

Retrofit London

Housing Implementation Plan 2022/23



#BeTheSolution

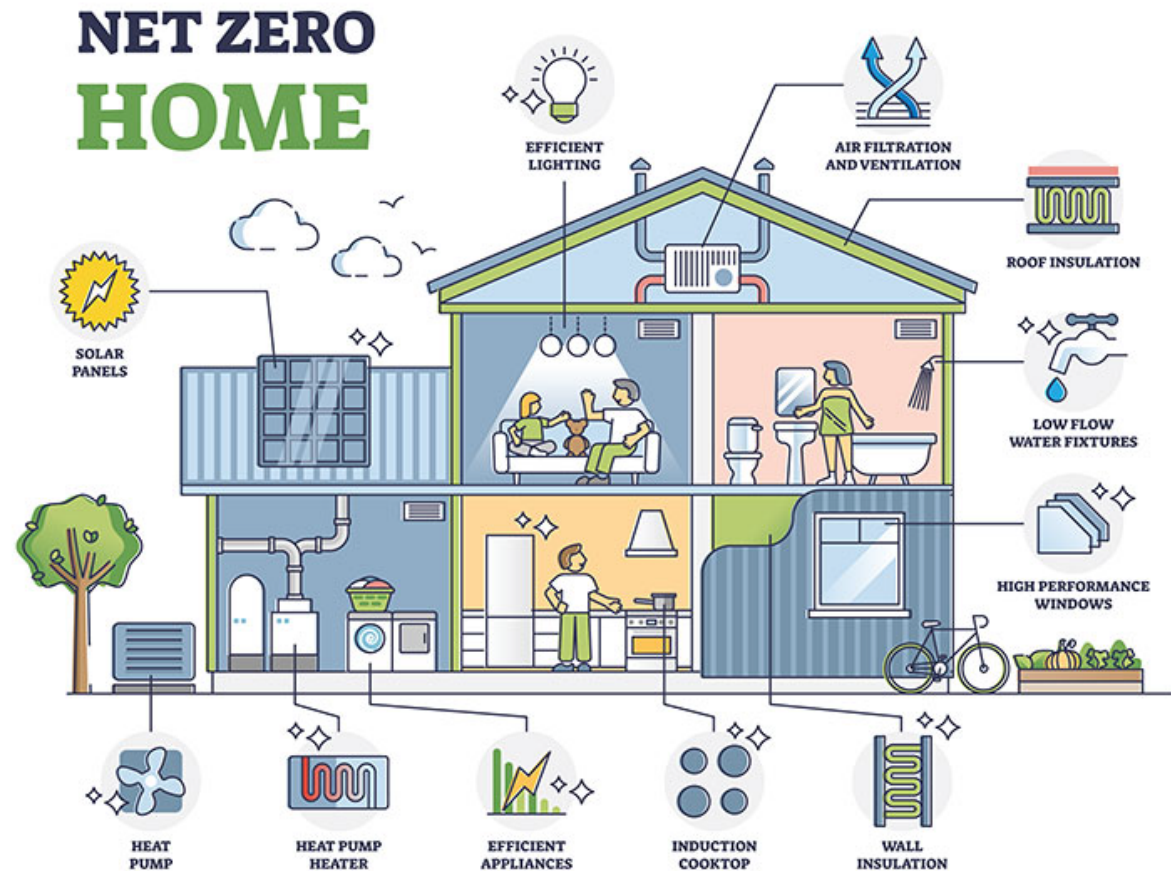


Why making London's homes greener and warmer is important

London's homes generate around a third of the capital's emissions. Homes must adapt so that their features and the way they are lived in minimise the generation of carbon emissions.

For residents a home should be a place of security, comfort and connection. It should be a base that enables the pursuit of aspirations. For many this is not the case.

By retrofitting homes (improving the fabric, heat source and energy generation and use) they become better for the people who live in them, with greater levels of comfort, and fit for the future, with net zero emissions the ultimate aim as shown in the graphic to the right.



The overwhelming majority of Londoners are concerned about climate change (82% according to London Councils polling) and the threat posed requires all of us to act with ambition and at pace if we are to combat its worst effects.

As we retrofit homes so that they are better and fit for the future, there are specific issues that this programme needs to also consider around tenure, typology and resident needs.

We already know that social renters have worse economic security than their peers in relation to the quality of their work, finances, health and wellbeing. There are quality challenges in the private rented sector and residents have less control over the features of their home. Two thirds of accommodation used for temporary housing across the country is in London and 65% of that accommodation is occupied by women. There is a correlation between homes with the poorest EPC ratings and their location in the most deprived areas of London. Fuel poverty tends to exist in households on the lowest incomes. We know that older homeowners can be asset rich and cash poor and are a growing part of low-income households in London. This list goes on.

This is why addressing social justice issues is at the heart of our programme. It is also why London's local authorities have a lead role in delivering green transitions so that we can ensure they are just, contributing to the wider development plans for places. Through an intelligence based, data driven approach, our programme will systematically identify the barriers faced by protected groups and those with economic challenges, and seek to ensure that measures are in place to deliver a just transition. This is alongside listening to the voices of residents most at risk of disadvantage and developing the programme with and alongside them. We will monitor this and report on progress as part of our approach to measuring success. It will also unlock the following wider benefits:

- Employment and economy – thousands of skilled workers will be required to deliver housing retrofit.
- Health – warmer, drier homes reduce respiratory disease and make managing chronic conditions easier.
- Investment – increased demand stimulates investment in infrastructure, plant, equipment, and labour.
- Maintenance – warmer, better ventilated homes reduce dampness and mould growth.
- Poverty – making homes more energy efficient means fewer households are in fuel poverty.

We acknowledge that currently cost is a significant barrier, so we will need to develop approaches which mean the most at need are those that are best supported in the transition to greener and warmer homes.

The Retrofit London Journey to Date

The Retrofit London Housing Implementation Plan is the next stage of a journey which will end with all of London's homes being retrofitted.

In December 2019, London Councils agreed an ambitious Joint Statement on Climate Change, which sets out the boroughs' approach to governance, citizen engagement and resourcing for climate change, as well as seven major programmes for cross-borough working.

