

# Project Retrofit

Project Retrofit is a climate action centre which teaches about building retrofit and the positive impact this can have on the lives of individuals as well as the climate.

The site seeks to get the everyday person involved in climate action, something they feel disengaged from, through education, exhibition, and workshops. Project Retrofit empowers people of all backgrounds to engage in meaningful climate action regardless of their economic status, living situation, or any other

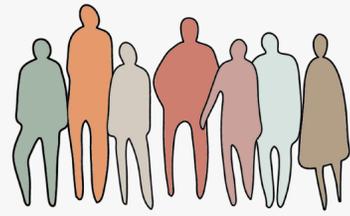
factor, believing that there is an opportunity to significantly improve people's lives both now and in the future through building retrofit.

The site achieves this through educating people about the negative impact of climate change and the positive and necessary benefits of building retrofit. People are supported through learning about how they can retrofit their homes and encouraged to engage in campaigns to change laws to create real change.

1. Workshop space
2. Cafe and seating area
3. Debate chamber
4. Retrofit space
5. Climate change exhibition space



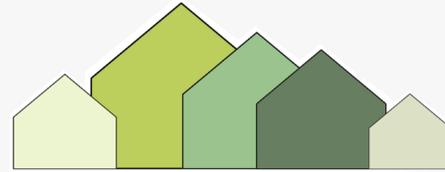
# Demographics in Newcastle upon Tyne and Climate Change Statistics



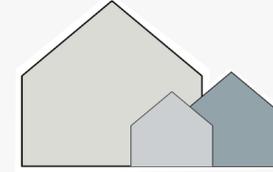
70% of the working age population are employed  
6% below national average



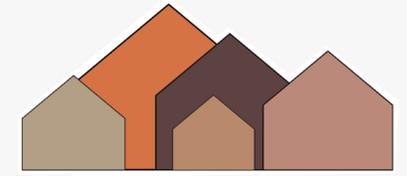
1/3 of people are educated up to A level or below



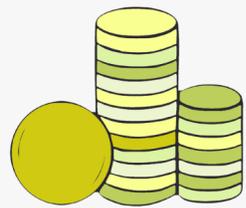
Over half of homes are classified as "Deprived Households"



27% of homes are social housing  
National average is 17%



50% of homes are owner occupied  
National average is 63%



## Cost of Living Crisis

The average cost of living in Newcastle places Newcastle in the top 31% of most expensive cities in the world.

The current cost of living crisis has heavily impacted the population of Newcastle-upon-Tyne with the cost of bills, food and other necessities increasing. People are struggling to heat their homes and feed their children.



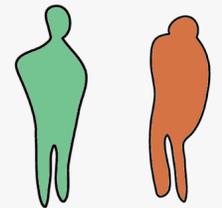
## Climate Change

- The current warming period is the first caused by humans
- Human emissions have warmed the planet by 1.1°C since 1750. The planet is due to warm by a further 1.5 °C in the next 30 years
- 90% of warming is happening within the ocean
- 19 of the hottest years have occurred since 2000
- Droughts, wildfires and extreme rainfall are all happening faster than predicted
- Some changes are irreversible



## The Impact of the Construction Sector

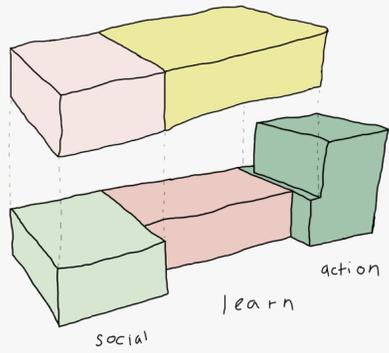
- The construction sector is responsible for:
- 50% of climate change
  - 50% of landfill wastes
  - 40% of drinking water pollution
  - 23% of air pollution
- Buildings are responsible for:
- 40% of global energy and resource use
  - 25% of global water consumption
  - 1/3 of greenhouse gas emissions



