



SHETTLESTON HOUSING ASSOCIATION

RETROFIT JOURNEY

FULL STOCK ASSESSMENT

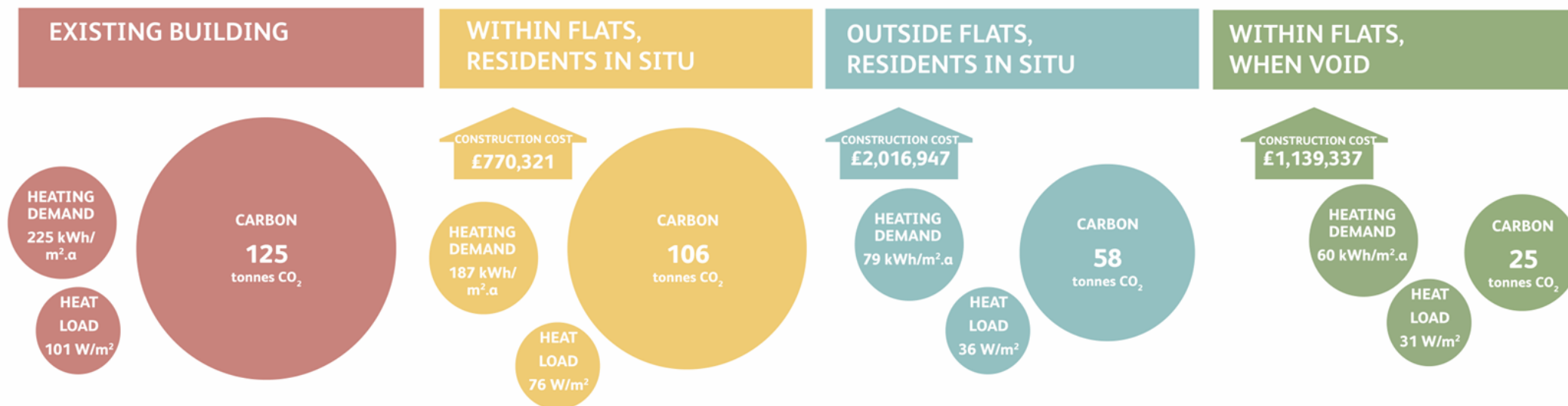
- ▶ 2021 – HUB WEST SCOTLAND APPOINTMENT CONSULTANTS TO PREPARE DELIVERY PLAN TO ACHIEVE EESSH2 AND (LONGER TERM) ENERPHIT STANDARD
- ▶ 5 ARCHETYPES – PHPP ASSESSMENT
- ▶ RANGE OF MEASURES TAILORED TO SUIT STOCK TYPES
- ▶ CRITICAL TO SECURE REDUCTION IN TENANT FUEL BILLS AND AVOID UNINTENDED CONSEQUENCES
- ▶ HIGH LEVEL COSTS
 - ▶ EESSH2 - £34M
 - ▶ ENERPHIT - £90M



PILOT FEASIBILITY STUDY

- ▶ 2023 – PARTNERSHIP PROJECT WITH HUB WEST SCOTLAND, COUNCIL'S RETROFIT TEAM & SPECIALIST CONSULTANTS & CONTRACTOR
- ▶ DEVELOP PRAGMATIC SOLUTION TO RETROFIT SANDSTONE TENEMENT WITH RESIDENTS IN-SITU
- ▶ BALANCE ENERGY CONSUMPTION, IMPROVED COMFORT AND REDUCTION IN HEATING BILLS WITH THE COST AND DISRUPTION OF UNDERTAKING RETROFIT WORKS
- ▶ IMPLICATIONS OF MEASURES – IMPACT ON TENANTS, IMPACT ON CONSTRUCTION PERFORMANCE, PRACTICALITY OF DELIVERY
- ▶ PHASED APPROACH TO WORKS
- ▶ LIMITATIONS OF SMALL FLATS & VARIETY OF SOLUTIONS





MEASURES FROM BEST TO WORST BY CARBON IMPACT



ASHP / electric storage heaters
 New windows
 EWI to rear end
 IWI to front
 Additional loft insulation
 Window draught stopping
 Insulate ground floor
 Flat front door improved
 MVHR
 PV
 Draught stopping to floor boards

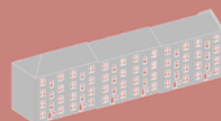
BIG HITTER -
 The measure with the biggest impact on carbon emissions. Note can only be carried out in conjunction with other measures

EASY WIN -
 The easiest + most effective upgrade to carry out.

TOTAL CONSTRUCTION COST
£3,875,725
 (£99,378 / FLAT)

CARBON SAVING: 100 TONNES PER YEAR
ANNUAL HEATING COST SAVING: £926/ FLAT

TIMELINE OF WORKS



Detailed Condition Survey
 Detailed PHPP Analysis
 M&E and Structural Consultancy

 New flat front doors
 Draught stopping between floor-boards (ground floor)
 Draught stopping windows
 Mechanical ventilation with heat recovery

 New communal doors
 Double glazing upgraded to Triple
 EWI Installation at rear and ends
 PV Panels serving each flat
 Communal corridor floor insulation
 Eaves Extension & Loft insulation

 IWI Installation at front
 Ground floor insulation
 Air tightness Improvements
 ASHP Installation

NEXT STEPS

- ▶ HIGH COST OF FULL RETROFIT UNAFFORDABLE AT SCALE
- ▶ APPLIED KNOWLEDGE TO INCREMENTAL APPROACH – SMARTER COMPONENT REPLACEMENT
- ▶ 2024 DEVELOPED ENHANCED SPECIFICATION WITH ARCHITECT FOR WINDOW AND CLOSE ENTRY DOOR REPLACEMENTS
 - ▶ TRIPLE GLAZING
 - ▶ AIR-TIGHTNESS
 - ▶ INSULATION
- ▶ LEARNING THROUGH EXPERIENCE
 - ▶ EXPECT THE UNEXPECTED
 - ▶ LEVEL OF DISRUPTION / TENANT (AND CONTRACTOR) FRUSTRATION



NET ZERO COLLABORATION GROUP

- ▶ **END 2023 JOINED NZCG - HUB WEST SCOTLAND & BE-ST**
- ▶ **GROUP OF ORGANISATIONS ON SIMILAR RETROFIT JOURNEY**
- ▶ **AIM TO SHARE KNOWLEDGE AND EXPERIENCE AND POOL RESOURCES TO DEVELOP WORKABLE SOLUTIONS THAT CAN BE REPLICATED**
- ▶ **VARIETY OF BUILDING TYPES, BUT SIMILAR ISSUES AND COMMON APPROACH**
- ▶ **TIME COMMITMENT BUT SIGNIFICANT BENEFITS:**
 - ▶ **TARGETED TRAINING FACILITATED BY BE-ST & HWS – TOPICS LED BY GROUP**
 - ▶ **KNOWLEDGE SHARING & BUILDING CONTACTS**
 - ▶ **LEARNING FROM REAL EXPERIENCE (GOOD & BAD)**
 - ▶ **SHARING COSTS OF DEVELOPING & EXPLORING PRACTICAL SOLUTIONS FOR ARCHETYPES**
 - ▶ **TRIAL APPROACHES & SHARING OUTCOMES**
 - ▶ **SUPPORT GROUP**