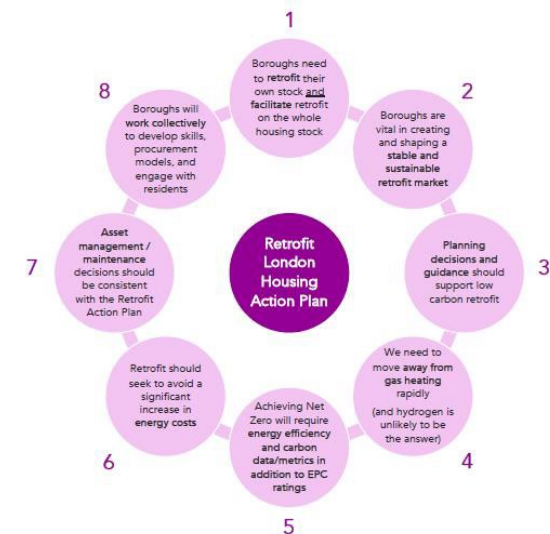
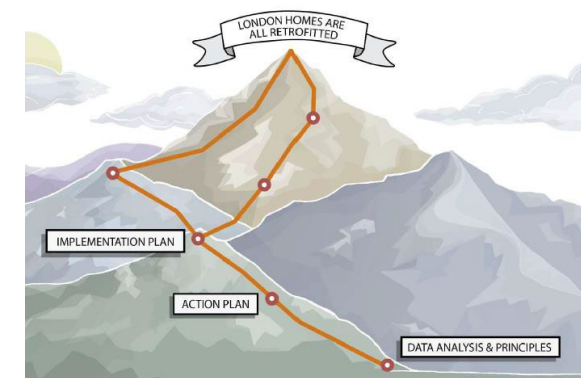
In 2020, London Councils Transport and Environment Committee endorsed Enfield and Waltham Forest as lead boroughs for programme #1 Retrofit London. The programme has a headline target of all buildings being an average of EPC B by 2030.

In 2021, Parity Projects analysed data on London's housing stock, which identified pathways to decarbonisation, as well as headline costs and measures required.

This work informed the Retrofit London Housing Action Plan, which was launched in October 2021. The Action Plan provided a clear framework for taking forward housing retrofit with 8 principles to guide delivery and 19 recommended actions covering four key areas of activity:

- Retrofit measures and plans
- Delivery models, skills and supply chain
- Cost, funding and finance
- Engagement, take-up and lobbying.

The Lead Boroughs and London Councils, with support from Campbell Tickell and Nesta, have now developed the Retrofit London Housing Implementation Plan for 2022/23, which aims to make London's existing homes greener and warmer.



Introduction to the Retrofit London Housing Implementation Plan

The Retrofit London Housing Implementation Plan (RLHIP) takes the recommended actions from the Housing Action Plan and translates them into tasks with timescales for delivery.

To support development of the RLHIP Campbell Tickell were appointed to prepare a report which looked at:

- A sequence of activities that achieve an average of EPC B, or equivalent, by 2030.
- A programme structure and management approach capable of achieving the required objective.
- Maximising transparency within the programme so that each local authority can easily work out what the opportunities are to get involved.
- The ways to secure approval to implement Retrofit London and how to create the delivery capability to do so.

In terms of the delivery approach and resourcing, this also built on work undertaken by Nesta to identify what this might look like at different stages of the Programme's life cycle.

The valuable insights that these workstreams provided have been synthesised into the RLHIP, which aims to provide the framework for Programme delivery over the next 12 months.

Retrofit measures and plans	
1	Improve the building fabric of London's inefficient homes
2	Develop a plan for retrofitting ventilation systems to improve health and air quality
3	Electrify heat
4	Deliver smart meters and demand flexibility (controls, storage) in retrofitted homes
5	Increase solar energy generation on London homes
6	Map out each building's journey towards lower energy costs and Net Zero
Delivery models, skills and supply chain	
7	Review current maintenance programmes and identify retrofit opportunities
8	Facilitate procurement of materials and services at a larger scale
9	Enable planning to facilitate low carbon retrofit, including in Conservation Areas
10	Develop retrofit skills actively across London
11	Set up a clear and consistent system to report and monitor progress (and success)
Costs, funding and finance	
12	Establish the cost of retrofit, business case and funding gap for the different tenures
13	Maximise capital finance for council owned stock (and eligible homes)
14	Create a 'Finance for retrofit' taskforce with finance experts
15	Support the owner occupier and PRS sectors to leverage private investment
Engagement, take up and lobbying	
16	Social housing: engage with tenants, leaseholders and other registered providers
17	Engage with owner occupiers and the Private Rented Sector
18	Lobby Central Government for more support, guidance and funding
19	Develop and implement the Action Plan together