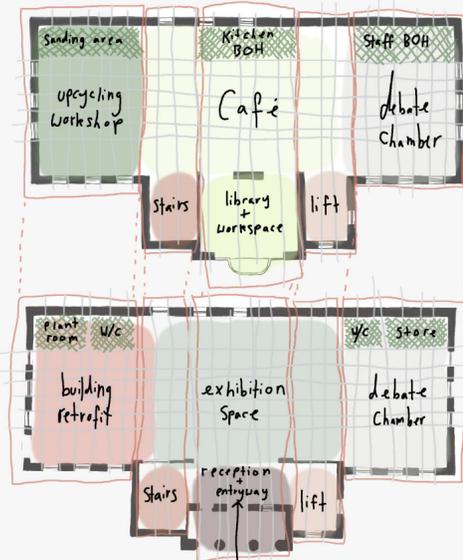
## Public Perception + Reaction to Climate Change + Climate Action

There are a number of climate action groups operating in the UK including 'Just Stop Oil' who have engaged in a number of recent protests such as vandalising notable buildings and adhering themselves to major roads and motorways. Protests and actions such as this divide people into those who support these ideas and engage in protests and climate action themselves, and those who despise the other side, arguing that these protests only inconvenience the everyday person rather than igniting governmental change.

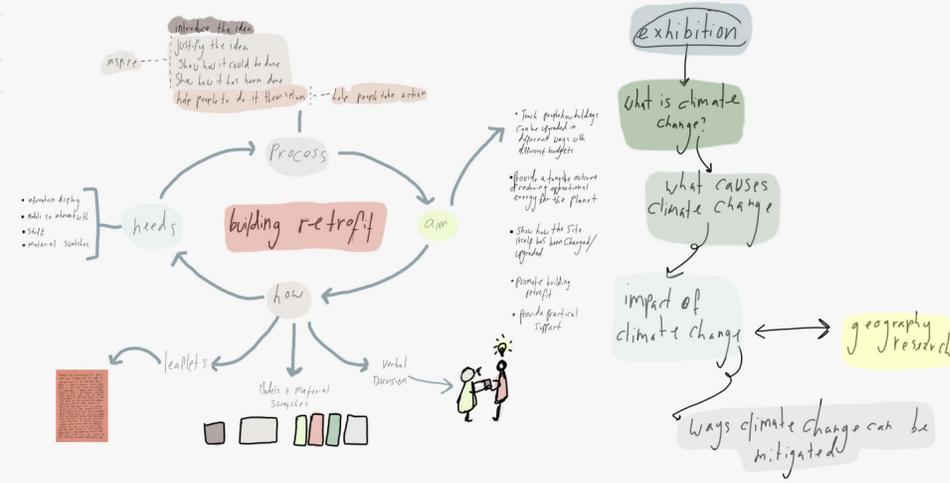
The site aims to engage those who feel they don't have a place within the climate action movement and to engage those who want to make a change in a more meaningful way.



**Parti Diagram** showing spatial division through purpose and use



**Block Plans** exploring the division of space dictated by the existing building grids



**Process of Teaching About Building Retrofit, Climate Change, and Workshops**



**Axonometric Diagram**



**Interior Perspective - View of the main exhibition spaces looking through to the debate chamber**

"WOULD YOU LIKE A LEAFLET?" SMILE. TAKE ONE. "THANK YOU" IT'S RUDE TO SAY NO. STUFF IT IN YOUR BAG. FORGET ABOUT IT. FIND IT. READ IT. THINK. TALK ABOUT IT WITH YOUR OTHER HALF. GOOGLE IT. LEARN ABOUT IT. DREAM ABOUT IT. FORGET ABOUT IT. SHOVE IT IN A DRAWER. LOOK FOR THAT TAKEAWAY MENU. FIND THE LEAFLET. THINK ABOUT IT SOME MORE. MAYBE WE CAN? COME BACK. SEE MORE. ASK QUESTIONS. GOOGLE 'BUILDERS NEAR ME'. CHECK SAVINGS. PAY BILLS. PAY MORE BILLS. COST OF LIVING CRISIS. SLEEP IN FOUR JUMPERS. HOW IS IT SO COLD? THE HEATING WAS ON AN HOUR AGO. IT TALKED ABOUT THIS IN THAT LEAFLET. FIND THE TAKEAWAY MENU. FIND THE LEAFLET. SMILE. COME BACK. "HI. CAN YOU HELP ME? I WANT TO RETROFIT MY HOUSE." DISCUSS. ENGAGE. LEARN. PLAN. START THE PROJECT. "WOULD YOU LIKE A CUP OF TEA?" MOVE OUT. MOVE BACK IN. WOW. IS THIS THE SAME HOUSE. NOSEY NEIGHBOURS. WE SHOULD HAVE DONE THIS SOONER. GIVE THE LEAFLET TO THE JONESES. YOU KNOW THEY'LL DO IT TOO.

