

Birmingham City Council

Report to Cabinet

27 June 2023



Subject: Three Cities Whole House Retrofit Pilot – Interim Progress

Report of: Paul Langford, Interim Strategic Director, City Housing

Relevant Cabinet Member: Councillor Jayne Francis, Cabinet Member Housing and Homelessness

Relevant O & S Chair: Councillor Mohammed Idrees, Homes

Report author: Wayne Davies, Housing Director, Asset Management City Housing

wayne.davies@birmingham.gov.uk

Pearl Roberts, Programme Manager, City Housing

Pearl.Roberts@Birmingham.gov.uk

Are specific wards affected?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No – All wards affected
If yes, name(s) of ward(s): Bromford and Hodge Hill		
Is this a key decision?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If relevant, add Forward Plan Reference: 011085/2023		
Is the decision eligible for call-in?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Does the report contain confidential or exempt information?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If relevant, provide exempt information paragraph number or reason if confidential: No		

1. Executive Summary

- 1.1. This report sets out an interim progress report on Birmingham's Three Cities Whole House Retrofit Pilot.

- 1.2. The pilot has completed the planning and solution design phase and is in delivery. The pilot scheme will continue to apply an incremental learning approach to works as it progresses.
- 1.3. It directly supports Birmingham's bold ambition to deliver best in class housing services, placing the Council front and centre in addressing fuel poverty in an affordable and achievable way by developing and implementing innovative solutions to scale up retrofit.
- 1.4. The scale of the Council's stock ownership is large (c. 60,000 homes); the delivery of the Whole House Retrofit Pilot presents a material opportunity for Birmingham City Council to progress towards its net zero carbon ambitions, and to make a significant contribution to economic recovery and growth through employment and skills opportunities for local businesses and the local community, and the economic benefits this can bring to the City.
- 1.5. The project is maintaining close contact with local Ward Members and the MP for Bromford and Hodge Hill as well as local residents via individual direct communications and 'door-knocking', drop-in events and briefings to the Bromford and Hodge Hill Ward Forum and Bromford Housing Liaison Board.
- 1.6. The pilot, funded from the Housing Improvement budget within the HRA, is testing retrofit works on 300 properties in order to explore funding opportunities, find effective retrofit solutions in both technology and process, and stimulate the market towards retrofit, so that a mix of retrofit and rebuild can be used to meet the carbon reduction targets on the entire Council stock over the longer term. The pilot planning and design phase has confirmed that the retrofit solutions will be delivered within the budget approved by Cabinet in July 2022 as set out in Section 9.3.

2. **Recommendations**

That Cabinet:

- 2.1. Notes the interim progress report.
- 2.2. Delegates authority to:
 - The Interim Strategic Director, City Housing to vary the composition of the retrofit solutions and implementation plans within the approved cost envelope to manage delivery within any arising supply side and manufacturing constraints.
 - The Interim Strategic Director, City Housing (or their delegate) following consultation with the Interim Director of Finance (S151 Officer) (or their delegate) to submit bids for and accept available grant funding opportunities to support delivery of the pilot.

3. Background and Context

- 3.1. The Three Cities: Whole House Retrofit (WHR) Pilot was approved by Cabinet in July 2022. It plans to invest £25.986m capital and £2.203m revenue over 30 years to retrofit 300 Housing Revenue Account (HRA) Council properties. The pilot aims to test two different approaches to improve thermal efficiency, reduce carbon emissions and improve tenants' energy demand usage.
- 3.2. The project directly supports the Council's levelling up strategy, 'three cities' approach and 'build back better' objectives. Increased inclusivity of growth will be derived from place-based regeneration, focusing on 'worst-first' housing and 'green growth' through growing employment and skills opportunities for local businesses and the local community, alongside the economic benefits this can bring to the city.
- 3.3. The pilot is intended to make a step towards these ambitions while allowing the Council to apply an incremental learning approach to works through designing retrofit solutions, taking learning from the design, planning and implementation of the pilot and progress the route to zero work on Council stock without committing the Council to unaffordable levels of borrowing.
- 3.4. The scope of the pilot is to deliver WHR to 300 units of BCC social housing stock in Bromford, East Birmingham: 174 low rise flat properties to EPC B+ and 126 cross wall properties to EPC B.
- 3.5. The WHR Pilot implementation plan is as set out below:

Project Milestones	Delivery Date
Report & Business Case to Cabinet	26 July 2022
Programme Team in Place	31 July 2022
Phase 1: Solution planning & design	May to December 2022
Phase 2: Initial Solution Rollout	January 2023 to October 2023
Interim Progress report to GBSLEP and BCC Cabinet on Pilot	27 June 2023
Phase 3: Wider Solution Rollout	June 2023 to May 2024
Phase 4: Monitor and review Pilot	January 2024 to May 2024
Report to BCC Cabinet on Pilot and Recommendations for Scaling	April/May 2024

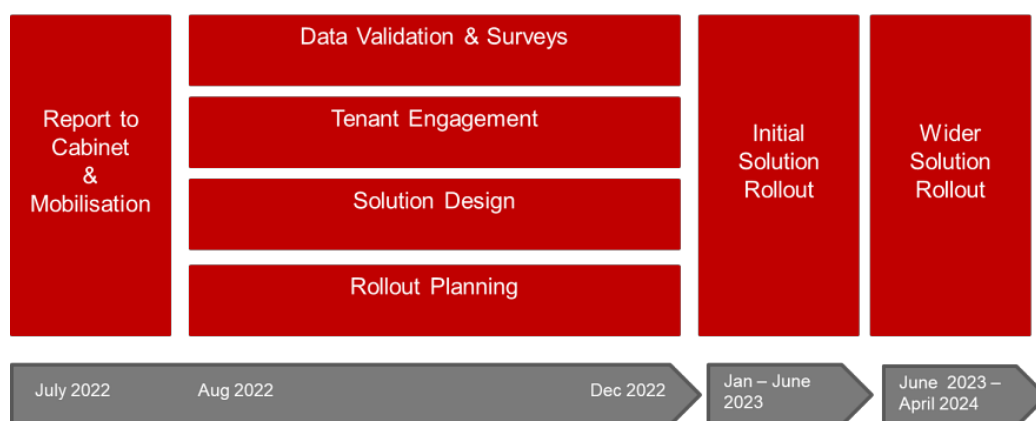
4. Governance

- 4.1. The WHR Pilot is an integral part of the City Housing Transformation Programme which comprises a portfolio of projects for the delivery of the City Housing vision.

- 4.2. The WHR Pilot is a core component of the City Housing Capital Investment and Repairs Transformation Programme.
- 4.3. The project is managed in accordance with BCC corporate projects and programmes methodology, as agreed with the Housing Transformation Programme and corporate Programme Management Office.
- 4.4. The Pilot is being delivered by BCC's Strategic Housing Repairs and Maintenance Partner.

5. Report on Progress: Phase 1 Solution Planning & Design

- 5.1. Solution planning and design activities have included the following:



- a) Property mapping, data validation of property information and detailed on-site surveys (including EPC ratings, space heating demand, air tightness, structural retrofit surveys, damp, dilapidation, asbestos, utilities, CCTV, topographic and PEA surveys) of the properties.
- b) Consultation and engagement with tenants to explain the programme and obtain their buy-in. This has included a consultation/launch event in August 2022, a door-knocking exercise for properties identified as part of the initial solution rollout and conducting pre-works tenant surveys.
- c) Consultation and engagement with Members: the Senior Responsible Owner has provided regular briefings to the Cabinet Member for Housing and Homelessness. The Ward Members have also received briefings on the project as has the MP for Bromford and Hodge Hill.
- d) Engagement and dialogue with BCC Planning to prepare the required planning applications, ensure that all relevant permissions are obtained and that planning and building control conditions are met through the specified design. BCC Planning requested adjustments to the initial designs to retain the 'look and feel' of existing properties and street-scene. These requirements have informed the

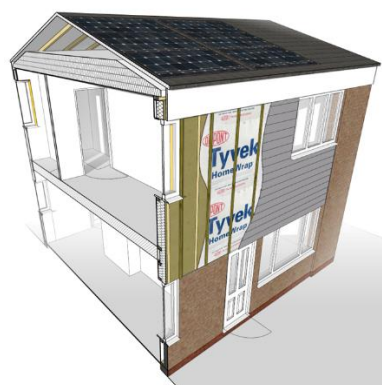
retrofit solutions for the two archetypes, this has required changes to costs and project timeframes (as described in more detail below).