Governance and the Delivery Approach

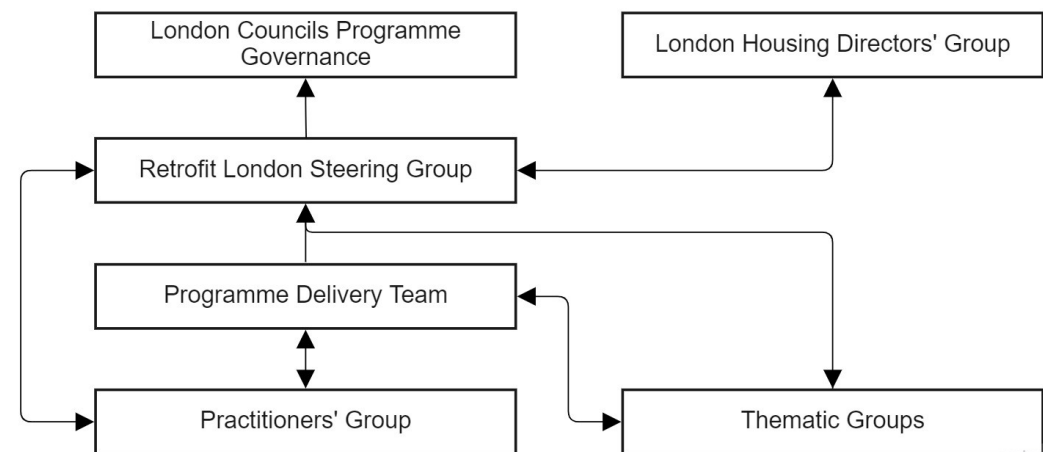
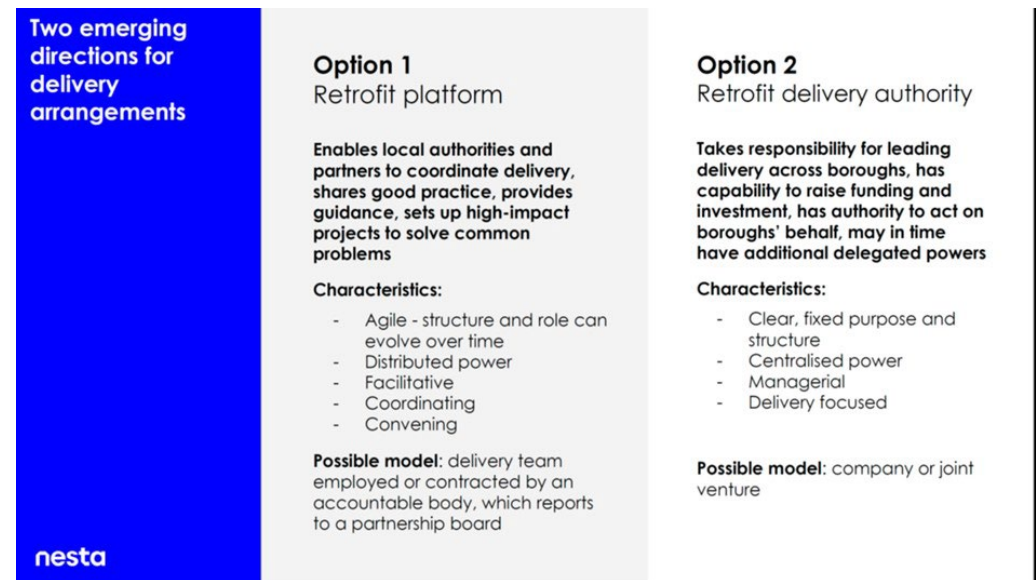
There is already an established governance structure for the Retrofit London Programme. This is a strong basis for the delivery of the RLHIP as it provides appropriate levels of management and oversight for the current programme.

However, given the potential scale of the programme in the future, this will likely need to evolve as highlighted in the work undertaken by Nesta – see graphic to the right.

An early priority will be establishing a dedicated Programme Delivery Team (PDT) to take forward the RLHIP. This will be both a clear statement of intent by London's local authorities, as well as a functional change which will facilitate the successful delivery of the next stage of the programme.

The PDT, with oversight from the Lead Boroughs, will be the operational lead for the Programme, including aspects such as delivering tasks, managing risks and monitoring progress. As implementation starts it will be relatively modest, with a team of three envisaged by the end of 2022/23.

May 2022



Identifying Opportunities and Priorities

As the RLHAP showed, the scale of the challenge in getting London's housing stock to an average of EPC B by 2030 is nationally significant. The long-term nature and inter-relationships of many of the tasks means that some must start before others. Also work on some tasks depends on completion of earlier steps. The scale of activity means that careful prioritisation is necessary to ensure the best use of scarce resources.

It is also clear that there is a great deal of work taking place on the retrofit agenda, so building on existing programmes and projects will be important. This includes acknowledging that London is not alone; across the UK there is knowledge and learning which can move us all forward. Finally, collaborative and collective working across disciplines and sectors is the key to success.

In terms of opportunities, through engagement with stakeholders, and feedback from London's Housing Directors, we have identified a number of key areas to take forward as a priority:

1. Developing guidance on retrofit for challenging properties (e.g., tower blocks and stock with high numbers of leaseholders);
2. Producing good practice specifications, including for design and monitoring, to minimise variability for procurers and suppliers;
3. Facilitating joint procurement to enable scaling up and reduce unit costs;
4. Leading collaborative work with Registered Providers (NHF, G15, G320) to share knowledge and deliver a consistent approach;
5. Developing a skills and knowledge framework for asset planning, project procurement and delivery and maintenance;
6. Regular engagement with the GLA and government departments to inform the distribution of resources and policy development (e.g., the Decent Homes Standard);
7. Engaging with the retrofit sector and other key delivery stakeholders such as energy companies;
8. Enhancing planning to facilitate low carbon retrofit, including in conservation areas;
9. Agreeing common performance measures;
10. Developing approaches to designing and delivering place-based and archetype solutions; and
11. Designing models for strategic delivery partnerships, including the private sector, and developing the market.

This is an extensive list, with many opportunities being multi-faceted and with durations beyond 12 months, so the approach has been to, as far as possible, include tasks which start to realise them in the near term. It should be noted that opportunity number 11. is something that will be taken forward as the delivery approach for the Programme evolves.

Alongside the work by Campbell Tickell and Nesta, these opportunities have informed the priorities for the 2022/23 Implementation Plan.

Priorities for the 2022/23 Implementation Plan

Priority A	Leading delivery	Priority G	Skills
Priority B	Data and monitoring	Priority H	Planning
Priority C	Action plans for local authority housing	Priority I	Finance and funding
Priority D	Reducing energy demand	Priority J	Procurement
Priority E	Heat pumps	Priority K	Communications and case making
Priority F	Heat networks	Priority L	Community and resident engagement

Priorities I, J and K are crosscutting so the assumption is that they will also be addressed within the delivery of priorities A to H. Therefore, the tasks listed against the crosscutting priorities cover specific elements of interest which are additional and / or overarching.

It is acknowledged that, given the complexity of the retrofit challenge, priorities and supporting tasks will be somewhat fluid. Moreover, this is not an exclusive list and other areas of work will be prioritised where they present a more immediate challenge and / or opportunity.

It should be noted that the programme will also be guided by overarching climate action policy principles, for example those set out in the national Heat and Buildings Strategy:

- Accelerate 'no- and low-regrets' action now.
- Take a whole-buildings and whole-system approach to minimise costs of decarbonisation.
- Provide long-term signals to investment by setting requirements but allow flexibility of approach.
- Target support to enable action for those in most need.
- Innovation driving down costs, improving options and informing future decisions.