"WOULD YOU LIKE A LEAFLET?" "OH, I ACTUALLY RENT." "HERE, THIS ONE IS FOR YOU." TAKE ONE. GO UPSTAIRS. HAVE A COFFEE. READ THE LEAFLET. WHAT'S GOING ON IN THERE? HAVE A LOOK. UPCYCLE SOME DRAWERS. TAKE THEM HOME. ENJOY THEM. DONATE OLD DRAWERS. COME BACK. ENGAGE. "WHY CAN'T I LIVE LIKE THAT?" LEARN MORE. TALK TO THE LANDLORD. "IT WOULD BENEFIT US BOTH." DENIED. LEARN MORE. HIGH BILLS. LOW INCOME. WRITE TO THE MP. SIGN PETITIONS. COME BACK. "CAN YOU HELP?" KEEP FIGHTING. KEEP LEARNING. KEEP ASKING QUESTIONS. KEEP PUSHING FOR CHANGE.

"WOULD YOU LIKE A LEAFLET?" SMILE AWKWARDLY. "AH WELL I LIVE IN A COUNCIL HOUSE SO I CAN'T REALLY DO ANYTHING." TAKE ONE ANYWAY. READ IT. LEARN. VISIT THE UPCYCLING WORKSHOP. LEARN. UPCYCLE A DRESSING TABLE. LEARN A NEW SKILL. KEEP IT. PRIDE. ENJOY IT. COME BACK. LEARN MORE. UPCYCLE A TABLE. SELL IT ON FACEBOOK. KEEP UPCYCLING. KEEP LEARNING. KEEP SELLING. COME BACK. ATTEND A DEBATE. AGREE. DISAGREE. BE PASSIONATE. WANT TO LIVE BETTER. "CAN I HAVE SOME MORE OF THOSE LEAFLETS?" KNOCK ON DOORS. NEIGHBOURS. "WE DESERVE BETTER." HAND OUT LEAFLETS. TEACH. START A COMMUNITY ACTION GROUP. KEEP UPCYCLING. START A PETITION. SHARE IT. WRITE TO THE COUNCIL. PLAN A PROTEST. POST IT. SHARE IT. MORE SIGNATURES. 10,000 SIGNATURES. GOVERNMENT RESPONSE. NOT GOOD ENOUGH. MORE PASSION. MORE PRESSURE. PLAN A TALK. PROTEST. POWER IN NUMBERS. COME BACK. HOLD A TALK. MORE SIGNATURES. MORE PRESSURE. 100,000 SIGNATURES. DEBATE SET FOR PARLIAMENT. NOW WE ARE GETTING SOMEWHERE. PLAN. LEARN. SHARE. PREPARE. CONTINUE TO CAMPAIGN. CREATE REAL CHANGE.

