Would replace your existing boiler completely.



New Radiators + Pipes

Existing radiators will be replaced with a similar type.



Thermostats

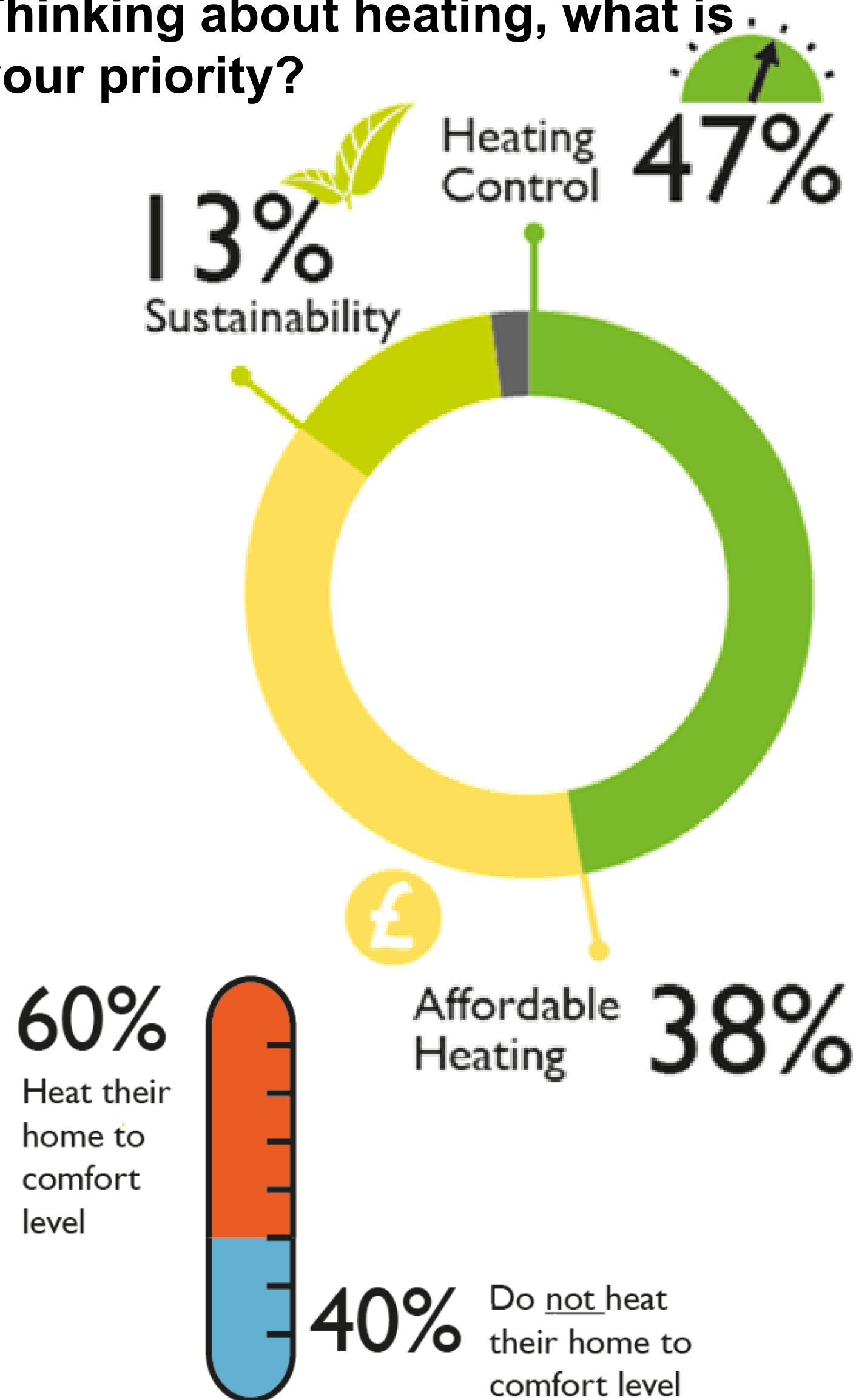


Heat Meter
Control & measure heat use

Heating and hot water survey 2021

Initial design ideas, what you said...

Thinking about heating, what is your priority?