In the following sections each RLHIP priority is set out in more detail. It should be noted that there will be a level of detail below many of the tasks and that they are not always sequential.

Priority A – Leading delivery

Synopsis	<p>The Retrofit London programme, with its mandate from 33 London local authorities and support from national and regional government, as well as across the sector, has already been leading the way with the development of the RLHAP and joint working between the lead boroughs of Enfield and Waltham Forest.</p> <p>Now in response to the scale of the challenge, the current arrangements will evolve with the first iteration of a delivery vehicle. The delivery vehicle has a key role to play in organising, initiating and managing projects. Therefore, getting an appropriately resourced delivery vehicle up and running is a crucial foundation of the programme. In the first instance this will require setting up the Programme Delivery Team (PDT). It is probable that this will evolve as the programme itself moves ahead.</p> <p>As well as the wider Implementation Plan tasks, there are specific early deliverables for the PDT in respect of mapping and coordinating retrofit activity.</p>
Challenges	<p>Establishing the PDT:</p> <ul style="list-style-type: none">• Securing funding.• Capacity of Lead Boroughs and London Councils to support transition.• Managing risk of an interim arrangement whereby a single organisation hosts the PDT.• Recruitment.• Agreeing hosting arrangements.• Collecting funding. <p>Mapping retrofit activity and horizon scanning:</p> <ul style="list-style-type: none">• Volume of projects and initiatives already underway.• Information sharing where approaches are viewed as innovative / commercially sensitive.• Availability of resources to engage with multiple emerging technologies.
Drivers	<p>The current programme support arrangements were created before the scale of the challenge was fully articulated. Now there is a greater understanding of what is required, including the tasks that need to be</p>

	<p>delivered, it is clear that a dedicated delivery team is the next stage in terms of a robust delivery approach. This function will take on the day to day responsibility for programme delivery.</p> <p>One overarching driver will be coordinating retrofit activity, for example by identifying existing projects and opportunities for new and innovative approaches, to avoid duplication and spread risk.</p>
Success measure	<p>A. Programme Delivery Team funded and established.</p> <p>B. Complete mapping of existing retrofit activity including emerging approaches and technologies.</p>
Tasks	
1.	Confirm PDT funding.
2.	Initial approach put in place as a platform to facilitate establishment of ongoing arrangements.
3.	Hosting arrangements agreed and recruitment for permanent posts completed.
4.	PDT established and embedded in programme governance structure.
5.	Identify opportunities for organisations (both London local authorities and private sector) to support delivery including by utilising existing knowledge and work. (This links to all of the other RLHIP priorities.)
6.	Engage with key stakeholders in the private and public sectors who are working on retrofit to map work already being undertaken, including messaging around retrofit, to identify commonality and opportunities for collaboration, as well as potential conflict. Links to Priority K – Communications and case making
7.	Monitor innovative approaches and emerging technology, including identifying lessons learned, with a view to engaging where significant opportunities exist for increasing retrofit. One specific example is the potential for a switch at scale to green hydrogen.

Priority B – Data and monitoring

Synopsis	Data is an important foundation for the programme. Good data will provide line of sight on the scale and nature of the challenge for stakeholders and support resource planning, as well as enable the measurement of progress towards the main objective.
Challenges	<ul style="list-style-type: none"> • Quality and consistency of data, including gaps in EPC coverage (both age and area). • Agreeing common measures. • Data sharing agreements including establishing responsibilities. • Data collection and presentation. • Private household data particularly following improvements.
Drivers	<p>The development of the programme to date has been built on robust data analysis by Parity Projects (https://www.londoncouncils.gov.uk/download/file/fid/28084). There is also a great deal of data collected and various analytical approaches and tools.</p> <p>The programme will need to consolidate and collate these before building on them to determine the most effective and viable way to use what is already there and, if required, secure agreement from stakeholders to undertaking additional work in this area. The goal is a common data set that can be accessed by all participants in the programme.</p> <p>There are also opportunities around the collection of smart data and related monitoring technology.</p>
Success measure	Data set agreed and populated to greatest extent possible with pre-existing data.
Tasks	
1.	Map measures and data from existing and emerging collection routes, including organisations such as local authorities, as well as industry standards like Enerphit, EPCs and PAS2035. Quantify potential data gaps particularly in respect of private households.

2.	Confirm and quantify performance measures for Retrofit London such as SAP ratings, (for in use cost), kgCO2 (for carbon), kWh/m2/yr (for energy efficiency) and connection to gas grid (for fossil fuel use).
3.	Confirm and specify other data requirements in respect of retrofit such as airtightness, air quality, and overheating. As well as physical measures, consideration should also be given to qualitative indicators such as user satisfaction.
4.	Determine which diversity, social and economic indicators should be collected to identify where interventions may be required to ensure a just transition and support business case / funding applications.
5.	Identify baseline data required – including surrogates if actual data is not available.
6.	Discuss and agree technical specification for data collection (needs to reflect diverse IT platforms and opportunities for smart technologies).
7.	Agree frequency of data collection.
8.	Determine how data is collated and presented within the London Retrofit programme.

Priority C – Action plans for local authority housing

Synopsis	London's local authorities own, manage and influence a significant proportion of the housing stock. Preparing action plans to reduce emissions from these properties has a wide ranging positive impact on delivery of the Retrofit London programme.
Challenges	<ul style="list-style-type: none"> • Hierarchy of priorities: Safe then Decent then Sustainable – how to take a whole home approach. • Constrained Housing Revenue Accounts and current cost of retrofit. • Government's piecemeal approach to funding retrofit. • Complexity and scale of the challenge. • Securing resident engagement and buy in.
Drivers	<p>Housing revenue account funding, whilst constrained, covers a range of activities which could support the decarbonisation of homes. Developing retrofit action plans for this housing stock will support other priorities including archetype and area based solutions, building the business case for retrofit and delivery in mixed tenure situations.</p> <p>It will also be of a scale that can kickstart highly visible retrofit activity.</p> <p>In addition, local authority housing stock has a high proportion of households at risk of climate change and fuel poverty. This means that it should be a priority.</p> <p>This work will drive to the surface opportunities for joint and collaborative work with the supply chain to reduce costs and improve the local economic benefit of retrofit activity.</p>
Success measure	At least four of London's local authorities develop an action plan for their own housing stock which outline and address the challenges of the main stock typologies in London, for example mansion blocks, housing estates, terraces and system built blocks.
Tasks	
1.	Confirm pilot London's local authorities who will develop an action plan for their own housing stock taking into account the RLHAP principles and pathways.
2.	Identify examples of existing best practice and learning, for example from the Social Housing Decarbonisation Fund Demonstrator projects and Retrofit Accelerator.