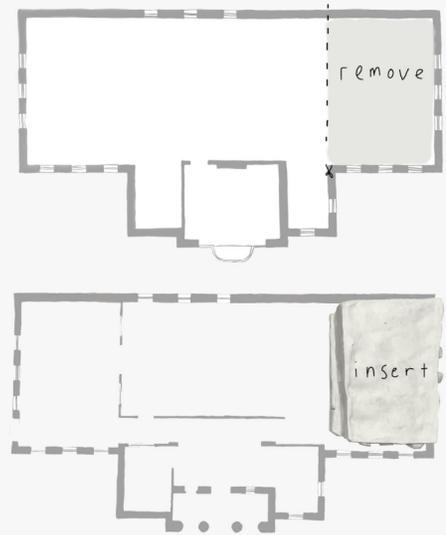
"WOULD YOU LIKE A LEAFLET?" "OH, I DON'T HAVE A HOUSE, I JUST FIND THIS INTERESTING." "HAVE YOU HEARD ABOUT THE INTERIOR ARCHITECTURE PROGRAMME AT \_\_\_\_\_?" TAKE THE LEAFLET. THANK THEM. GO HOME. GOOGLE IT. OPEN DAY. APPLY. EXPERIENCE DAY. ENROL. PROJECT 1. COME BACK. LEARN MORE. TALK ABOUT IT. APPLY IT. COME BACK. ASK QUESTIONS. DEBATE. INFORM. KEEP COMING BACK. BRING PEERS. HAVE LUNCH. LEARN MORE. UPCYCLE A CHAIR. TAKE IT HOME. USE IT. A NEW SKILL. COME BACK. "HEY, I'VE BEEN LEARNING ABOUT PASSIVE SYSTEMS. WHY DON'T YOU HAVE MORE INFORMATION ON THIS?" GIVE SUGGESTIONS. BUILD A RELATIONSHIP. ATTEND A TALK ON PASSIVE HEATING. TAKE NOTES. LEARN. APPLY IT. HELP EACH OTHER. KEEP LEARNING.

"WOULD YOU LIKE A LEAFLET?"  
"NO, THANKS."

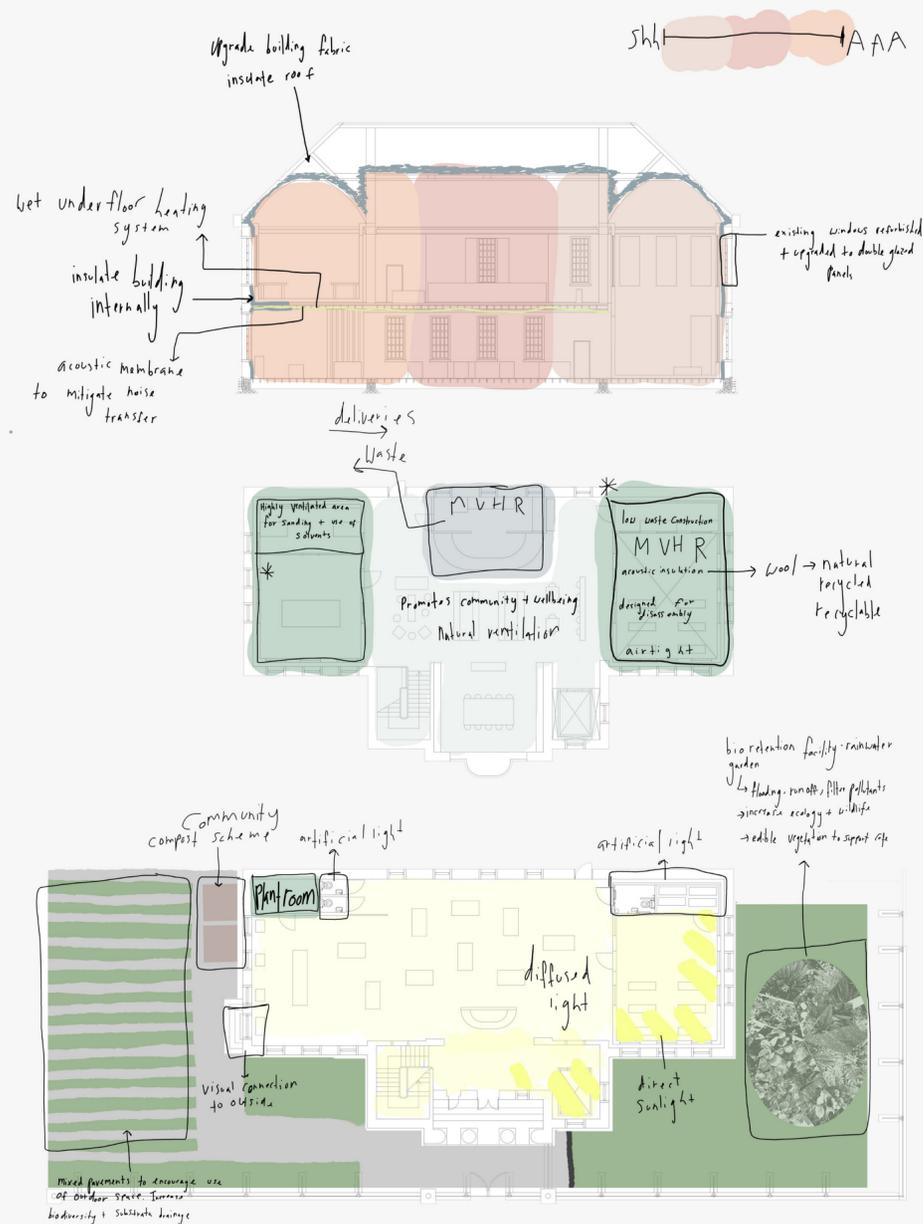