Next steps

Heating Pilots

To test different heat controls

Resident Involvement

We set-up a resident working group to review project in detail.

Two resident board members will also help manage the local energy centre.

Use of Solar panels

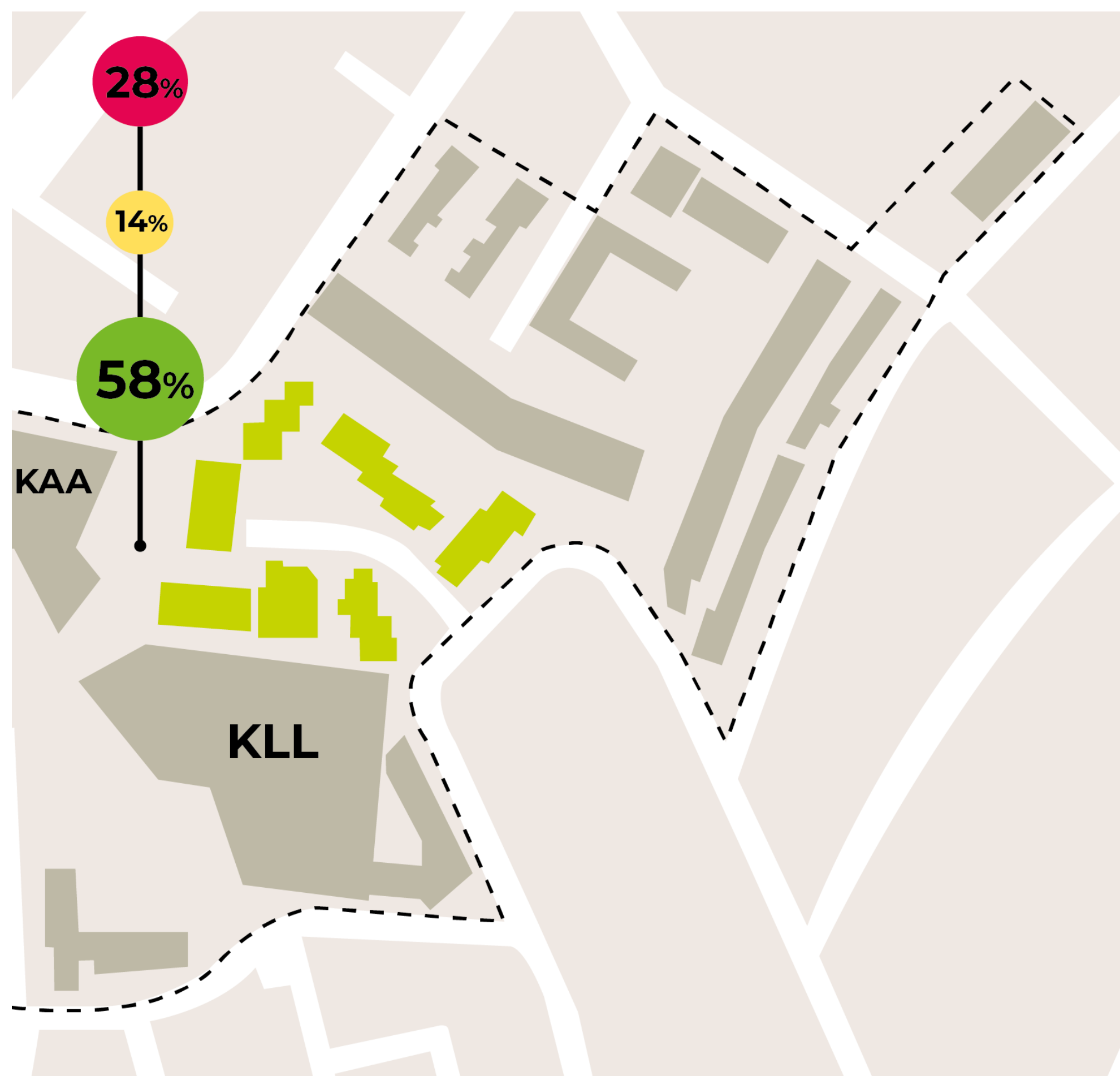
Include use of solar panels to reduce electricity costs to residents.