- e) Completing Grant Applications: BCC has secured a grant of £325,000 (BCC match funding £175,000) from the Greater Birmingham and Solihull Local Enterprise Partnership Growing Places Fund as a contribution to the Initial Solution Rollout. BCC has also been awarded £24.806 million from the Social Housing Decarbonisation Fund (SHDF). The SHDF includes fabric first measures for 2,076 homes over 9 different schemes, including the WHR Pilot, to test a variety of retrofit designs which have the potential to be scaled across the Council's wider stock.

5.2. Following the detailed survey work, engagement with BCC Planning and solution design with supply chain partners, the Project Board has agreed retrofit solutions for the two archetypes as outlined below.

5.3. The pictures below illustrate before and after views of the two archetypes:

a) Cross Wall Homes: Before & After



Low Rise Flats: Before & After





Low Rise Flats

- 5.4. The solution fabric measures have been adjusted to meet BCC Planning requirements. A Mixergy¹ heating solution will be deployed alongside the solar PV solution to support energy efficiency performance to address fuel poverty, decarbonisation and increased EPC ratings of B.
- 5.5. The Low Rise Flat initial solution rollout to 30 properties at Dreghorn Road is planned for Jan 2023 – October 2023 and wider solution rollout for June 2023 – April 2024.
- 5.6. Retrofit works to the first 30 Low Rise Flats are progressing well with practical completion expected in August and final completion including formal sign-off of all documentation in October.
- 5.7. The project has encountered a number of unforeseen issues which have had to be addressed to ensure a ‘future proofed’ solution. These works have included: bracing to roof and joists, fire stopping to partition walls and concrete repair works to the balconies. The project has resolved a small number of issues encountered on-site during the initial solution rollout including verification of housing asset data and discrepancies in the address list. The team is also reviewing the status of existing boilers within the Low Rise Flat blocks with a view to coordinating boiler replacement with the retrofit works. The project is reviewing the impact of these issues and the likely contingency required to accommodate subsequent issues on the target April 2024 completion date.
- 5.8. The Project Board has agreed the leaseholder proposal (windows, roofs, chimneys, firestopping, entrances plus the option to select Mixergy) which will apply to 10 leaseholders within the pilot and the Section 20 consultation exercise commenced in May 2023.
- 5.9. Planning applications for Phase 2 and 3 of the rollout are in train.

Cross Wall Homes

¹ The Mixergy solution is currently being delivered to 126 apartments in 3 tower blocks in BCC and is delivering savings on energy costs (average £600 p.a.).

- 5.10. Through the managed solution design process, the programme has identified several challenges which have impacted programme scope, costs and timescales:
- The Cross Wall Homes comprise 6 different archetypes (e.g. multiple rear structures and porch designs) which are not suitable for pre-made External Wall Insulation (EWI) panel treatment and which require 'bespoke' EWI panel solutions.
 - The number of different archetypes (6) and the distribution of freeholder Cross Wall Home properties (145) compromises the ability of the solution to achieve the expected performance standard/EPC A level.
 - The proposed fabric measures require significant structural changes (foundations, screw pilings, steelwork) to fix and bear the weight of the panels with a consequential significant increase in the unit price exceeding £150k per unit.
 - The proposed works are likely to result in significant tenant disruption.
 - The design details and bespoke nature of retrofit works also limits the ability to scale the solution, drive commerciality and decrease the per property costs.
- 5.11. The retrofit solution for the Cross Wall Homes includes fabric measures plus, Solar PV, Battery and Mixergy which is suitable for 104 properties; the remaining 22 will receive a more traditional EWI solution. As this solution is delivered within the 'red line' boundary for each property, the Council will not proceed with a Freeholder Offer to owner-occupied properties adjacent to the target HRA properties.
- 5.12. The initial solution rollout to 10 Cross Wall Homes at Cookspiece Walk and Little Meadow Walk is planned for April 2023 – July 2023 and wider solution rollout for July 2023 – April 2024.
- 5.13. Retrofit works to the first 10 Cross Wall Homes are progressing well with practical completion expected in June and final completion including the sign off of all documentation in August.
- 5.14. There has been a small delay in the completing the PAS² design process; this is expected to be confined to the initial solution rollout. Compliance with PAS is required to draw down the SHDF grant contribution.
- 5.15. The project has encountered a small number of issues which have had to be addressed to ensure a 'future proofed' solution. These have included bracing to roofs and joists, the treatment of porches and rear extensions and the discovery of asbestos under soffit/tiles. The project is reviewing the impact of these issues

² Publicly Available Specification for the installation of energy efficiency measures in existing buildings

and the likely contingency required to accommodate subsequent issues on the target April 2024 completion date.