"WOULD YOU LIKE A LEAFLET?" SMILE AWKWARDLY. "AH WELL I LIVE IN A COUNCIL HOUSE SO I CAN'T REALLY DO ANYTHING." TAKE ONE ANYWAY. READ IT. LEARN. VISIT THE UPCYCLING WORKSHOP. LEARN. UPCYCLE A DRESSING TABLE. LEARN A NEW SKILL. KEEP IT. PRIDE. ENJOY IT. COME BACK. LEARN MORE. UPCYCLE A TABLE. SELL IT ON FACEBOOK. KEEP UPCYCLING. KEEP LEARNING. KEEP SELLING. COME BACK. ATTEND A DEBATE. AGREE. DISAGREE. BE PASSIONATE. WANT TO LIVE BETTER. "CAN I HAVE SOME MORE OF THOSE LEAFLETS?" KNOCK ON DOORS. NEIGHBOURS. "WE DESERVE BETTER." HAND OUT LEAFLETS. TEACH. START A COMMUNITY ACTION GROUP. KEEP UPCYCLING. START A PETITION. SHARE IT. WRITE TO THE COUNCIL. PLAN A PROTEST. POST IT. SHARE IT. MORE SIGNATURES. 10,000 SIGNATURES. GOVERNMENT RESPONSE. NOT GOOD ENOUGH. MORE PASSION. MORE PRESSURE. PLAN A TALK. PROTEST. POWER IN NUMBERS. COME BACK. HOLD A TALK. MORE SIGNATURES. MORE PRESSURE. 100,000 SIGNATURES. DEBATE SET FOR PARLIAMENT. NOW WE ARE GETTING SOMEWHERE. PLAN. LEARN. SHARE. PREPARE. CONTINUE TO CAMPAIGN. CREATE REAL CHANGE.