3.	<p>Support development of action plans including their scope and making sure there is alignment with other programme priorities. Areas to be considered are:</p> <ul style="list-style-type: none"> • Addressing competing priorities • Aligning existing budgets with retrofit • Approach to different tenures including leaseholders • Archetype and area based approaches linking regeneration and new build schemes with refurbishment • Business cases for investment including innovative sources • Delivering and managing heat networks and pumps • Enabling retrofit sector capacity • Identifying approaches, materials and products which support other priorities including decent homes and fire safety • Leaseholder contributions and engagement • Procurement including routes and scaling up • Quantifying costs and resource requirements • Reducing risk and securing reward • Retrofit plans for every priority property.
4.	Share learning and potentially develop a template to enable development of additional action plans.

Priority D – Reducing energy demand

Synopsis	<p>Given recent trends in energy pricing an immediate priority is reducing energy demand from homes.</p> <p>It is acknowledged that, as part of a whole property approach over time, fabric first is an obvious starting point. However, there are challenges in respect of choosing the right approach for different measures, including doors and windows, insulation and ventilation.</p> <p>Onsite renewable energy generation and storage also has a role to play and supports the roll out of heat pumps by offsetting associated energy costs.</p> <p>In terms of implementing retrofit on the ground, having common standards for measuring the quality of installations, both when delivered and when in use, will both reassure consumers and provide evidence to support different approaches, materials and products.</p>
Challenges	<ul style="list-style-type: none">• Plethora of existing approaches and products.• Agreeing common guidance and standards across properties of different types and ages.• Trust in products given wider concerns such as fire safety and look.• Making sure that installations are high quality and deliver measurable benefits.• Having appropriate levels of ventilation.• Taking a whole building and whole life approach when looking at measures.• Potential impact on installers and suppliers of products not considered to be compliant / suitable.• New and innovative approaches lead to abortive investment.• Collecting information and data – Links to Priority B – Data and monitoring.• The range of issues and opportunities covered by this one priority.
Drivers	<p>Government funding is focused on a fabric first approach so there is a need to deliver measures which improve energy efficiency:</p> <ul style="list-style-type: none">• Low energy lighting and appliances.• Windows and doors.• Cavity and loft insulation.• Internal and external wall insulation.• Smart controls and metering.

	<p>These measures reduce energy demand, which alongside onsite renewable energy generation and storage, improve the affordability of heat pumps.</p> <p>Where airtightness improves, there is a need to deliver appropriate ventilation measures. As well as removing moisture, these potentially can also provide cooling to prevent overheating.</p> <p>Understanding the interrelationship between different fabric measures, as well as with heat decarbonisation and energy generation and storage, are key to having coherent approach for each dwelling in London.</p> <p>Having overarching guidance and common standards can reduce costs and complexity by providing more certainty for consumers, installers and suppliers.</p>
Success measures	<p>A. Core monitoring measures and targets identified.</p> <p>B. Mapping of key elements for common standards for measuring the quality of installations.</p> <p>C. Publication of a review of the current evidence on successful delivery of internal and external wall insulation.</p> <p>D. Note on the challenges and next steps for smart monitoring.</p> <p>E. Indicative scale of opportunity for energy generation and storage for London's residential properties.</p>
Tasks	
1.	Identify measures and targets which support the delivery of the wider programme outcomes as well as support minimum standards for individual elements (for example ventilation). This is linked to Priority B – Data and monitoring,
2.	Agree pathway to developing guidance and a common set of standards for reducing energy demand from domestic properties.
3.	Identify approaches and products which support other priorities including decent homes and fire safety. Links to Priority C - Action plans for local authority housing.
4.	Review the current evidence on successful delivery of internal and external wall insulation.
5.	Using outputs from emerging Local Area Energy Plans identify the scale of opportunity in respect of renewable energy generation and storage.

6.	Consider challenges and opportunities of smart monitoring of homes in use. Links to Priority B – Data and monitoring.
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Priority E - Heat pumps

Synopsis	<p>Heat pumps are a key part of the plan to reduce emissions from London's housing stock. However, they are perceived to be expensive and are not well understood so work is required to make them an affordable and acceptable alternative to direct electric and gas powered heat sources. This includes addressing concerns about the size of heat pumps and the noise they generate.</p> <p>There is a link to the Low Carbon Development Programme in respect of planning policy supporting the provision of heat pumps for existing and new developments.</p>
Challenges	<ul style="list-style-type: none"> • Current costs for both installation and use. • Impact on secondary systems. • Need for insulation works and solar PV to balance additional electricity costs. • Planning policy particularly in conservation areas. • User experiences and understanding of the technology. • Reliance on other areas of work including finance and funding, as well as insulation guidance.
Drivers	<p>Whilst adoption rates to date have been low, heat pumps are a proven technology which, alongside heat networks, are a realistic option for heat decarbonisation in the near term.</p> <p>There is also the potential for innovation such as high temperature heat pumps, hybrid technologies and a scaling up of local production using existing industrial areas in London.</p>
Success measure	Guide prepared which demystifies heat pumps, sets out the benefits of their use and the potential routes to finance.
Tasks	
1.	Initiate review of current technology including challenges / gaps and potential solutions, including Identifying the current installation and in use cost gaps. This will inform other tasks.
2.	Determine the role of enabling measures such as insulation and renewable energy generation.
3.	Develop a funding and delivery model for different tenures; this potentially will take a phased approach.
4.	Challenge the current approach to funding heat decarbonisation.
5.	Pilot engagement and education for residents including demystifying the use of heat pumps.