- 5.16. A planning application for the final phase (22 Cross Wall Homes) of the rollout is in development.

6. Social Value

- 6.1. The programme team has worked in partnership with Equans to agree a series of social value outcomes for the WHR Pilot, these are summarised in the table below. Progress is being monitored on a quarterly basis.

Social Value

BBC4SR Charter Theme	Measure	Number	Cross Wall Homes	Low Rise Flats	Measure Value
Local Employment	# local people FTEs employed on contract	52	23	29	£1,635,972
	% local people on contract that live within 30 miles	70%	70%	70%	0
	# opportunities advertised with BCC Jobs/Skills	52	100%	100%	0
	# hours supporting unemployed into work	30	13 (focused on ward)	17 (focused on ward)	£9,495
	# people taken on who are NEETs	2	1	1	£88,689
	# school/college visits (staff hours)	22	9	13	£354
	# training opps BTEC City & Guild NVQ HNC BTEC Level 2, 3, 4	208	1	3	£59,586
	# apprenticeships	6	2	4	£69,910
Green & Sustainable	Achieve Net Zero 2030		270 tCO2e p.a.	330 tCO2e p.a.	0
Partners in communities	# people in fuel poverty assisted	300	126	174	0
Buy Local	Total £ spent VCEs in supply chain	£1,000,000	tbd	£400,000	£360,000
Partners in Communities	Donations to local community projects (£ and materials)	£6,000	£3,000	£3,000	£18,000
Green & Sustainable	Voluntary time to creation / management green infrastructure (hours)	120	54	66	£1,931
TOTAL VALUE					£2,247,102

7. Solution Planning and Design and Initial Solution Rollout – Lessons Learned

- 7.1. As outlined above and agreed in the report to Cabinet in July 2022, a core objective for the pilot is to explore and test the two proposed solutions and approaches to retrofit works. The Solution Planning and Design phase and the initial solution rollout phase of the project has provided valuable insight and several lessons learned as highlighted in the table below.

ID	Lesson Learned	Solution	Mitigation/Action
1	Property mapping and data review - the BCC property information was incomplete and included inaccuracies which impacted solution design and also grant funding applications. Significant effort was required to review, validate and undertake additional surveys.	All	Inaccuracies in asset data can lead to material amendments to scheme design and costing. Additional scrutiny of asset information is essential at 'concept stage'. BCC is investing in surveying its wider HRA stock to improve its asset data set.
2	Engagement and Dialogue with BCC Planning - initial discussions with Planning could have started earlier and prior to the report being considered by Cabinet in July. Subsequent discussions were protracted. Feedback on the initial query and scheme overview was slow and informal. BCC Planning feedback requires the project to preserve the existing look and feel / street scene which has significantly impacted the designs and cost for both	Cross Wall Low Rise Flats	Timely collective engagement with BCC Planning. PPA to be agreed from the outset. Assign formal ownership and accountability for the application at the outset. BCC to consider the impact of requirements in view of BCC's wider strategic objectives in relation to R20 and plans to retrofit its HRA stock.
3	Design & Supply Chain - engagement, dialogue and design work with Melius (Melius has previously delivered a panel solution to properties with Notts City Housing) highlighted (a) significant structural/fixing challenges with the CWH archetype (b) Melius product guarantee/warranty (1 year) is not compliant with Energiesprong model requirements and EQUANS supply chain partner protocols	Cross Wall	Approach needs to ensure there is a variety of options for all key components/ suppliers. Noting, concerns around Melius warranty provision and ability to meet programme at an earlier stage in the process.
4	Property suitability - a fuller review and understanding, including necessary intrusive surveys, of the suitability of the full target address list would mitigate project risks for solution design and support the output based Energiesprong specification approach.	All	A comprehensive review and understanding (inclusive of limited design works) of the suitability of the full address (outside the phase) list would mitigate risks later in the programme. This would delay the programme from the outset but likely result in programme and costs savings (and accuracy) in the long-term. Joint BCC/Contractor surveys of every property recommended.
5	Distribution of Properties & Owner Occupiers - the distribution of 'pepper-potted' properties and adjacent owner-occupiers has a significant impact on design and performance standards due to additional and complex details around the party wall(s),	All	Owner occupiers (not included within the scheme) are likely to significantly impact on the performance outputs of the adjoining properties. BCC to invest in understanding and mapping assets early in scheme development
6	Solution Design Works & Performance Specification - it is necessary to invest in a 'front-ended' design process for a scheme of this nature and to balance the output based specification approach with the traditional documented scope of works/employers requirements.	All	The Design works are critical to critical path, formation of contract etc. These works should start as early as possible with 'float' allowed for to accommodate Client/ Planning feedback. The design will impact both the programme and thus costings.
7	Programme Roles and Responsibilities - BCC technical staff have not been significantly involved in the design stage to validate emerging solution design, costs and plans prior to consideration at Project Board .	All	Dedicated client technical lead should be assigned to work alongside contractor to assist in problem solving design challenges and act as a link between BCC Planning and Contractor.
8	PAS Design - PAS design process is complex due to the bespoke nature of design (interface between different systems/ junctions) for the Cross Wall Homes and there is a risk to being able to claim full SHDF grant funding . Risk on funding must be considered by Project Board. Outcome possibilities:	Cross Wall	EQUANS PAS team and associated PAS designers are working closely to provide full technical details, architects drawings etc to support the approval process. This will also be discussed with the BEIS SHDF Delivery Officer. Works continue and the Council will take the learning from the pilot as it develops its wider retrofit delivery programme.
9	Materials - Industry wide delay on insulation; long lead times of 8-12 Weeks may impact on medium and long term programme.	All	Equans continue to engage supply chain; the Council is exploring options to provide advance payment for materials to mitigate against this supply side issue.

