

## READING BOROUGH COUNCIL

### REPORT BY EXECUTIVE DIRECTOR FOR ECONOMIC GROWTH & NEIGHBOURHOOD SERVICES

|                         |  |                   |                                    |
|-------------------------|--|-------------------|------------------------------------|
| <b>TO:</b>              | <b>HOUSING, NEIGHBOURHOODS &amp; LEISURE COMMITTEE</b> |                   |                                    |
| <b>DATE:</b>            | <b>10 MARCH 2022</b>                                   |                   |                                    |
| <b>TITLE:</b>           | <b>LOW CARBON HOUSING ACTION PLANS</b>                 |                   |                                    |
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| <b>SERVICE:</b>         | <b>HOUSING &amp; COMMUNITIES</b>                       | <b>WARDS:</b>     | <b>ALL</b>                         |
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#### 1. PURPOSE OF REPORT AND EXECUTIVE SUMMARY

- 1.1 In July 2021 a report was presented to HNL Committee entitled ‘Low Carbon Homes - Key Issues and Challenges’ which set out details of the scale of the challenge to reduce emissions from Reading’s housing stock in line with the ‘net zero by 2030’ ambition set out in the Reading Climate Emergency Strategy. The report proposed the development of Low Carbon Housing Action Plans for (i) RBC housing stock and (ii) private sector housing to be brought back to HNL by March 2022. This report therefore presents these action plans for endorsement by the Committee.
- 1.2 One of the most important contribution Reading Borough Council can make to reducing domestic carbon emissions, which make up almost 40% of Reading’s total, is to improve the energy efficiency of its own housing stock. This is because (i) it is a significant source of emissions in its own right (the Council owns about 10% of the housing stock in Reading) (ii) it can stimulate local supply chains and skills (iii) it has a role to lead by example, demonstrating to other property owners in social and private sectors how emissions from housing can be reduced. The Council’s influence over, and the resources it has available to devote to, improvement of its own housing are significantly greater than it can devote to the private sector, and this is reflected in the relative scope of the Action Plans. Reading’s climate emergency declaration made clear that additional powers and resources would be needed from Government to enable the achievement of net zero by 2030, and private sector retrofit remains one of the key policy areas where this remains the case.
- 1.3 Appendices to this report are as follows (i) Appendix 1: Low Carbon Housing Action Plan for RBC housing (ii) Appendix 2: Low Carbon Housing Action Plan for private sector.

#### 2. RECOMMENDED ACTION

- 2.1 It is recommended that the Committee note the contents of Appendix 1 (Low Carbon Housing Action Plan for RBC housing) and Appendix 2 (Low Carbon Housing Action Plan for private sector) and endorse both Action Plans.

### 3. POLICY CONTEXT

- 3.1 With domestic emissions accounting for almost 40% of Reading's total carbon footprint, reducing emissions from the housing sector has been identified as a key strategic priority in meeting both national and local 'net zero' ambitions. The Reading Climate Emergency Strategy 2020-25 (endorsed by Policy Committee in November 2020) commits to the goal of a 'net zero Reading by 2030' and identifies (i) housing retrofit and (ii) building new homes to zero carbon standards as key priorities. RBC's Housing Strategy 2020-25 (endorsed by Policy Committee in September 2020) aligns with the Climate Emergency Strategy.
- 3.2 Most housing in Reading does not meet the standards required to support the net zero by 2030 ambition, although RBC's own housing performs significantly better than the national average, with an average EPC rating of 'C' compared to the national average of 'D', and an average Standard Assessment Procedure (SAP) energy efficiency rating of 74, higher than the national average for all housing of 65 and for social housing of 69.
- 3.3 Policies are in place via the Reading Local Plan to ensure that new housing does not add unduly to Reading's 'carbon footprint', and RBC is leading by example with high standards in its own new housing designs. However, the challenges of retrofitting Reading's existing housing stock (both RBC housing and non-RBC housing) are significant and currently beyond local means to resource. Fuel poverty remains a key concern and a growing one in view of anticipated increases in energy prices in 2022.
- 3.3 The Reading Climate Emergency Strategy and the Council's Housing Strategy set out the high-level commitment to develop housing retrofit across Reading, and the Action Plans proposed in this report take forward this commitment in more detail.