Priority F - Heat networks (also known as district heating)

Synopsis	<p>Heat networks can contribute towards reducing emissions from London's housing stock, particularly where they have low carbon, low cost heat sources. Whilst they are largely untested as an option for retrofitting different property types, there is the potential to use them at scale, potentially building on investment in coming forward via new developments.</p> <p>It should be noted that the Renewable Power 4 London Programme has actions which will deliver against this area of work:</p> <ul style="list-style-type: none">• Assess the current London wide picture of decentralised energy projects and pipeline schemes to inform opportunities and the future programme.• Publish London wide report on Decentralised Energy opportunities based on a potential sub-regional model to inform funding strategy to develop high-level business cases for investment.• Support the feasibility of development of a North London Heat and Power Network with boroughs and North London Waste Authority and Energetik.• Use the ultra-low 5th generation heat network, such as the GreenSCIES project in Islington and Notting Dale in Kensington and Chelsea, as case studies for London. <p>There is also a link to the Low Carbon Development Programme in respect of planning policy supporting the provision of heat networks for existing and new developments.</p> <p>This means that the optimal approach will be to align work between the Programmes.</p>
Challenges	<ul style="list-style-type: none">• Current costs including capital investment in infrastructure and in use.• Impact on secondary systems.• Understanding the optimal approach to balancing heat demand and energy efficiency measures.• Largely untested as a retrofit approach across a range of property types and at scale.• Planning policy particularly in conservation areas.• User experiences and understanding of the technology.• Reliance on other areas of work including finance and funding, as well as insulation guidance.• Changing legislative and consumer environment needs to be understood and reflected in the implementation of this aspect of the programme.

Drivers	<p>Heat networks are being considered as a heat decarbonisation option for existing properties with recent areas of work supporting their wider utilisation:</p> <ul style="list-style-type: none"> • Government consultation on heat network zoning. • Mayor of London's preferred pathway to net zero by 2030, the London Plan and GLA heat mapping. • Renewable Power 4 London programme workstream on decentralised energy. • Sub-regional and local authority level support for heat networks both as investable propositions and via the planning policy.
Success measure	Existing and planned heat network provision is mapped and there is an area based pilot assessment of potential investable future provision. Alongside this will be an assessment of the optimal approach to balancing heat demand and energy efficiency measures.
Tasks	
1.	Engage with the Renewable Power 4 London Programme to make sure that the retrofit of existing buildings is a core part of the decentralised heat workstream.
2.	Inform the development of heat network zones and related planning policy at different levels of government.
3.	Be involved in the development of an optimal approach to balancing heat demand and energy efficiency measures.

Priority G - Skills

Synopsis	<p>The skills needed to support the retrofit revolution in London are a huge challenge with a potential ramping up from around 4,000 people in the sector now to 110,000 in 2030. This is also a huge opportunity to support new entrants into the sector, making it more diverse and resilient, to reskill people working in at risk industries, to provide career routes offering better pay and attract and retain money in the London economy as spend on retrofit grows.</p> <p>In this context it is important to recognise that retrofitting projects are competing for labour at a time when the number of people employed in construction is decreasing. For this reason, promoting a growth in related trades is beneficial for retrofit as well.</p>
Challenges	<ul style="list-style-type: none">• Ageing workforce and lack of diversity in the sector.• Current capacity in the retrofit sector and construction more generally.• Different qualifications and standards.• Lack of consistent investment in retrofit programmes and projects.
Drivers	<ul style="list-style-type: none">• Investment in regional and local skills academies.• Opportunity to provide pathways to better employment for local people, particularly young people and those needing to reskill and/or who may be on low incomes seeking pathways to progression• Increasing capacity and attracting new talent.• Transferable nature of many skills means that they can support construction and retrofit. <p>This also links to Priority C – London local authorities develop an action plan for their own housing stock, which should provide a pipeline of projects to support investment in retrofit skills.</p>
Success measure	<p>Coordinated activity between a range of stakeholders which builds the basis for the ramping up of construction and retrofit skills.</p>
Tasks	

1.	Start to collate existing training and skills initiatives, identify gaps at all levels of the skills chain (including strategic, technical and operational) and the potential scope of new activity. This will inform other tasks.
2.	Engage with the further education sector to develop a plan to meet immediate Retrofit London needs and opportunities, as well as establish the trajectory going forward.
3.	Developing and securing agreement to a standard / consistent set of qualifications to provide customer re-assurance.
4.	Work with educational institutions and suppliers to promote retrofit as a profession while supporting wider programmes promoting related trades.
5.	Identify a pipeline of local authority and registered provider retrofit schemes to provide confidence for the development of retrofit jobs and skills. Links to Priority J – Procurement.
6.	Lobby for consistent investment in retrofit with London's local authorities leading the retrofit revolution.

Priority H - Planning

Synopsis	<p>The planning process already supports some retrofit measures but there needs to be better understanding of what is required for those undertaking works and how to approach conservation areas and traditional buildings.</p> <p>At a strategic level there is a strong link to the Low Carbon Development Programme in respect of delivering new homes which require minimal or no future retrofit. There is also a need to consider whole life carbon impacts when looking at retrofit compared to new build.</p>
Challenges	<ul style="list-style-type: none"> • Varying application of planning policy and differing practical requirements between local authorities. • Conservation areas and traditional buildings which have specific regulations and guidance to which retrofit interventions must conform. • The time taken to secure consents in light of time limited external funding. • Understanding of the planning process and what is permitted development.
Drivers	<p>Demystifying the planning process can remove a perceived barrier to retrofit.</p> <p>Alongside this a better understanding of how to retrofit traditional buildings and in conservation areas will allow for improvements to some of the poorest performing properties.</p>
Success measure	<p>Provision of clear advice on what is permitted development and what is required where planning consent is necessary. For the latter this includes identifying best practice in relation to retrofitting traditional buildings and in conservation areas.</p> <p>Policies move towards a position where new development is low carbon across its life cycle and requires no or limited future retrofit.</p>
Tasks	
1.	<p>Start to identify examples of best practice in respect of planning guidance for retrofit and use to inform a template for London's local authorities, which demystifies the process and makes it clear what is permitted development. As part of this, deploy examples of user experiences to highlight challenges including around consistency between local authorities.</p>

2.	Commence review of existing guidance and best practice in respect of conservation areas and traditional buildings to highlight routes to successful retrofit, as well as identify opportunities for improving delivery, for example by better communication or better skills in the retrofit sector.
3.	Engage with the Low Carbon Development Programme to push for guidance and standards which mean that new homes require no future retrofit or, where they do, that this is minimal and the property is retrofit ready.
4.	Engage with the Low Carbon Development Programme and other key stakeholders, including the GLA, to inform emerging policies and guidance in relation to sustainable new development.

