



Technical Issues Consultation

Welcome	Why are the works required?		What will the benefits be?	What are we consulting on today?
<p>Thank you for attending this public exhibition. This event has been organised by the City of London Corporation to obtain residents’ views on three options to improve the windows at Crescent House. The proposed works to Crescent House represent the first phase of a comprehensive strategy to make improvements to the thermal performance of all buildings across the Golden Lane Estate.</p>	<h3>The Current State of the Windows</h3> <p>Surveys have been carried out in relation to the current condition of the windows in Crescent House. These surveys show that there is a significant level of deterioration in the majority of windows and that improvements must be made in order to ensure the long-term viability and maintenance of the building.</p>	<h3>A requirement for Net Zero</h3> <p>The City of London Corporation has adopted a radical Climate Action Strategy which breaks new ground and sets out how the organisation will achieve net zero, build climate resilience and champion sustainable growth, both in the UK and globally, over the next two decades. By adopting the strategy, the City Corporation has committed to achieve net zero carbon emissions from its own operations by 2027.</p>	<p>The benefits of the proposal will be:</p> <ol style="list-style-type: none">1. Making environmental enhancements to the buildings that commit to “net zero” requirements, ensuring its long-term sustainability for future generations.2. By carrying out the works, enhancements to the appearance of the building will be made whilst respecting its heritage value at all times.3. Significantly improving comfort for residents of the building by reducing problems outlined in the Residents Comfort Survey. This also has the added benefit of reducing heating bills.4. There is an opportunity to reduce noise impacts for each flat in the building (the extent of this reduction will depend on the option that is taken forward).	<p>Whilst previous rounds of consultation with residents have focused on “high-level” proposals and updates, we are now in a position to present three detailed options for works to the building. All of these options will provide environmental improvements, as is required through the Climate Action Strategy - but to varying levels. The boards will outline the three options, together with an indication of cost, but are summarised as follows:</p> <p>Option 1: Existing windows to be refurbished.</p> <p>Option 2: Double glazing in new frames.</p> <p>Option 3: Triple glazing in new frames.</p> <p>In addition, supplementary works will be required to improve the insulation to all flats in Crescent House (regardless of which option is taken forward. These works are futher outlined on the relevant boards.</p>
<h3>Team</h3> <p>The City of London has brought together a team of specialist consultants to work on the project. These are as follows:</p> <p>Architects: Studio Partington</p> <p>Building Physics consultants: Etude</p> <p>Structural Engineer: Stand</p> <p>Heritage Consultant: Heritage Advisory</p> <p>Planning Consultatnt: Grade</p> <p>Cost consultant: Keegans</p> <p>Specialist Window Design: TRC</p> <p>Communications Consultant: Thorncliffe</p> <p>M&E Consultatns: Synergy</p> <p>Acoustic Engineer: Hann Tucker</p> <p>Fire Engineer: BB7</p> <p>Surveyors: Murphy Surveys</p>	<h3>Residents Comfort</h3> <p>A Residents’ Comfort Survey has been carried out, which shows that there are existing problems with ventilation, overheating, heat loss, condensation and mould across the building which must be rectified. A summary of the results of this Survey are shown on a dedicated display board.</p>			<h3>Seeking your views</h3> <p>We are seeking your views on the three options presented in this exhibition. Feedback forms are provided at this exhibition and you can also provide comments through the following:</p> <ul style="list-style-type: none">• Call us on 0800 955 1042• Email us at GoldenLane@Yourshout.org• Freepost RTXU-JGSR-KHLE (Golden Lane), Your Shout, 28 China Works, SE1 7SJ

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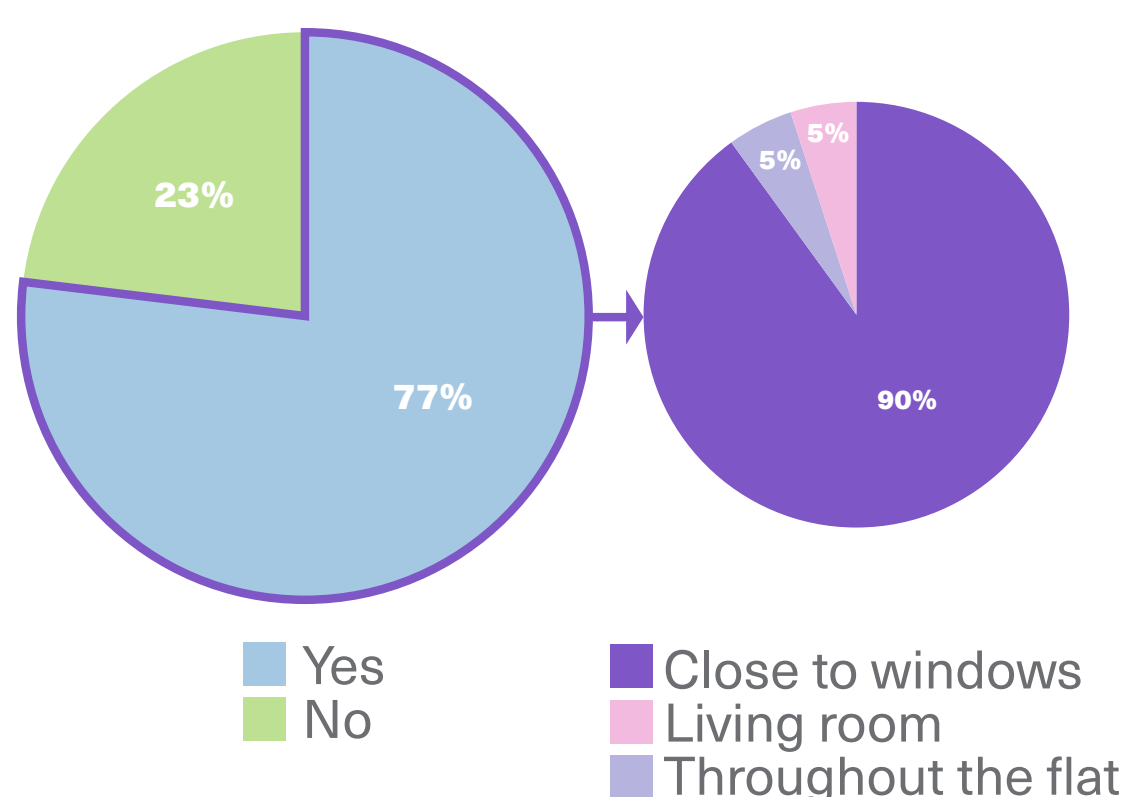
Results of the Residents' Comfort Survey

Etude's *Energy, Carbon and Thermal Comfort Strategy* shows that many of the reasons for discomfort, expressed in the Residents' Comfort Survey, circulated last year, can be attributed to weaknesses in the performance of the building fabric.

105 responses to the survey were received from across all the buildings on the estate, 26 of which were from residents of Crescent House.

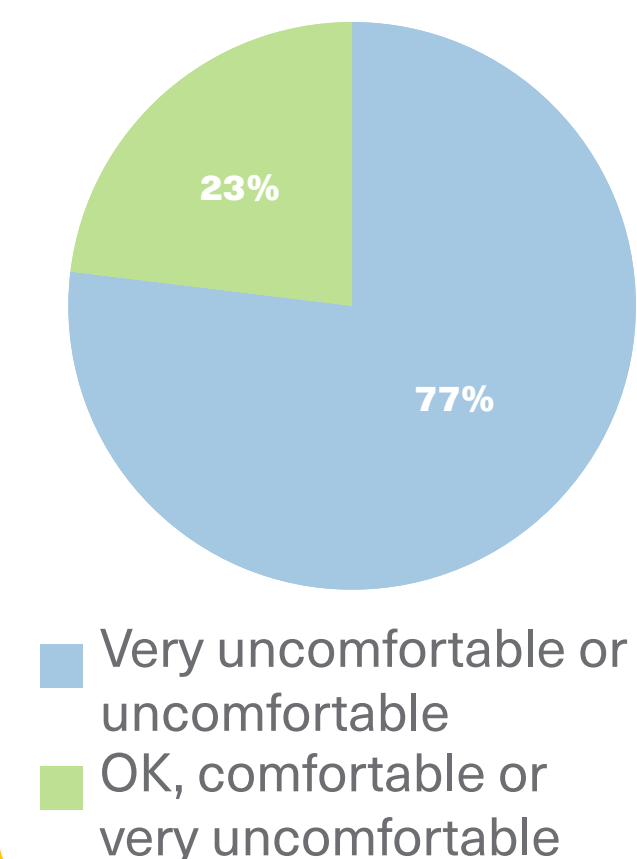
Effect: Poor Airtightness

Are there draughts and uncomfortable places to sit? If yes, please specify where:

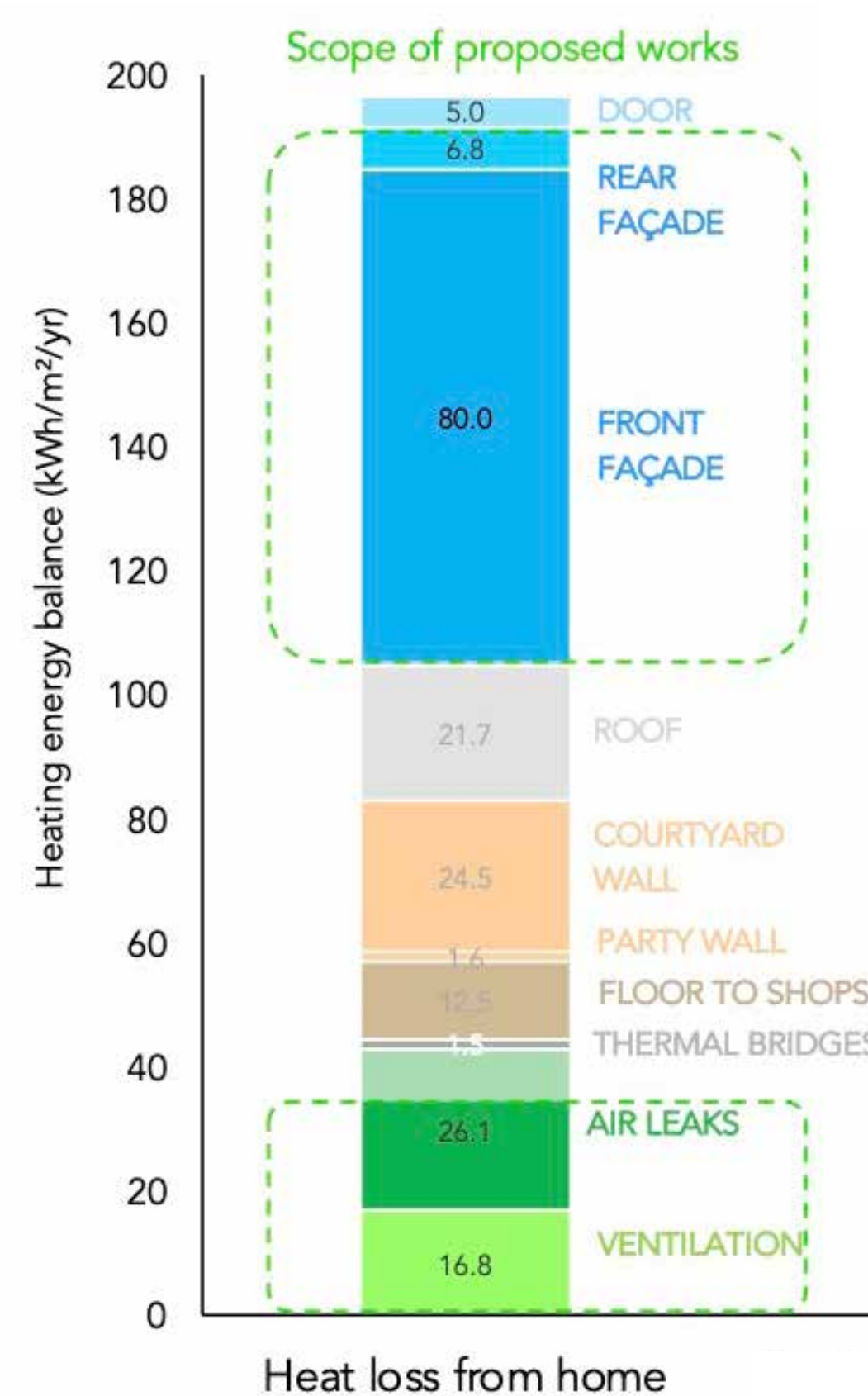


Effect: Overheating

In summer, does your home feel hot and uncomfortable



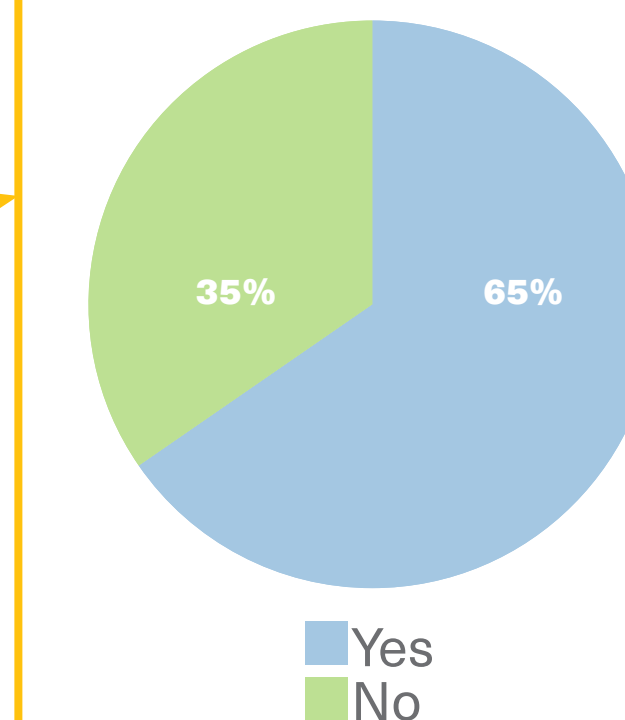
Cause: The Building Fabric



Heating energy balance from a predicted in-use energy model of a vertical stack of 3 sample flats (units 145, 245 & 345).

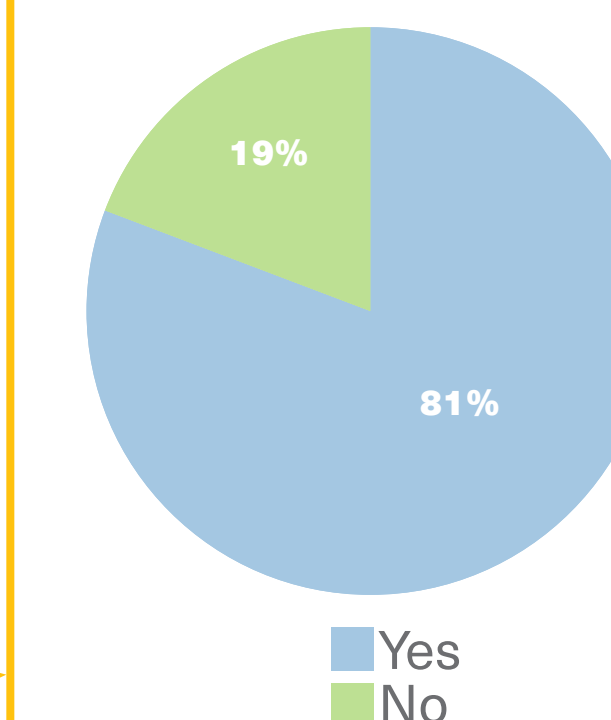
Effect: Heat Loss

Does your home take a long time to heat up from cold?



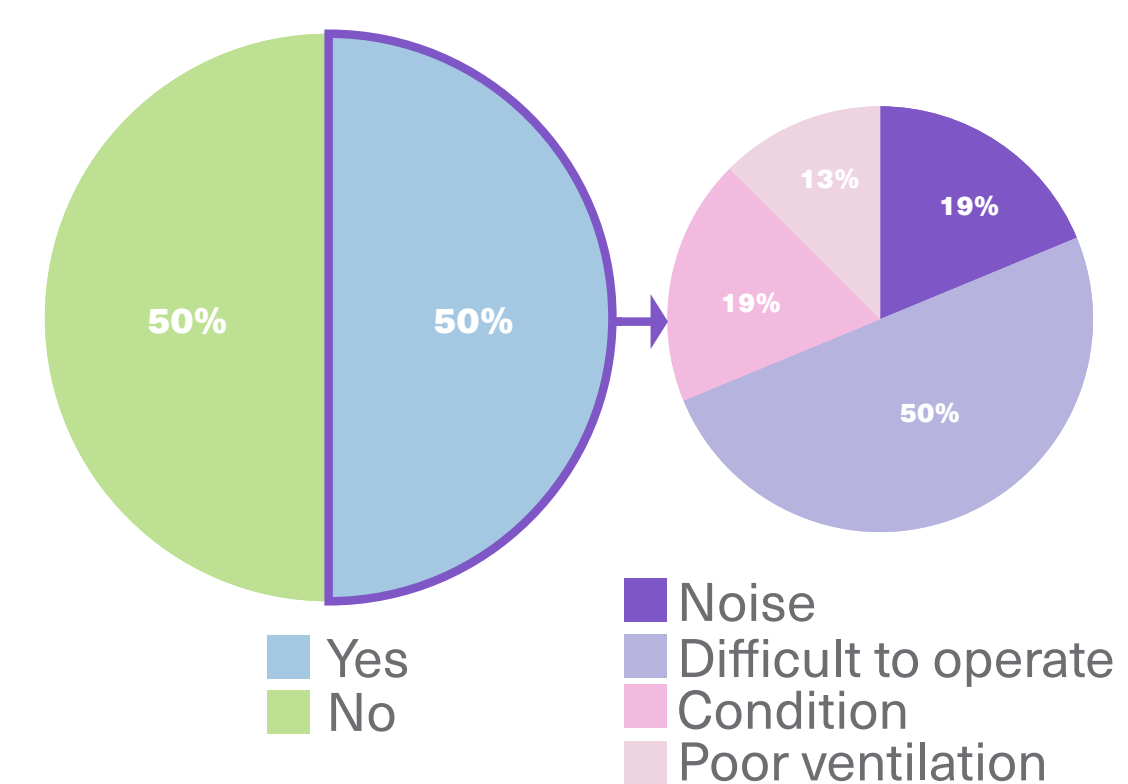
Effect: Heat Loss

Does your home cool down quickly once the heating is turned off



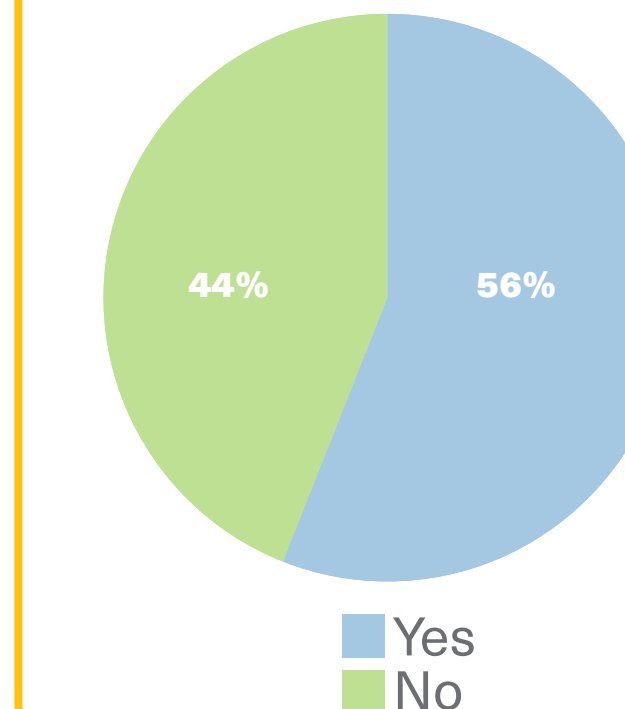
Effect: Poor Ventilation

Do all the windows open sufficiently to get good ventilation? If no, please explain why?



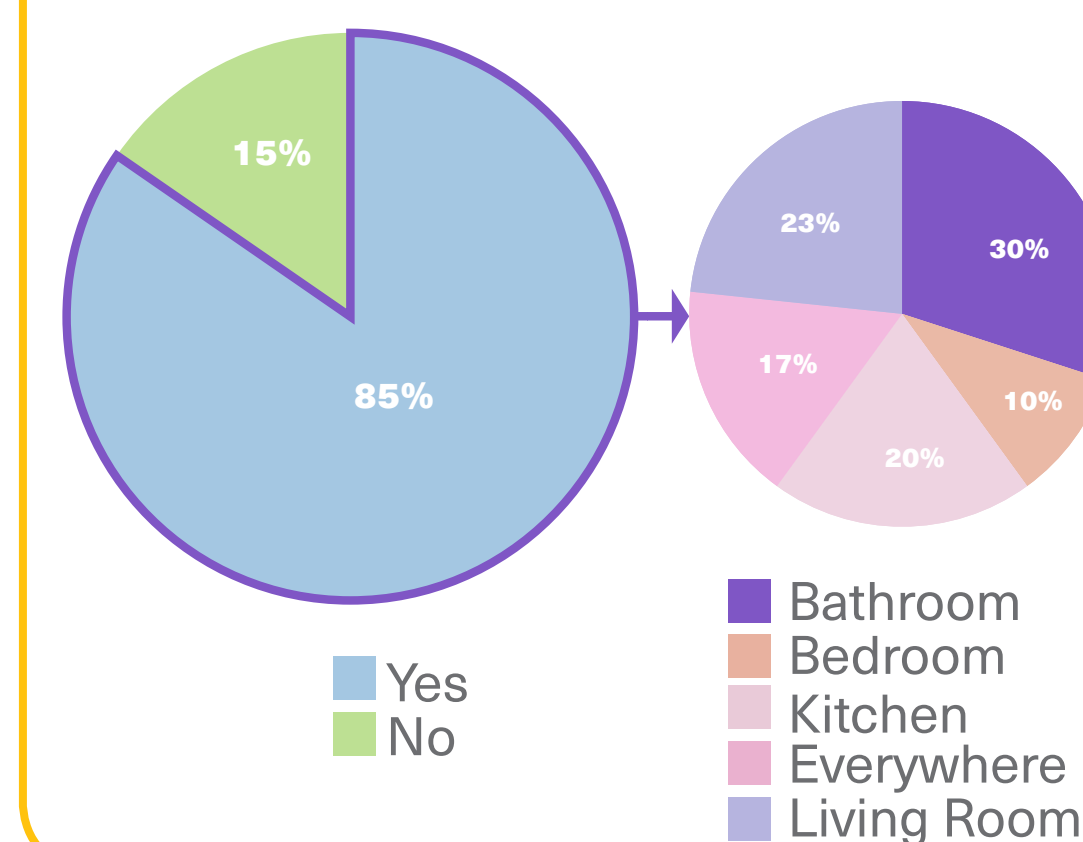
Effect: Heat Loss

Do you live in colder conditions than you would like, to save money on heating bills?