## Creative Study

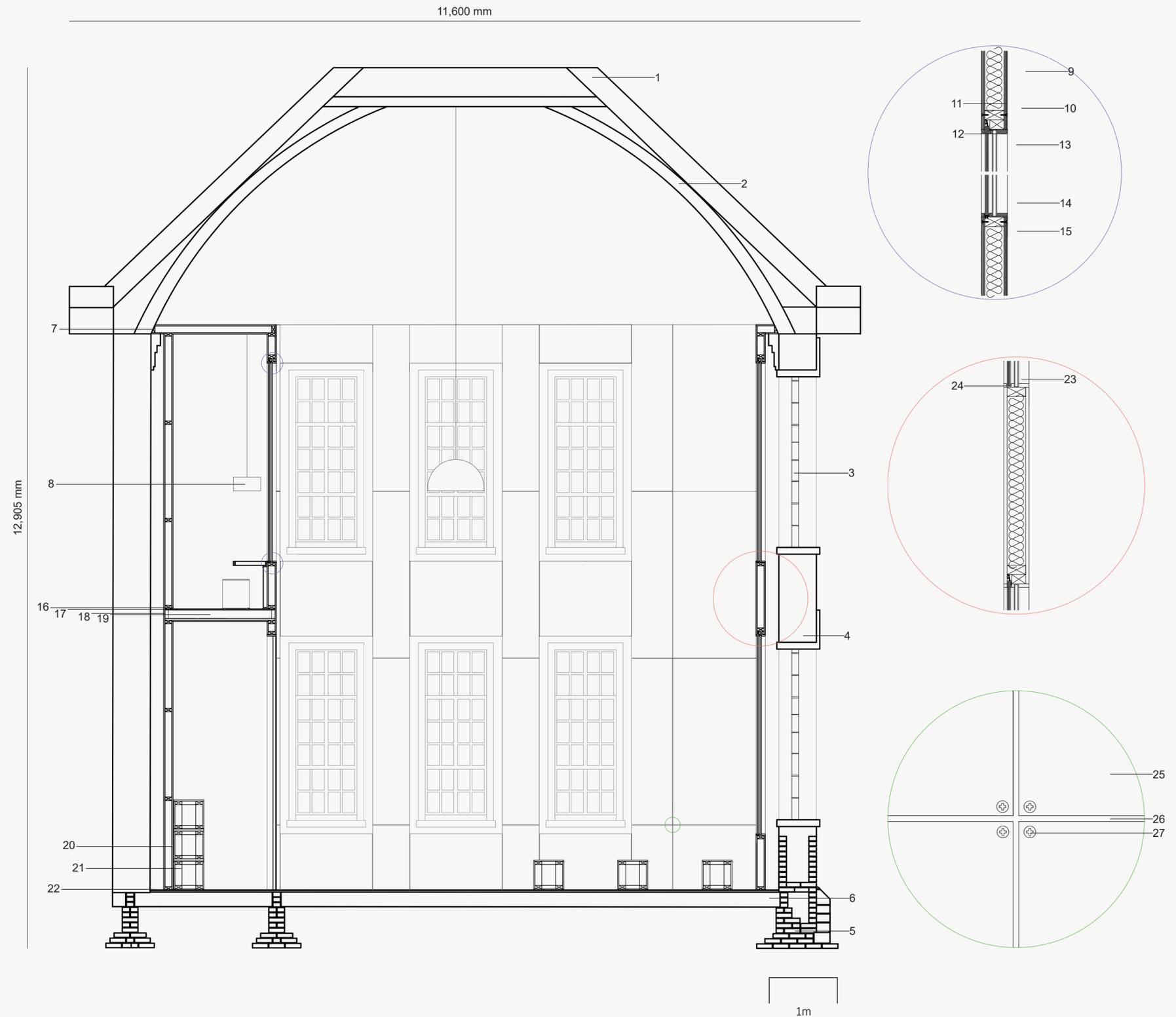
A series of leaflets exploring the potential impact that Project Retrofit could have on different individuals in different living situations. The study explores how homeowners, private tenants renting, social housing tenants and students could all get involved and benefit from project retrofit and the wider change that may be triggered.



**Architectural Strategy Diagram** showing the process of partial removal of the first floor plate and the process of inserting something into the new void space



**Environmental Strategy Diagram**



**1:20 Technical Section Key Intervention**

1. Existing timber roof structure
2. Existing vaulted ceiling structure
3. Refurbished double glazed existing sash windows
4. Existing solid brick wall
5. Existing brick footings
6. Existing concrete slab
7. Intervention connected back to existing ceiling structure
8. Allfar BLOM acoustic lightshade
9. 20mm birch faced plywood sheet 1200 x 2440mm
10. 75 x 50mm sawn timber
11. Hafele SF-30 top hung sliding system
12. 18mm birch faced plywood sheet 1400 x 2100mm
13. 25mm double glazed window unit
14. 100 x 50mm sawn timber stud wall construction
15. Thermafloce Cozywool insulation 50mm
16. 2.4mm Marmoleum Fresco in Moonstone
17. Techsound 100 Acoustic Membrane, 5.7mm
18. Joist hanger
19. Timber floor joists with 400mm centers
20. 18mm Fenix faced plywood
21. 100 x 50mm sawn timber box construction
22. Intervention connected back to concrete slab
23. 18mm birch faced plywood sheet
24. Hafele SF-30 system lower guiding rail
25. 20mm birch faced plywood sheet 1200 x 2440mm
26. Timber painted in Rust-Oleum Universal Paint, Matt Black
27. Phillips head screw, black