Priority I – Finance and funding

Synopsis	<p>Funding retrofit is arguably the biggest barrier to delivering at scale, if at all. This is not a new challenge and there is already a range of stakeholders working to improve the funding landscape.</p> <p>Solutions will need to address the multiplicity, variety and differing scales of necessary interventions. Therefore, progress will be made incrementally and via testing different approaches including the delivery of other priorities in the programme.</p> <p>There is also a need to review the London wide programme cost estimates to make sure these reflect ongoing developments in terms of technology deployment and underlying factors such as the recent shift in energy prices.</p>
Challenges	<ul style="list-style-type: none">• Current costs of retrofit and available funding.• Developing investable retrofit opportunities.• Different tenures and need for offers which appeal to each segment of the housing market.• Divestment instead of investment could transfer the problem and make it harder to address.• Ensuring a just transition and finding funding models which work in the private rented sector.• Lack of whole home retrofit plans which leads to low cost measures being delivered with no long term recognition of the long term requirements.• Perceptions around the cost and benefits of retrofit measures. This includes moving from a direct return on investment via reduced energy costs to a capital uplift approach.• Unlocking individual and institutional investment.• New and innovative approaches lead to abortive investment.
Drivers	<p>Housing accounts for around a third of London's carbon emissions. About 80% of the homes that will be in use in the UK in 2050 are already built and in use. This means retrofit is a nationally significant infrastructure project.</p> <p>There is significant government funding already available to start addressing the challenge and there are commitments to this continuing. Alongside this, London's local authorities are looking to push forward with housing retrofit.</p>

	<p>The estimated investment in the London economy to deliver an average of EPC B by 2030 is nearly £50bn. It is important to also recognise the wider societal benefits, including from employing 100,000 plus new workers in the sector, improvements in health outcomes and opportunities to improve local economies. A robust economic analysis that identifies and monetises the full suite of benefits arising from this investment is critical. It also needs to identify the actual and potential revenue streams that could be used to support the investment.</p>
Success measure	<p>At least one finance and funding solution for a specific retrofit challenge is developed and agreed by stakeholders.</p> <p>Funding strategies for existing stock plans (including as highlighted in Priority C – Action plans for local authority housing) are identified maximising external sources of funding including addressing resident contributions.</p> <p>Programme level cost estimates are reviewed.</p>
Tasks	
1.	Identify current and emerging approaches to financing and funding retrofit.
2.	<p>Following on from other tasks, engage with key stakeholders and expert organisations to develop approaches which support retrofit by reducing costs and unlocking finance. Examples include but are not limited to:</p> <ul style="list-style-type: none"> • Assessing whether there is a “Green Premium” value or an obsolescence impact. • Retrofit as a service model. • Developing investable opportunities for private finance. • Encouraging retrofit in the private rented sector. • Having coordinated guidance and standards. • Local authority retrofit action plans. • Maximising opportunities for new developments to support local area retrofit. • Moving from direct return on investment via reduced energy costs to a capital uplift approach. • Establishing the cost of heat network connections. • An approach to leaseholder contributions. • Evaluating comfort charges including barriers to making them work at scale. • Solving the heat pump installation and in use cost challenge. • Trialling area based multi intervention approaches such as those being looked at by the UK CCIC.

3.	Develop a knowledge hub for finance and funding.
4.	Review London wide programme costs.
5.	Lobby Government for flexible and longer term funding which can be used locally to address real need and deliver a range of retrofit approaches tailored to specific challenges, such as tenure and type of property. Links to Priority K – Communications and case making.

Priority J - Procurement

Synopsis	<p>The current unit costs for retrofit measures are largely driven by the small scale nature of the market and the lack of certainty for suppliers and installers. Scaling up procurement and establishing an investment pipeline should advance knowledge in terms of controlling, managing and predicting costs.</p> <p>Sharing current procurement resources and experience will also be a critical component in accelerating delivery.</p>
Challenges	<ul style="list-style-type: none"> • Consistency of funding. • Coordinating procurement activity across different organisations. • Different quality assurance requirements and specifications for materials. • Impact of embodied carbon and opportunity for circular economy principles to be part of the process. • Varying procurement standards.
Drivers	Retrofit needs to be delivered at scale to reduce costs and facilitate growth in the market. The current level of activity means that this will not be achieved. However, collective procurement can increase scale and, if suitable routes are available, reduce delivery timescales and risk.
Outcome	The interim outcome will be for London's local authorities to be informed as to the options available for collective procurement including via existing frameworks, neutral vendor schemes and dynamic purchasing schemes. The longer term outcome is that there is coordinated and largescale procurement to support London wide retrofit activities, with a resultant reduction in delivery costs and risks.
Success measure	London's local authorities will be aware of existing opportunities and there is at least one collective procurement exercise.
Tasks	
1.	Support work to map current and emerging approaches to procurement, including existing national, regional and sub-regional frameworks. This should identify gaps and opportunities for large scale activity.

2.	Building on the previous task, review best practice and opportunities for enabling collective procurement for private owners and occupiers.
3.	Start developing a pipeline of local authority and registered provider retrofit schemes to provide confidence for the retrofit market. Links to Priority C – Action plans for local authority housing and Priority G – Skills.
4.	Engage with stakeholders to better understand opportunities for common quality assurance requirements and specifications for materials. Links to Priority D – Reduce energy demand.