Effect: Condensation and Mould

Does your home suffer from condensation or mould growth? If so, please specify where:



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Option 1: Existing Refurbished

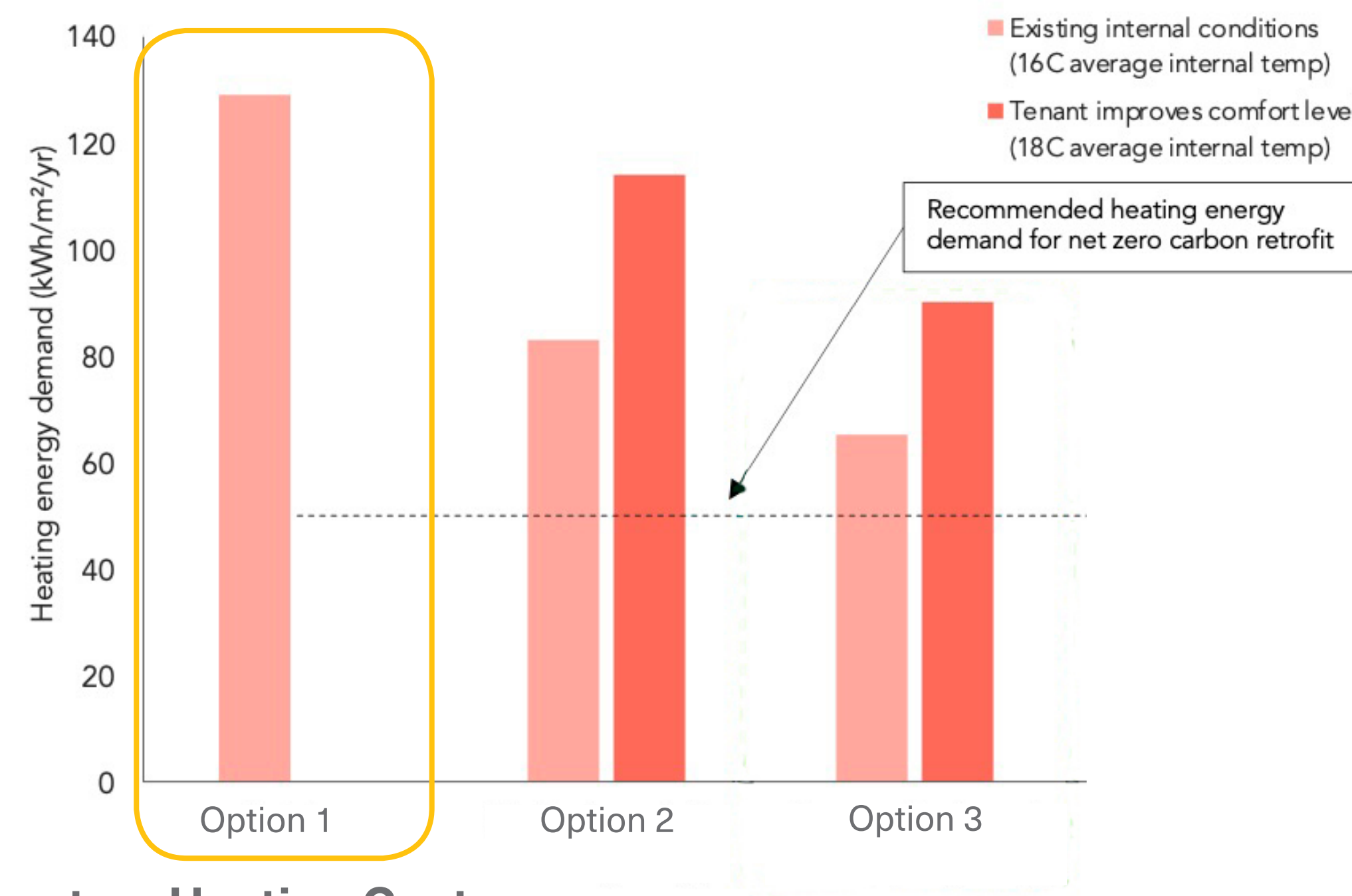
Impact on Heritage

- Any viable parts of the original timber frame would be retained.
- Original design intent is retained, though it must be noted that changes to the original design have already been implemented through past repairs.
- Inherent design flaws are not addressed though later adaptations that address these can be retained.

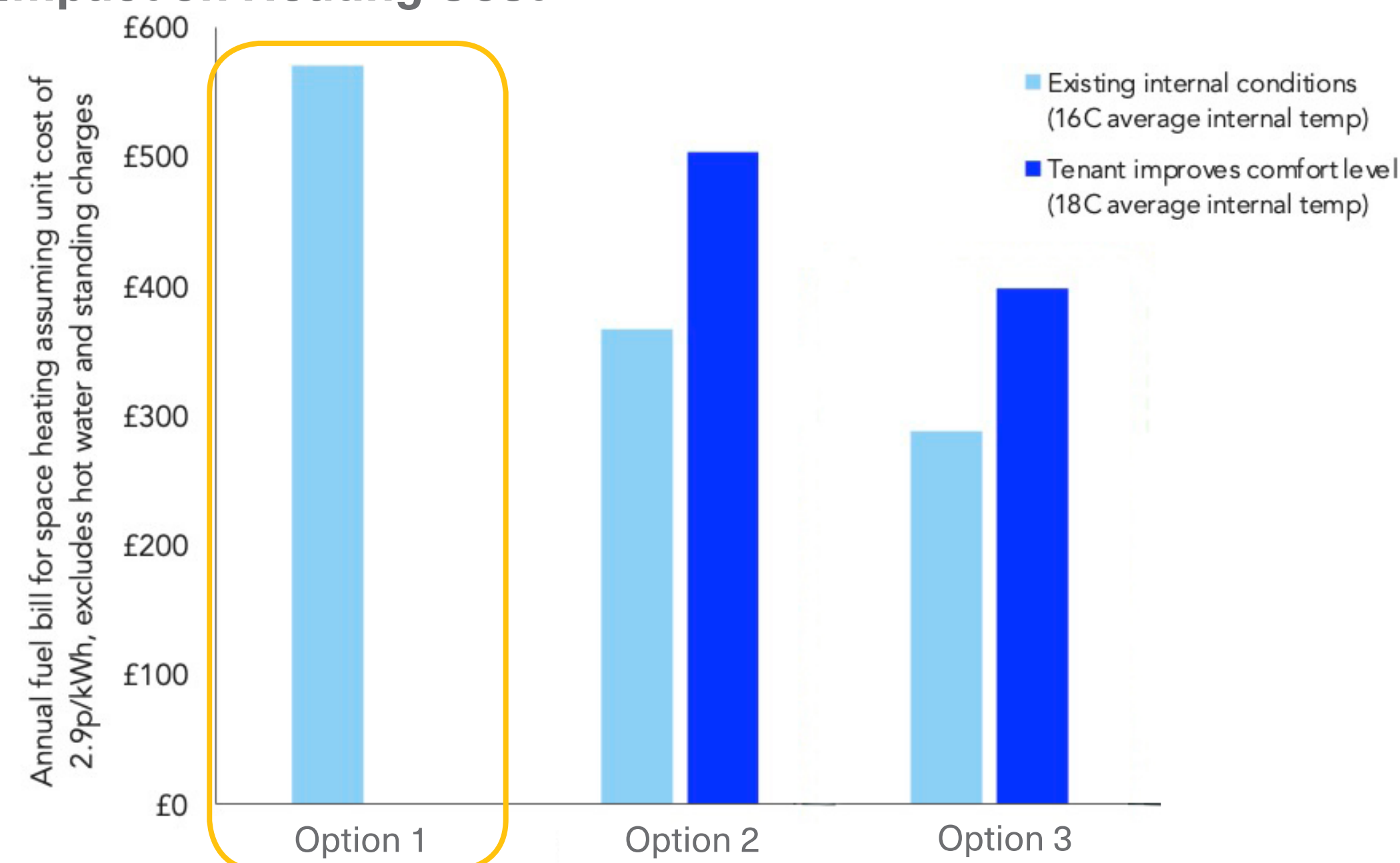
Structure

- No addition to structural loads.

Impact on Heating Demand

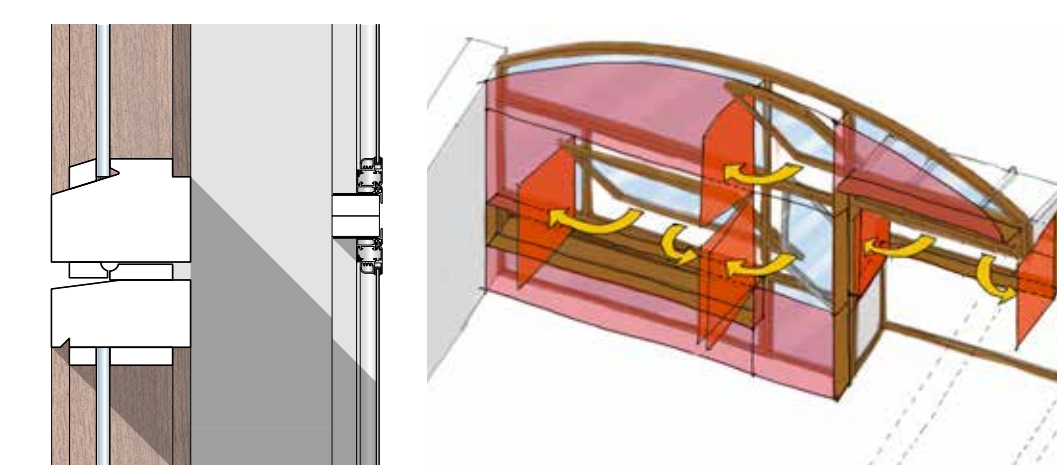


Impact on Heating Cost



The graphs show two bars for all the options which improve the thermal performance of the windows. The left hand bars indicate the reductions based on residents continuing to heat their flats to the same level as prior to the upgrades. The second bar accounts for the rebound effect often seen after upgrades, where residents choose to increase their heating levels.

Secondary Glazing



- The only way to improve thermal performance and air tightness in this option
- Impractical as it would require a minimum 100mm gap between the secondary glazing and the existing windows.
- Opening elements would have to open inward and take up space in the flats.
- The oriel corners would be difficult to reconcile
- Likely to cause interstitial condensation

Uninsulated elements:

- Oriel spandrels
- 1st floor concrete upstand
- 1sts floor oriel projecting slab
- Oriel roof
- Bookshelf
- Slab edges
- Party wall to external wall
- Roof slab to external wall

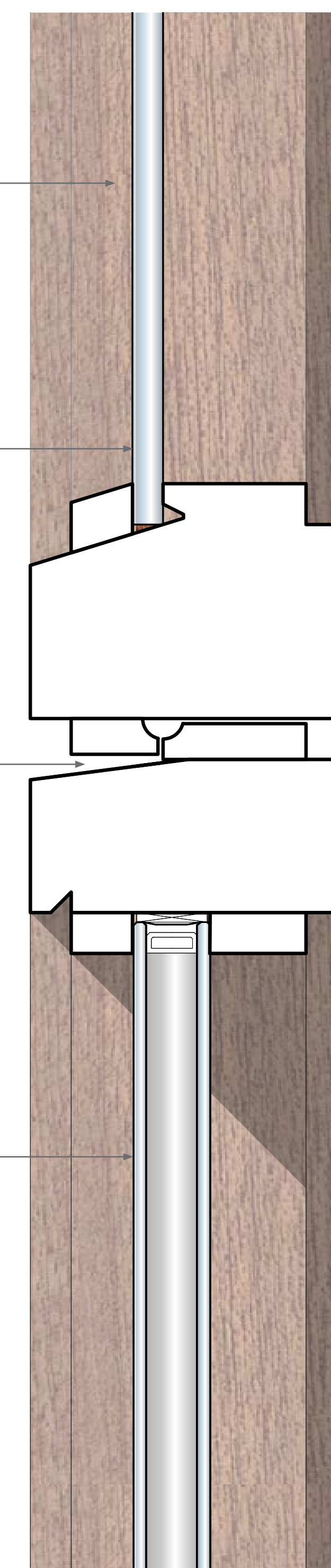
Option 1

Refurbished timber frames. New timber will be spliced where frames are too damaged to repair.