8. Consultation

- 8.1. The project has consulted with the Ward Members, the MP for Bromford and Hodge Hill and with local residents on the pilot and the recommended retrofit solutions.
- 8.2. One of the tenants involved in the initial solution rollout at Cookspiece Walk said at a drop in event held on Tuesday 21 March “I think it’s great and can’t wait for the work to get started. It’s so cold in my house even with the heating on.”

9 Risk Management

- 9.1 Risks are managed at the project level by the Programme Manager for the Pilot, reporting to the City Housing Transformation Programme Board and the Corporate Programme Management Office.

10 Compliance Issues

10.1 How are the recommended decisions consistent with the City Council’s priorities, plans and strategies?

The WHR Pilot progress reported makes a direct contribution to both Corporate and Directorate outcomes, and is an example of Birmingham taking a Bold approach, specifically it supports the Council plan priorities:

- A Bold Prosperous Birmingham
- A Bold Safe Birmingham
- A Bold Green Birmingham

10.2 Legal Implications

- 10.2.1 The proposed allocation of work is consistent with the Council’s duties of effective management of the Council’s housing stock under Section 21 of the Housing Act 1985 and other legislation.
- 10.2.2 Under S.111 Local Government Act 1972 the Council has power to do anything which is calculated to facilitate, or is conducive or incidental to, the discharge of any of their statutory functions.

10.3 Financial Implications

- 10.3.1 The Three Cities Whole House Retrofit (WHR) Pilot was approved by Cabinet in July 2022. It agreed to provide capital funding of £25.986m to deliver the pilot and this is budgeted and funded within the agreed HRA Business Plan capital programme. Funding is through a combination of HRA borrowing and government grant including £3m from the Social Housing Decarbonisation Fund. Current forecasts indicate delivery will be within the agreed funding envelope. In addition,

there is an anticipated ongoing revenue cost of £2.203m over 30 years in respect of service and maintenance.

10.4 Procurement Implications

10.4.1 The retrofit solutions for the Low Rise Flats and Cross Wall Homes have been commissioned utilising the existing, compliantly procured, Housing Repairs and Maintenance contractual arrangements with Equans, as part of the 2022-2024 Capital Programme, to deliver the WHR retrofit works to 174 low-rise flats to EPC B+ and 126 Cross Wall Homes to EPC B.

10.5 Public Sector Equality Duty

Regarding section 149 of the Equality Act 2010, the proposed operating model is not considered to have any practices that could be considered unfair, unlawful or discriminatory within this context. The Equality Assessment (EA) that reflects the changes of this proposal will be monitored and re-evaluated at the end of consultation.

11 Background Documents

None

12 Appendices

None