Pricing

Affordable energy was a top priority to residents. We are developing a Resident Price Promise to ensure affordable heating.

Heating and hot water survey 2021

What you think of your heating today?



13.2% of Verity Close residents participated

Your comments on combi-boiler heating today...

Positive Comments (58%)

- ▶ I like the ability to select provider
- ▶ I find the heating efficient and warm

Neutral Comments (14%)

- ▶ It's ok!

Negative Comments (28%)

- ▶ I don't like my current energy provider

Heating and hot water

Why change to renewable heating?



Future-Proof

Move away from Gas ahead of legislation changes, UK Gov has given £1.1m grant to support the project



Hassle Free

Servicing and replacement of equipment included for all tenures



Local Energy

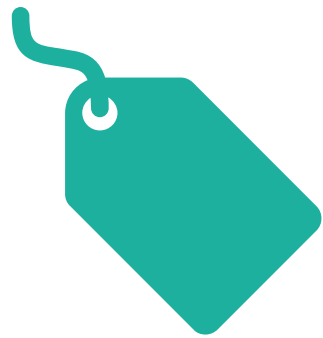
Enjoy locally produced heat, avoid the big energy companies



Health & Safety

Improve health, safety and air quality in homes

Heating and hot water



Affordable Heat

The heat network will provide cost-effective heat

- Individual Air Source Heat Pumps last about 15-20 years
- The heat network will last about 60 years
- We will use communal electricity to offset costs
- We can access cheaper commercial electricity prices, to run the Air Source Heat Pumps and save you money

A Resident Price Promise

- Has been developed with residents
- **Our Goal: Residents will pay no more than gas heating**

Heating and hot water

Emerging Preferences & Choices

Understanding your preferences will help us to support you when changing to a new heating system in the future.



Question 1

How would you like to control your heating from a control panel, mobile phone, or each radiator?



Question 2

How would you like to pay for your heating from your phone, by top-up meter, or standing order?