Single glazing retained where viable and replaced where damage is too great.

No air seals and permanent slot vents leak air

Where glazing needs replacement, double glazing will be used. It is likely that all the spandrel panels will need to be replaced.



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Option 2: Double Glazing in New Frames

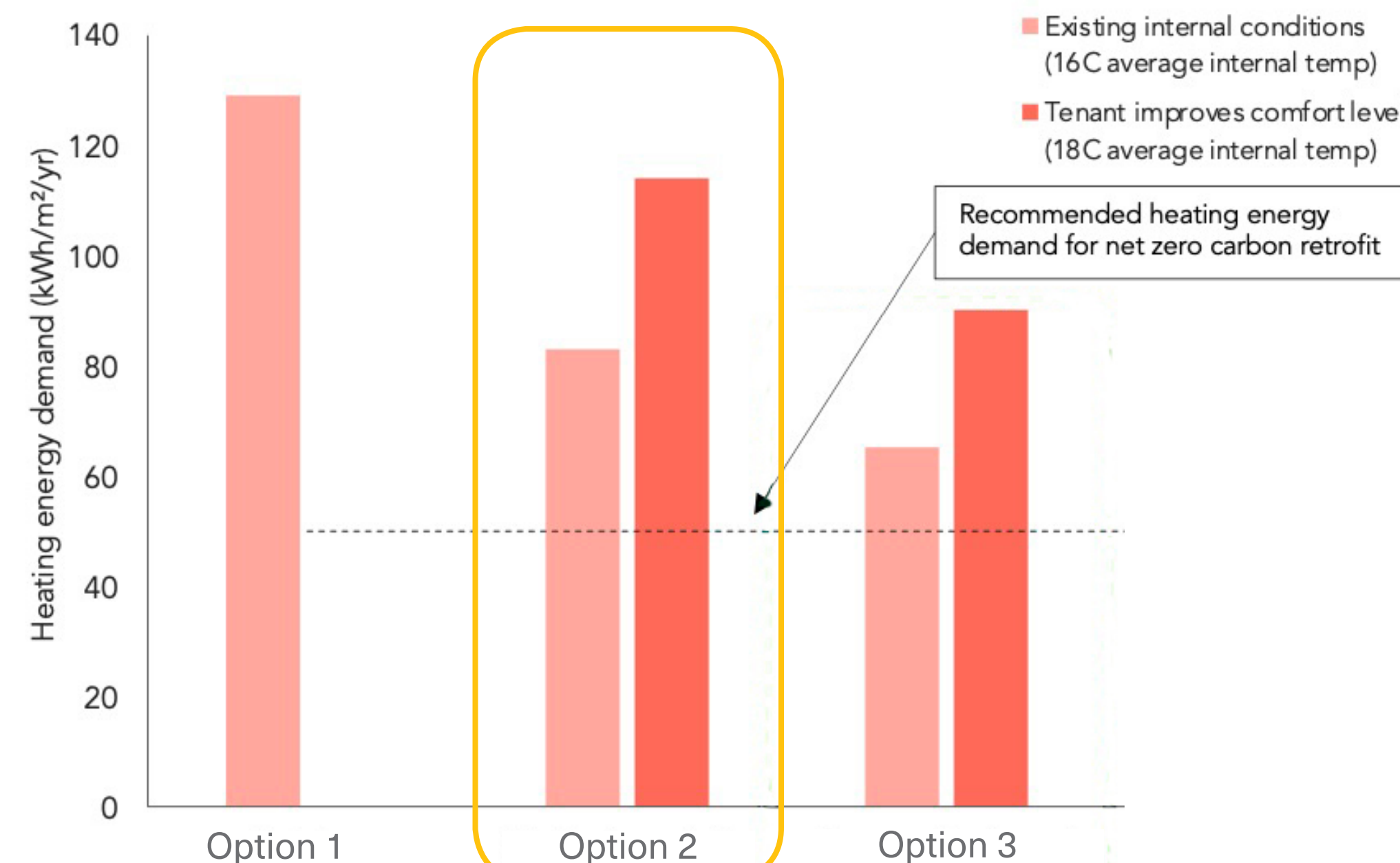
Impact on Heritage

- No original timber frames would be retained.
- Original design intent is retained.
- It is possible to address inherent design flaws and tackle them in a comprehensive way, resulting in a more rational appearance for the windows across the building.

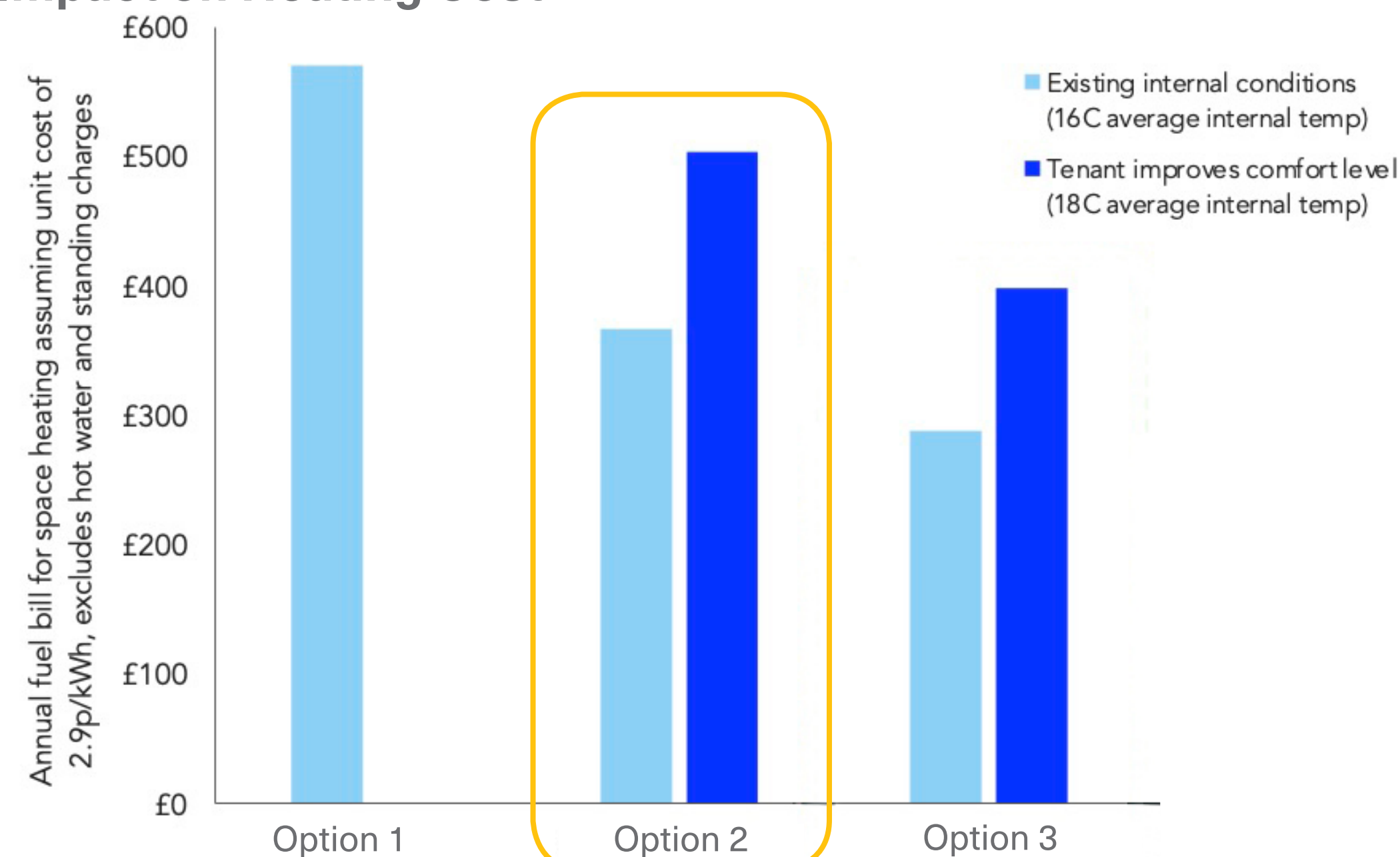
Structure

- Structural analysis indicates that there is sufficient spare capacity in the structure to accommodate the extra loads.

Impact on Heating Demand



Impact on Heating Cost



The graphs show two bars for all the options which improve the thermal performance of the windows. The left hand bars indicate the reductions based on residents continuing to heat their flats to the same level as prior to the upgrades. The second bar accounts for the rebound effect often seen after upgrades, where residents choose to increase their heating levels.

Option 2

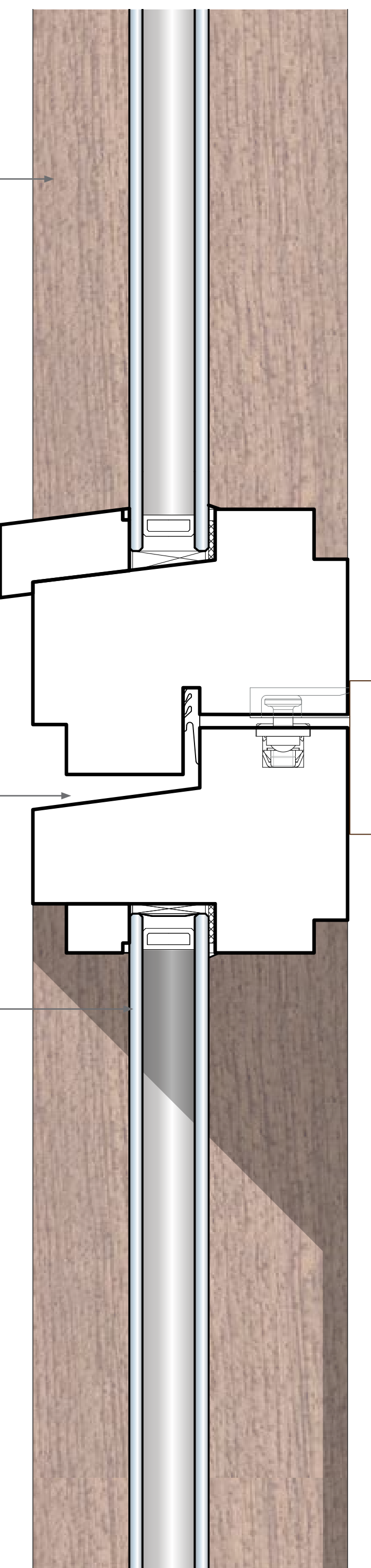
New hardwood timber frames with similar profiles

Air seals and trickle vents can be incorporated

Double glazing

Insulated elements:

- Oriel spandrels
- 1st floor concrete upstand
- 1st floor oriel projecting slab
- Oriel roof
- Bookshelf
- Slab edges
- Party wall to external wall
- Roof slab to external wall



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Option 3: Triple Glazing in New Frames

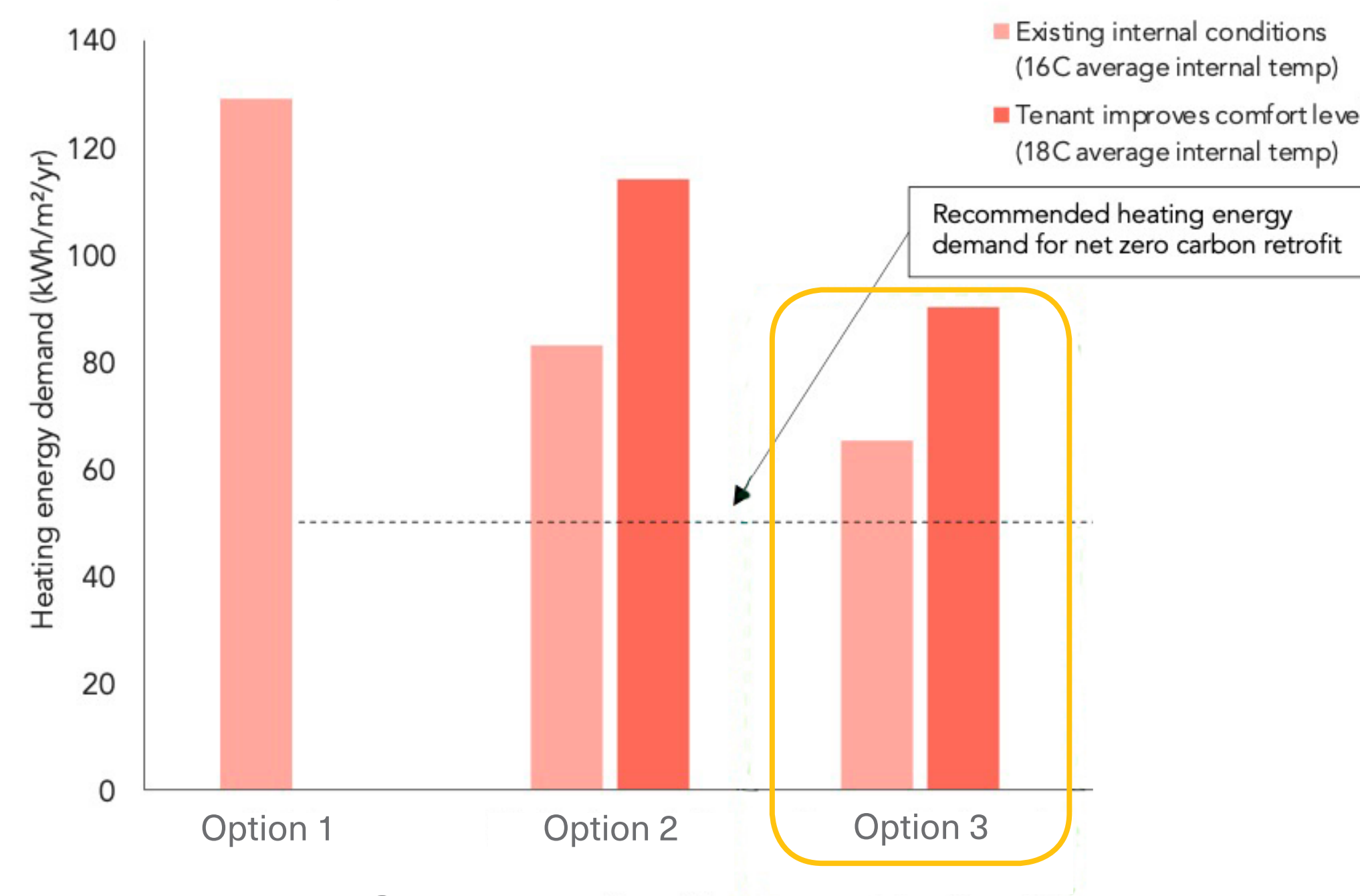
Impact on Heritage

- No original timber frames would be retained.
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- It is possible to address inherent design flaws and tackle them in a comprehensive way, resulting in a more rational appearance for the windows across the building.

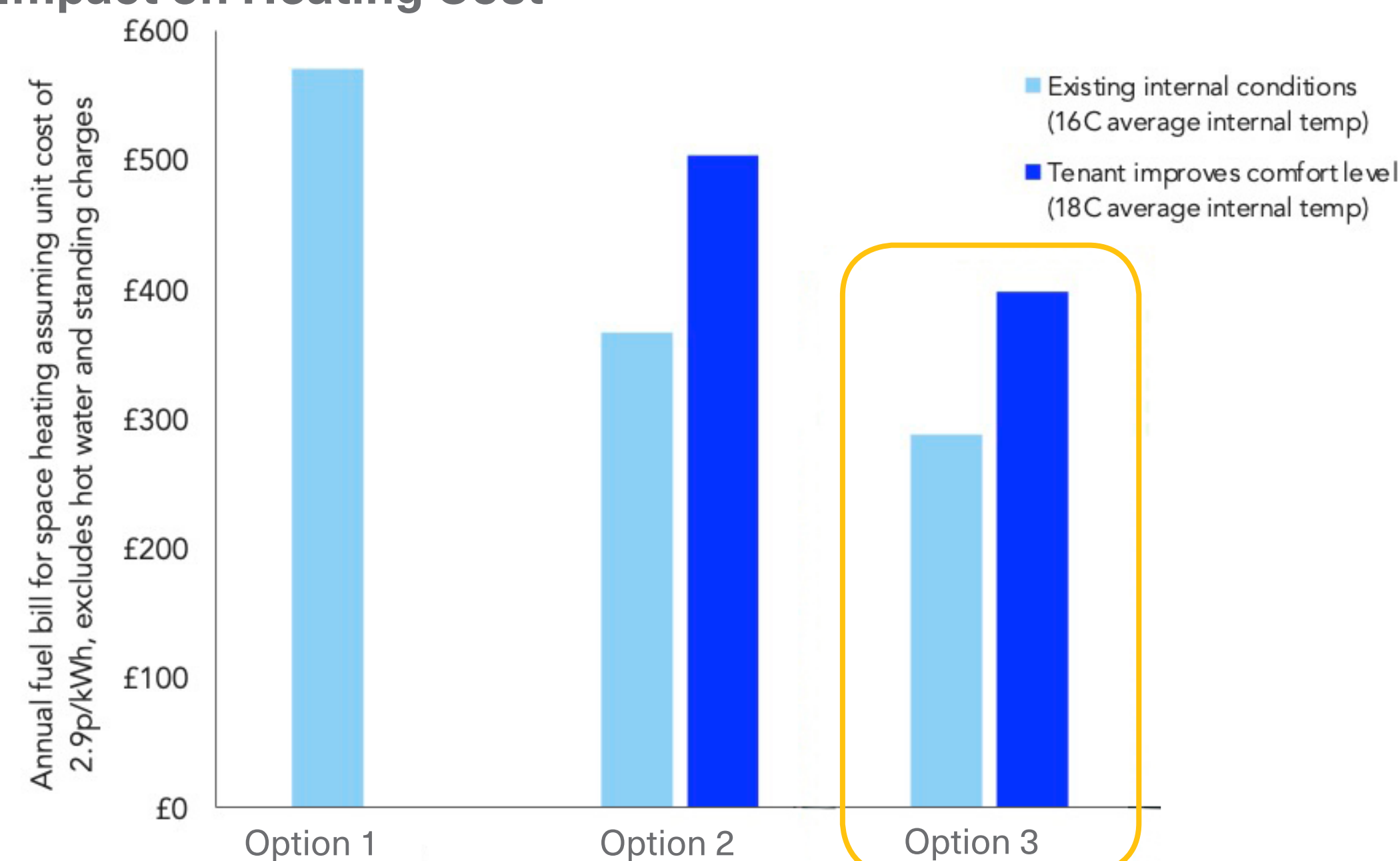
Structure

- Structural analysis indicates that there is sufficient spare capacity in the structure to accommodate the extra loads.

Impact on Heating Demand



Impact on Heating Cost



The graphs show two bars for all the options which improve the thermal performance of the windows. The left hand bars indicate the reductions based on residents continuing to heat their flats to the same level as prior to the upgrades. The second bar accounts for the rebound effect often seen after upgrades, where residents choose to increase their heating levels.

Option 3

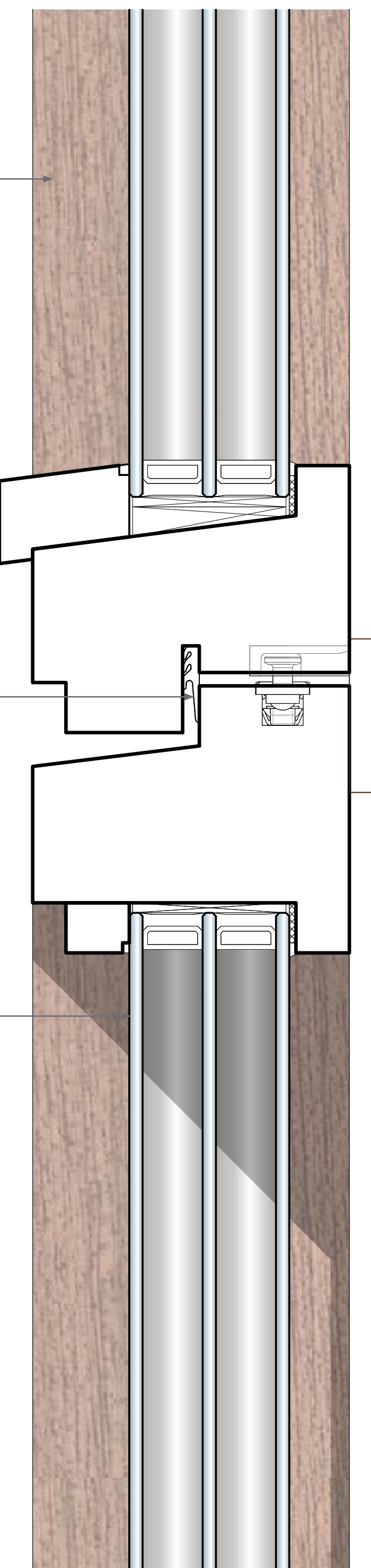
New insulated hardwood timber frames with similar profiles

Air seals and trickle vents can be incorporated

Triple glazing

Insulated elements:

- Oriel spandrels
- 1st floor concrete upstand
- 1st floor oriel projecting slab
- Oriel roof
- Bookshelf
- Slab edges
- Party wall to external wall
- Roof slab to external wall