Priority K - Communications and case making

Synopsis	<p>As set out in Priority A - Leading and coordinating delivery, the initial approach for the Retrofit London Programme will be of a scale that supports coordination and collaboration, rather than being an agent for on the ground delivery of measures.</p> <p>In line with this, a key area of work will be communicating and engaging with a range of stakeholders to facilitate delivery.</p> <p>There will also be some areas of communications and engagement which will be dealt with as part of other priorities, so the tasks for this priority are focused on specific opportunities and crosscutting Programme level requirements.</p>
Challenges	<ul style="list-style-type: none"> • A number of organisations are operating in the retrofit space. • Conflicting views and different approaches between stakeholders. • Coordination and collaboration around priorities and asks. • Need for messaging which promotes retrofit measures and addresses common questions. • Technical nature of the subject area.
Drivers	<p>Effective communications and engagement are at the core of successfully delivering the Retrofit London Programme.</p> <p>There are opportunities for the programme to operate at different levels, ranging from cohesive and compelling strategic asks of key partners, to clear and common sense information for householders.</p>
Outcome	<p>The interim outcome will be for Retrofit London to develop a strong brand and presence, which is of interest to a range of stakeholders including government, other local authorities, registered providers and the further education sector. The longer term outcome is for the Programme to be a recognised repository of experience, knowledge and skills, which effectively promotes housing retrofit and shapes opinions and policies.</p>
Success measure	<p>The Programme is actively engaged with a range of stakeholders, has a distinct offer and has developed key asks of partners, particularly around funding and powers.</p>
Tasks	

1.	With a focus on elected representatives and senior managers in the public sector, prepare a document setting out existing retrofit opportunities and the added value of the programme.
2.	Develop a public facing presence which clearly and simply communicates the role and intended outcomes of the programme.
3.	Publish frequently asked questions in respect of the programme.
4.	Engage with key stakeholders in the private and public sectors who are working on retrofit to understand work already being undertaken, including messaging around retrofit, to identify commonality and opportunities for collaboration, as well as potential conflict. Links to Priority A – Leading and coordinating delivery and Priority L – Community and resident engagement.
5.	Develop communications including core messages for different participants in the sector, focusing on professional and personal drivers to unlock uptake.
6.	Using the outputs from other areas of work, develop strategic asks in respect of engagement, funding and responsibilities. Links to Priority I – Finance and funding.
7.	Continue regular engagement and information sharing with a range of stakeholders, including through the Steering and Practitioners' Groups.
8.	Continue working with other London programmes including Low Carbon New Development and Renewable Power for London.

Priority L – Community and resident engagement

Synopsis	<p>Community and resident engagement will be key to delivering retrofit successfully, particularly given that it is only with their active involvement that measures can be implemented.</p> <p>In addition, it will also ensure that the programme is identifying barriers faced by protected groups and those that are economically disadvantaged. Together, this will enable us to target appropriate interventions to secure a just transition.</p>
Challenges	<ul style="list-style-type: none"> • The number of households involved and their diverse nature. • Different tenures and need for offers which appeal to each segment of the housing market. • Making a technical subject like retrofit understandable. • Finance and funding availability and accessibility. • Establishing credibility for the installation of measures in light of previous programmes.
Drivers	<p>Clear and common sense information for householders.</p> <p>Alongside this is the need for a means to hear residents' voices and involve them in the co-design of solutions that will work locally.</p>
Success measure	Retrofit is easier to understand for residents and information reflects their concerns and issues.
Tasks	
1.	Engage with key stakeholders in the private and public sectors who are working on retrofit to identify work already being undertaken, including messaging around retrofit, to identify commonality and opportunities for collaboration, as well as potential conflict. Links to Priority A – Leading delivery and Priority K – Communications and case making.
2.	Undertake collaborative work with Registered Providers (NHF, G15, G320) to share knowledge and deliver a consistent approach.
3.	Consider existing ways to engage with communities and residents on retrofit and pull together best practice examples.
4.	Collate existing information to inform the development of a guide which helps to demystify retrofit and highlights positive experiences, as well as signposting funding opportunities and routes to delivery. Test this with community groups and residents, potentially using existing local authority groups.

5.	Work with the Renewable Power 4 London programme to support the delivery of energy efficiency advice services across London, including information on retrofit measures.
6.	Support behaviour change campaigns which encourage retrofit in line with the RLHAP principles.

What Will Success Look Like?

A key measure of success for the RLHIP will be performance against the headline target of getting London's homes to an average of EPC B by 2030. However, as noted in the RLHAP, this is not the only metric that should be used:

- Carbon emissions in kgCO₂/m²/yr. If reducing carbon is a key objective, an indicator is required which takes into account the carbon impact of all home energy uses and the need to transition away from gas and other fossil fuels based on long-term carbon factors (e.g. 2038).
- Space heating demand in kWh/m²/yr. Heat demand is a major challenge in existing homes and a key opportunity in terms of retrofit. It is an energy efficiency indicator and also links to comfort, health and wellbeing.
- Total energy use (Energy Use Intensity - EUI) in kWh/m²/yr. This is independent from changes to the energy system and prices, is easy to understand for consumers, enables a direct feedback loop from metering, and allows comparisons between dwellings.

There are also opportunities to consider in use indicators such as airtightness, air quality, and overheating. As well as physical performance, qualitative indicators such as user satisfaction would help understand what retrofit means for residents.

The programme must also be delivered in a way that addresses equality, diversity and inclusion priorities:

- Avoid disadvantaging protected groups through access to or use of solutions.
- Plans must ensure social justice is achieved and measured through take up and coverage of solutions.
- Solutions must be delivered with and alongside residents and the wider community helping to build the social infrastructure and capital in places.

In addition, as highlighted in the priority task areas, there are specific measures for each priority in the RLHIP.

Achieving success against even some of these will mean that programme #1 Retrofit London is delivering economic, environmental and social benefits across London. Assuming this is at scale and involves a range of stakeholders, from government to householders, it will mean significant progress is being made.

This will only be possible with collaborative, collective and considered working between all stakeholders.

Proactive programme management and an annual review will be crucial to ensuring that priorities remain current, that the programme flexes as the context evolves and that risks are continually and consistently identified, mitigated and monitored.

This first annual plan describes steps which will engender incremental progress towards the overall goal. Subsequent iterations will continue the journey.

London Councils
59½ Southwark Street
London SE1 0AL
www.londoncouncils.gov.uk

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