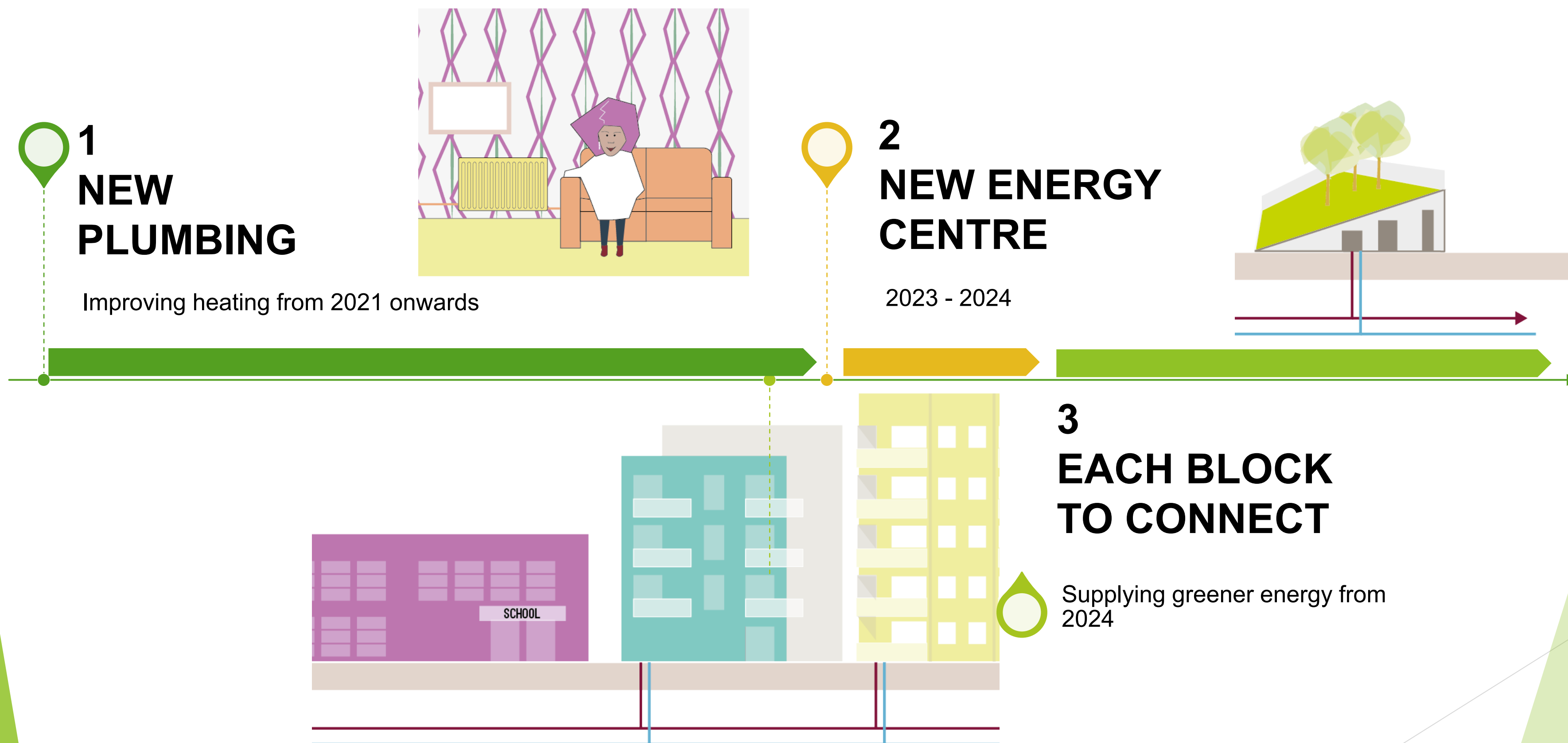


Survey available now
(printed copies to be shared soon)

Heating and hot water

When will it happen?

Alongside the refurbishment



Verity Close Connections available from 2024

Heating and hot water

How can you get involved?

Return the Co-Design Survey

- ▶ Spring 2021
- ▶ Online / Paper

Heat Network Champions

- ▶ Join now to attend future field visits and workshops on the heat network
- ▶ Contact janet.hall@rbkc.gov.uk



Next steps – emerging preference and choices Time to choose.

Paper survey

- ▶ All residents will receive a copy of the survey in the post. You can return your completed survey to Unit 22, Baseline or place in the dedicated post-box.

Online survey

<https://www.surveymonkey.co.uk/r/YourRefurbYourChoiceBooklet>

- ▶ All residents signed up to the e-newsletter will receive a link to the online survey. You can also access the online survey by scanning the QR codes shared on social media and on the booklets, posters and letters.

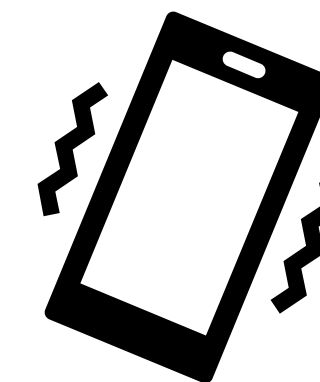
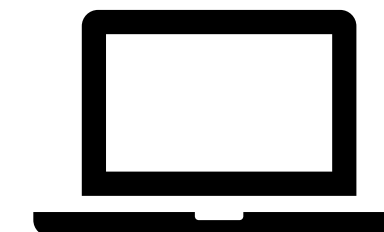
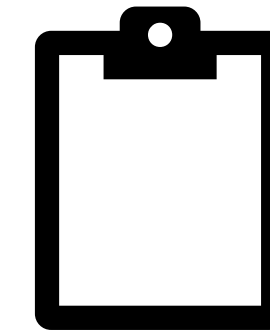
Text or WhatsApp us

- ▶ Text or WhatsApp us on 07814 608999 and we will send you a link to the online survey and offer guidance and support where needed.

Unit 29 drop-in

- ▶ Still undecided? Visit us at Unit 29, Baseline to talk to a member of our team about your choices. Open Monday-Friday between 10am-4pm, or come a long to one of our evening drop-ins between 4-6:30pm on Monday 7th, Wednesday 9th February, Monday 14th and Wednesday 16th February.

Don't miss out on your chance you have your say. All surveys must be completed by Friday 18 February.



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happening
where you live.

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QR code.
Indicate your block to get
all your block's news.



**Stay connected with the Lancaster West
Neighbourhood Team**

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