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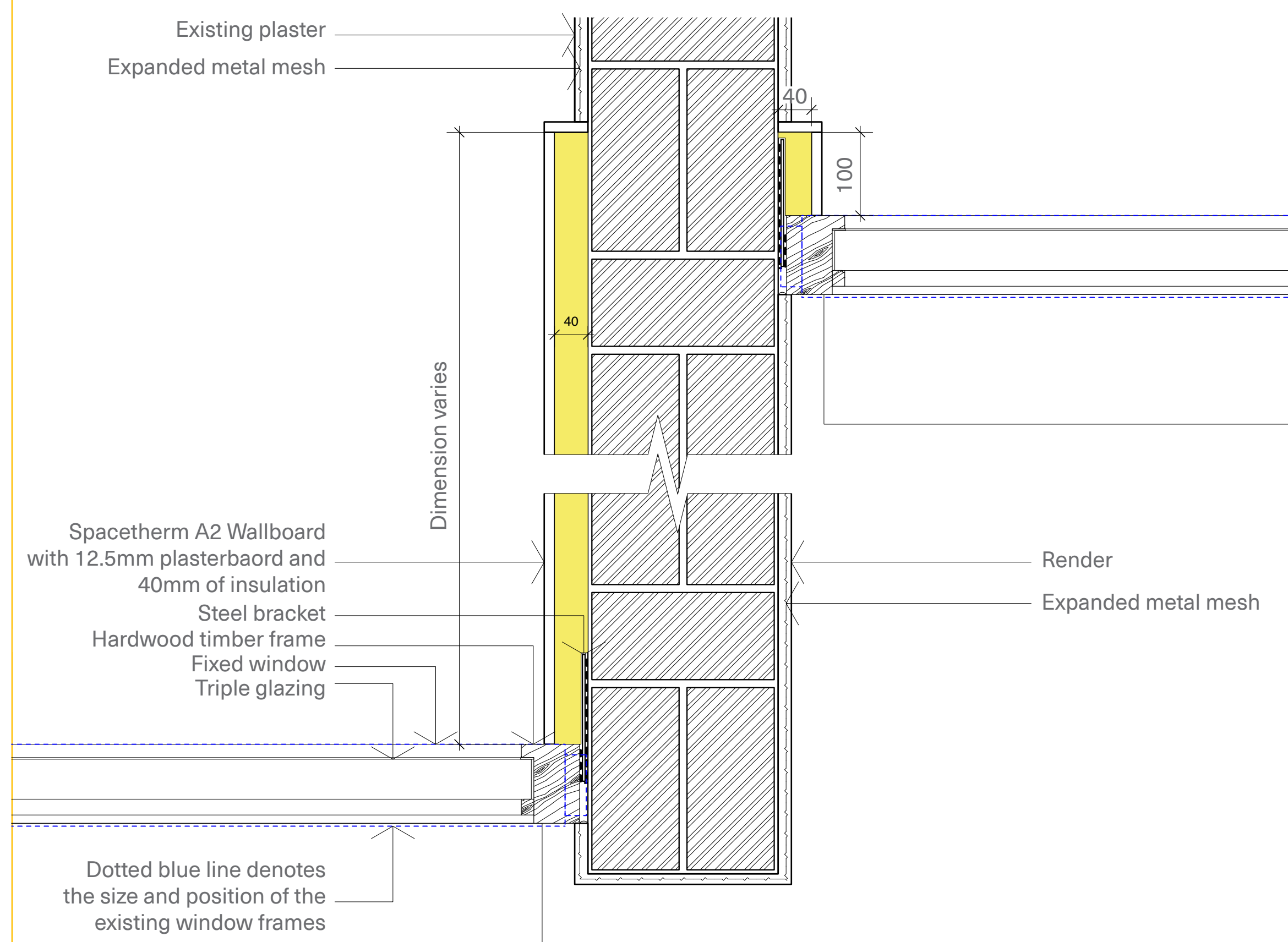
Supplementary Works

Regardless of whether Options 2 or 3 are chosen, it will be necessary to insulate thermal bridges in the building fabric, which provide routes for heat to escape through the facade.

Etude, the team's building physics and energy consultants have undertaken the calculations required to establish the minimum amount of insulation required at each thermal bridge in order to mitigate condensation and mould.

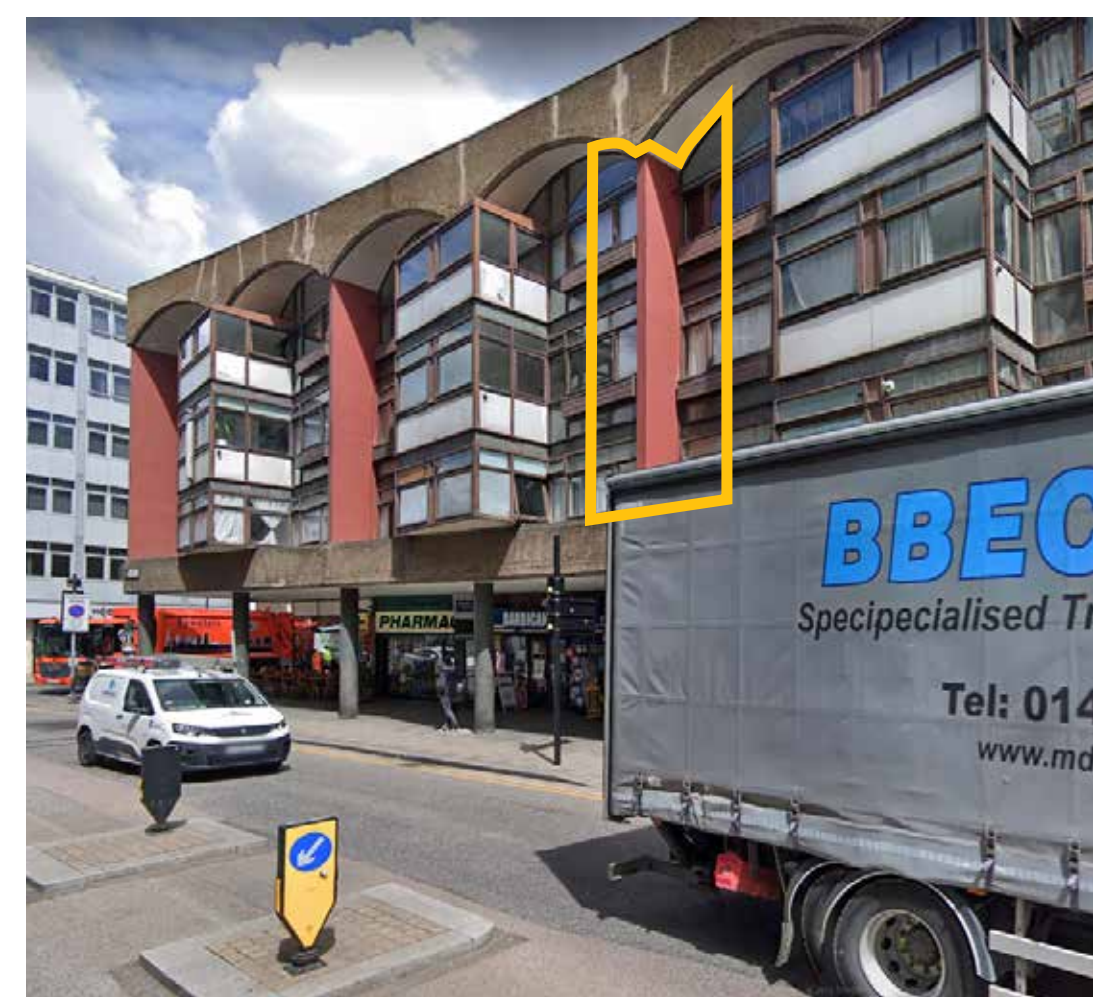
The drawings shown in this board reflect those calculations, though further work will be undertaken to establish satisfactory design solutions that will ensure that these interventions are coordinated and work in sympathy with the building's design.

Staggered Party Wall

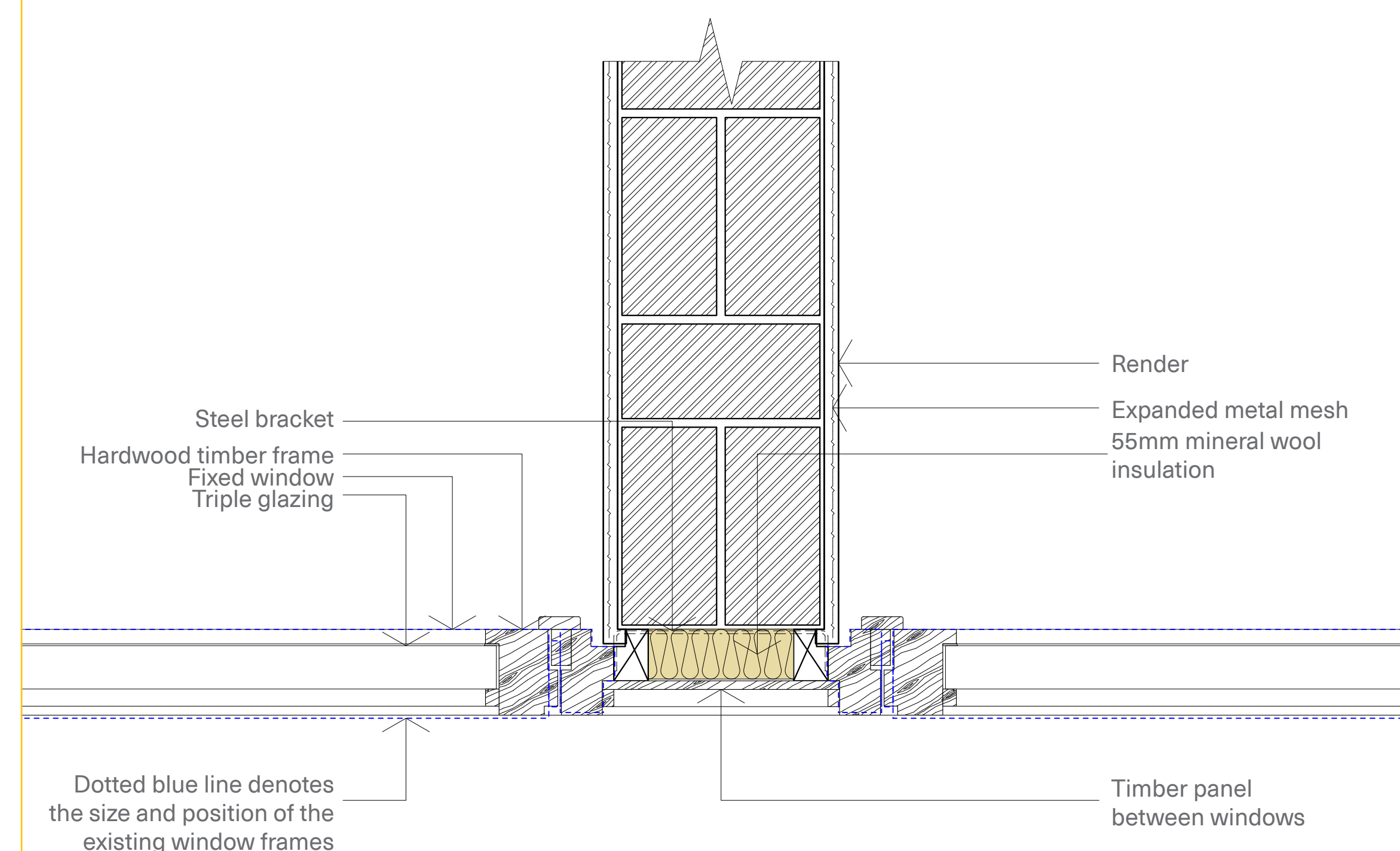


Detail

Area requiring insulation



Oriel Party Wall

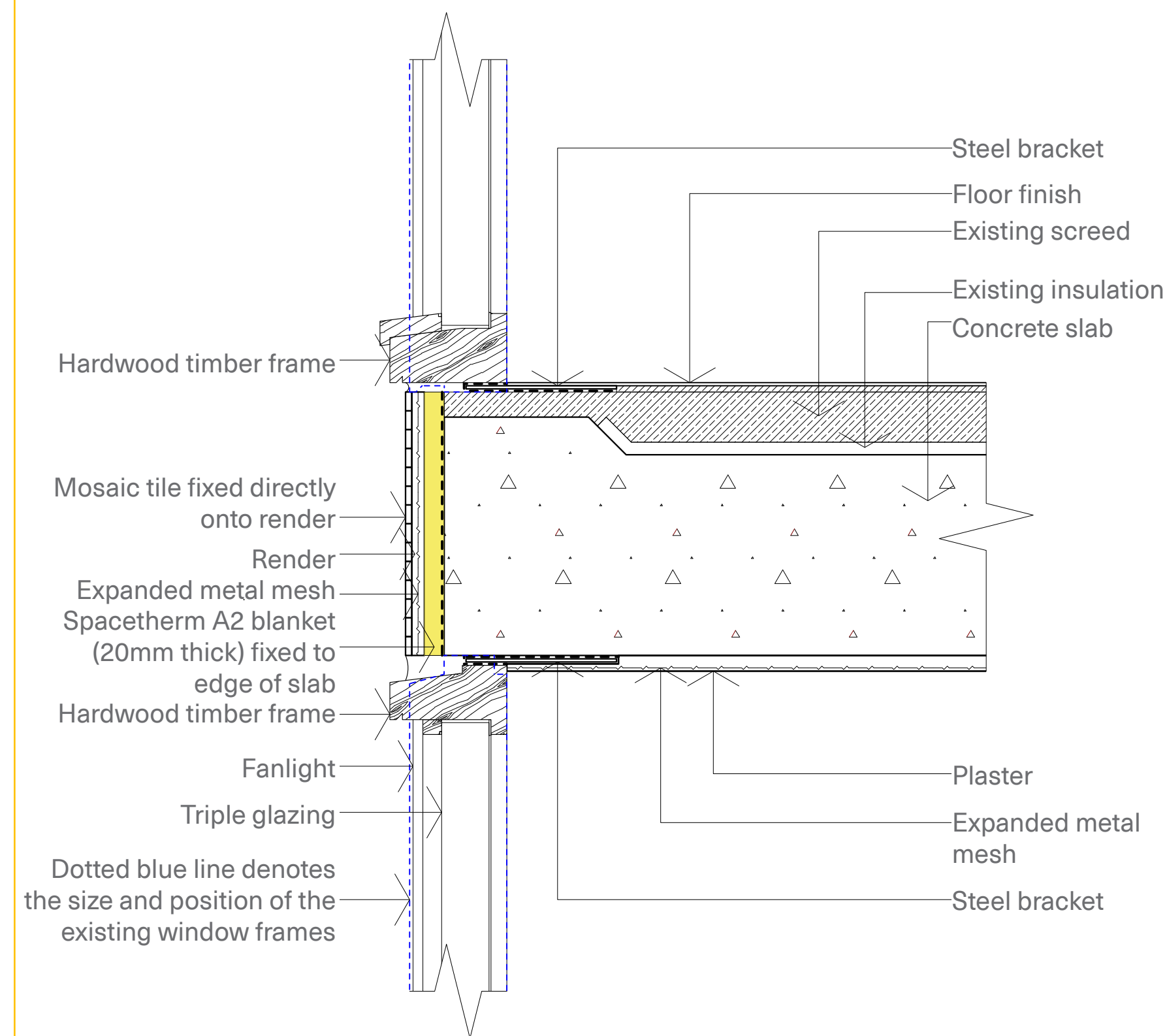


Detail



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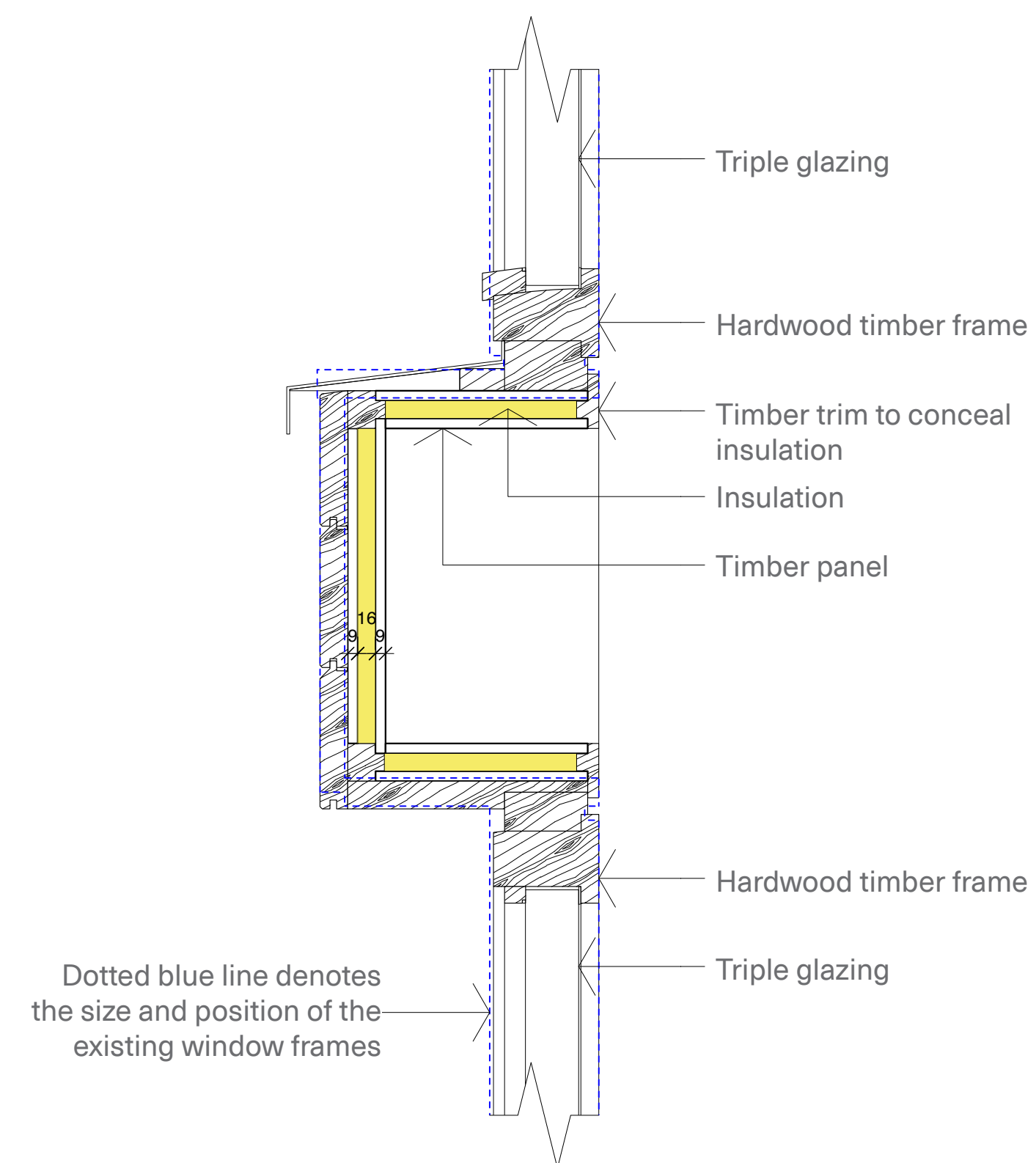
Slab Edge



Detail



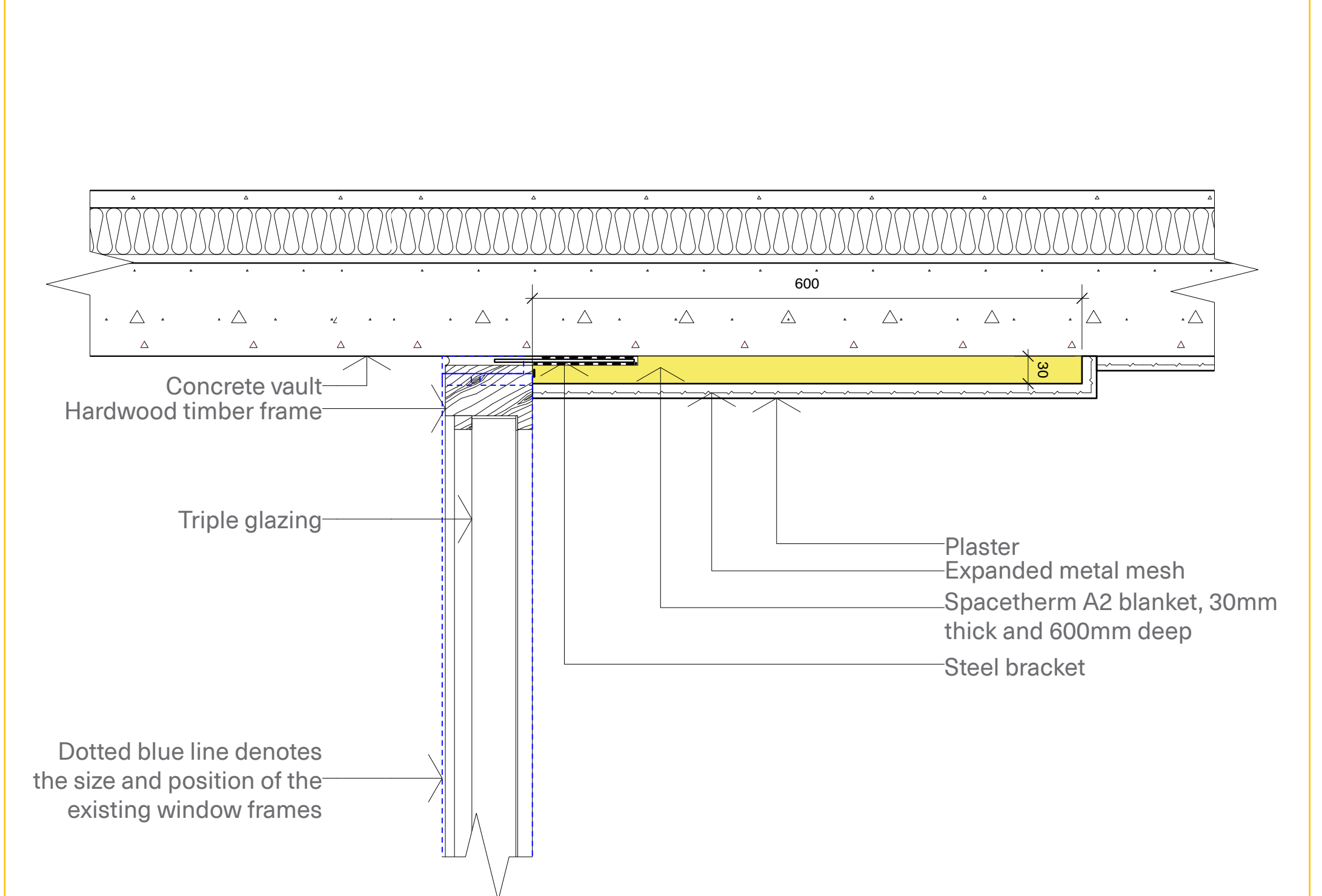
Bookshelf



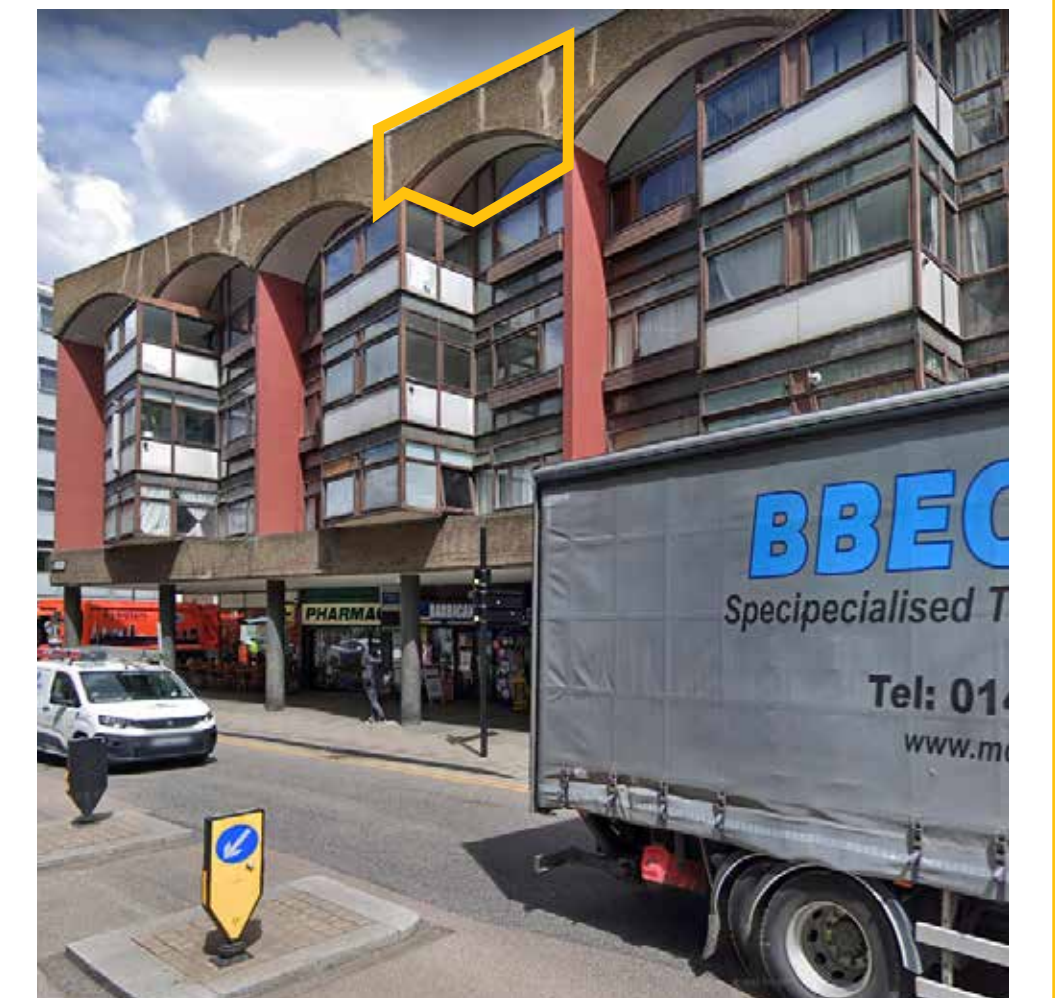
Detail



Concrete Vault



Detail



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Next Steps

We are working to submit a planning application before Christmas this year. Before then, we will need to carry out the following:

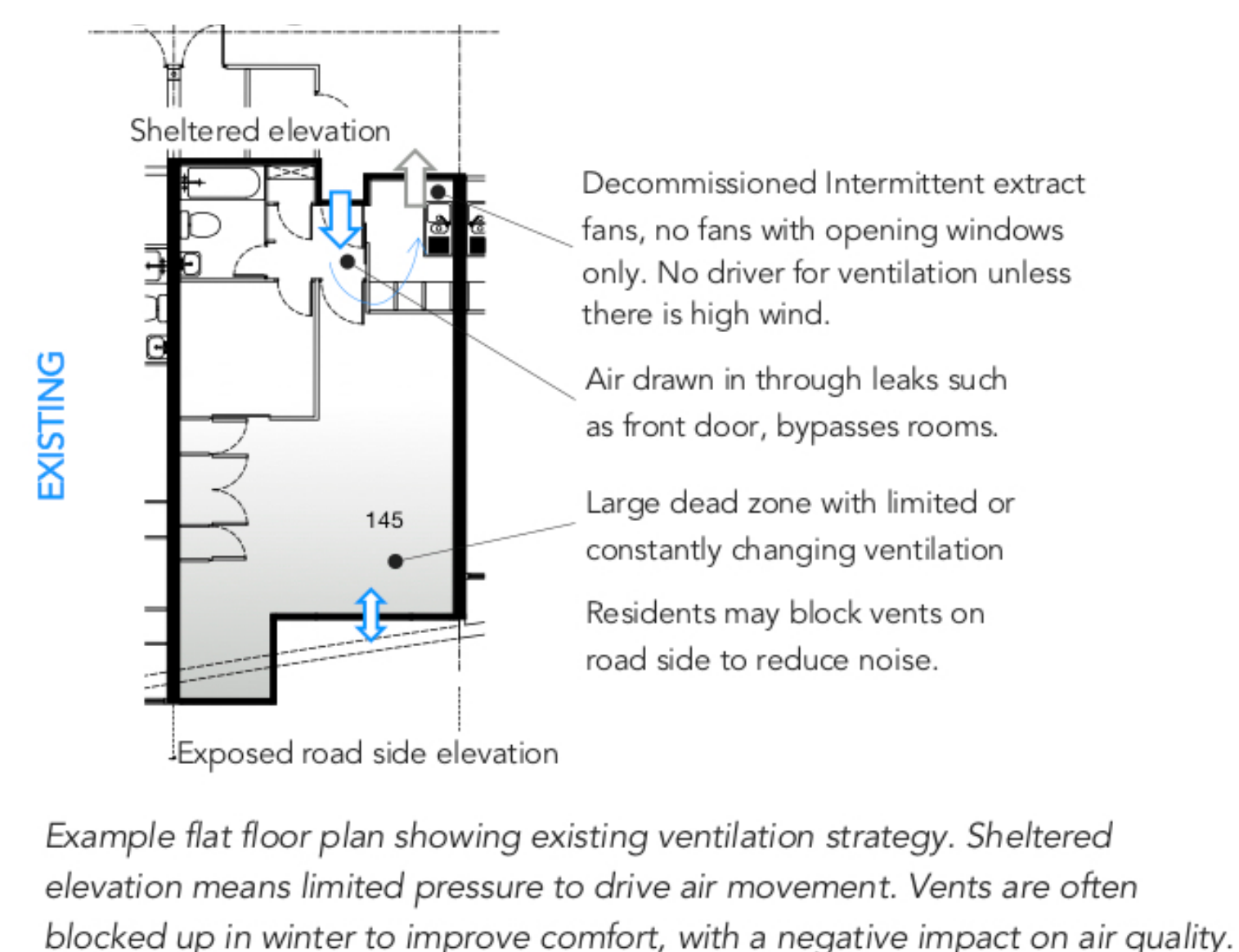
Stage 1 (October 2021)

1. Obtain and consider the views of residents of the building following this consultation period.
2. Carry out further detailed design of the windows.
3. Develop detailed proposals to improve the ventilation system for each flat.
4. Carry out acoustic surveys in relation to traffic noise to understand the baseline level of noise impact.

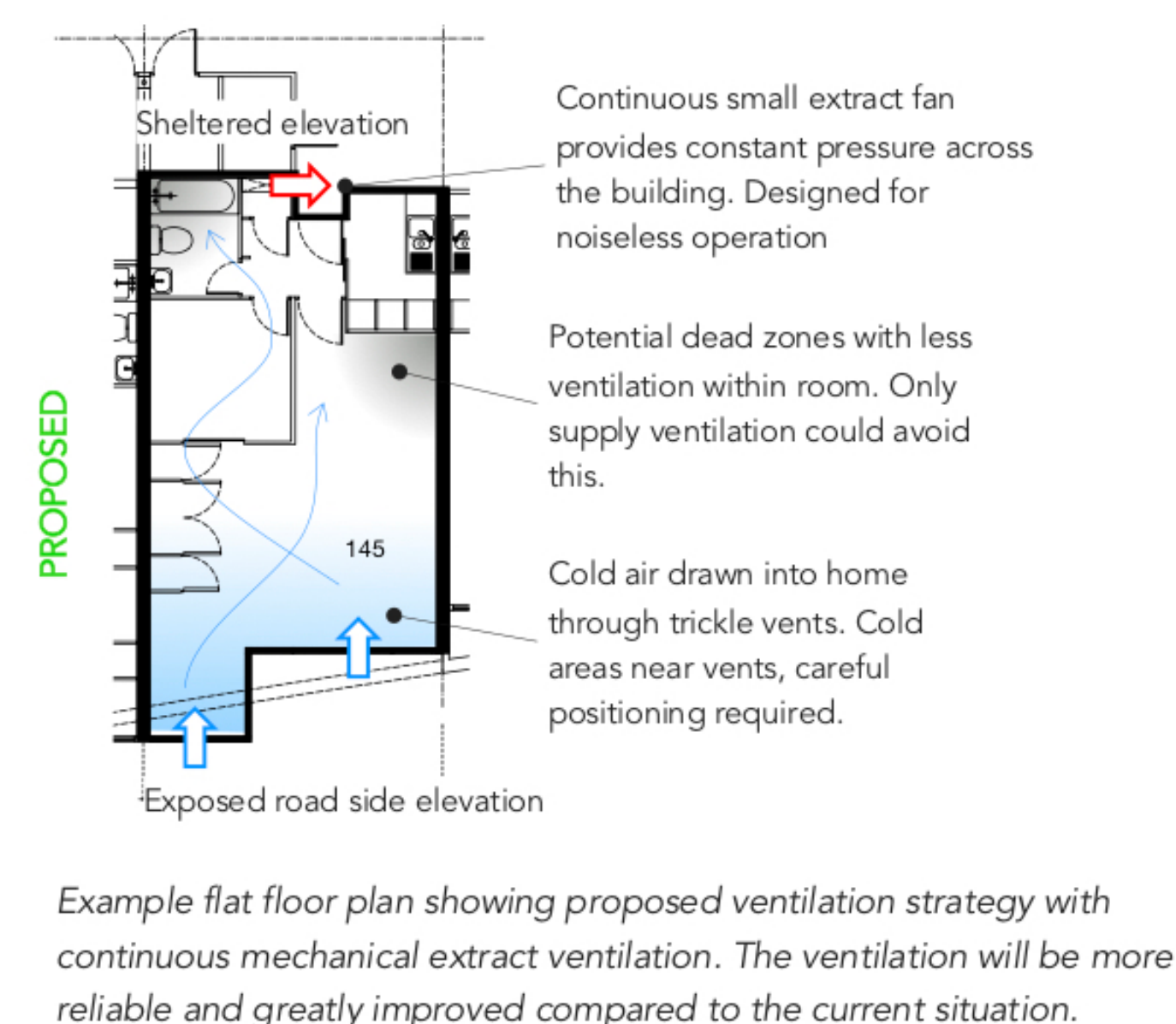
This work will result in a final set of proposals which will balance the views of local residents, heritage considerations and the required environmental improvements.

Stage 2 (November 2021)

1. We will carry out further consultation on the final proposals before an application is submitted. This consultation will include local residents, planning and sustainability officers at the City of London and heritage bodies.
2. The proposals will then be finalised and an application for planning permission and listed building consent will be submitted to the City of London before Christmas.



Existing ventilation strategy



Proposed ventilation strategy



Double glazed sample window by TRC.

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Programme

- Submission of Planning Application – End of December 2021
- Statutory Consultation Period for Planning Application – commencing January 2022.
- Application Decision – Spring 2022
- Works Commence – Autumn 2022