### 4. THE PROPOSAL

- 4.1 **Current Position:** the Housing Strategy makes a strong commitment to the headline aims and actions set out in the Reading Climate Emergency Strategy 2020-25 and the Action Plans in this report elaborate on these.
- 4.2 **Options Proposed:** a number of initiatives are already underway which are moving Reading in the right direction. The challenge is to increase the scale and impact of these initiatives in line with the 'net zero by 2030' ambition. The proposed Low Carbon Housing Action Plans for both RBC housing stock and for the private sector will therefore supplement the Council's Housing Strategy 2020-25 and provide a more detailed road map for the Council's activity in this important policy area. Funding a programme of the scale required remains the key challenge but by combining our own resources with grant funding we can begin to scale up existing efforts.
- 4.3 **Other Options Considered:** the alternative would be to not produce these action plans, but this would be unlikely to provide the detail and direction for the Council's efforts to reduce emissions from housing in Reading

### 5. CONTRIBUTION TO STRATEGIC AIMS

- 5.1 The recommendations in this report align with Corporate Plan priorities as follows:
- **Healthy Environment:** reducing emissions from housing is an essential element in delivering corporate plan commitments to a carbon neutral Reading by 2030.
  - **Thriving Communities:** good quality, affordable and sustainable housing is an integral part of a thriving community, and the report illustrates how action in this area can contribute to this aim.

- Inclusive Economy: there are significant economic opportunities arising from the activity required to reduce emissions from the housing sector in Reading which are outlined in the report.

## **6. ENVIRONMENTAL AND CLIMATE IMPLICATIONS**

- 6.1 One of the main purposes of the action plans is to have a positive impact on the Environment and Climate, both locally and in a wider context. The positive impact would be achieved through the reduction of carbon produced in heating, lighting, maintaining and redeveloping the Council's housing stock. Increasing insulation levels, controlling ventilation, and decarbonising the heating of the stock are all the intended outcomes of the programmes outlined in the report to reduce energy consumption as a whole and to cut out, as much as possible, creating of carbon in the running of the stock.
- 6.2 The aim regarding other reduction of environmental impacts will be to: reduce the number of vehicle journeys required to maintain the stock; to enable and encourage the use of low carbon vehicles for necessary journeys, both through the Council's own fleet and provision of vehicle charging points, allowing tenants to choose low carbon vehicles.
- 6.3 In addition, we are working with suppliers and contractors to reduce carbon emissions at all levels within the supply chain. We are looking for ways to cut waste and other damaging practices, such as single-use plastics. We are promoting the use of materials from sustainable or recycled sources and improving the incidence of recycling at the end of life. We are aiming to embed carbon within buildings with the increased use of sustainable timber where this is not detrimental to lifespan and would not considerably increase maintenance requirements.

## **7. COMMUNITY ENGAGEMENT AND INFORMATION**

- 7.1 Section 138 of the Local Government and Public Involvement in Health Act 2007 places a duty on local authorities to involve local representatives when carrying out "any of its functions" by providing information, consulting or "involving in another way". The Housing Strategy and the Climate Emergency Strategy were both the subject of consultation. The outcomes of these consultations have informed this Report and the development of the proposed Low Carbon Housing Action Plans.

## **8. EQUALITY IMPACT ASSESSMENT**

- 8.1 It is not considered that the decision will have a differential impact on: racial groups; gender; people with disabilities; people of a particular sexual orientation; people due to their age; people due to their religious belief and therefore no Equality Impact Assessment (EqIA) is relevant to the decision. That said, efforts to address fuel poverty, which are described in the report, should generally have positive equalities impacts given the relationship between fuel poverty, disadvantage and some groups with protected characteristics.

## **9. LEGAL IMPLICATIONS**

- 9.1 The main legal implications arising from this report relate to the Council's regulatory functions with respect to private sector housing. These arise primarily in relation to the enforcement of the Minimum Energy Efficiency Standards for private landlords.

## **10. FINANCIAL IMPLICATIONS**

- 10.1 Considerable investment has taken place to enable RBC housing stock to be relatively energy efficient compared to the national average, the investment required to bring

it up to a standard compatible with the 'net zero by 2030' target would still be very significant. In broad terms it is estimated that a total investment of c£210m would be required to achieve the maximum potential carbon reduction currently available for RBC's housing stock. Although it is not possible to put exact values on what can be achieved at this stage, the £210m investment was calculated by applying as many measures as are currently readily available. The result of energy efficiency improvements in terms of banding, depends in many ways as to what the starting point is.

- 10.2 While there may be future opportunities to attract grant, at present government schemes are targeted at raising the EPC rating of properties to band 'C'. As this is already the average for RBC properties, the Council's ability to benefit from these schemes is limited.
- 10.3 Approximately £60m is already built in to the 30-year Asset Management Plan as expenditure up until 2030 (e.g. for window replacements or central heating upgrades already identified as required prior to 2030 which form part of enhancing energy efficiency standards). This still means, however, that meeting the 'net zero by 2030' target for RBC housing stock would require an additional investment of c£21m per year over and above the average £16m total annual budget currently identified for the entire maintenance and refurbishment budget. The cost of achieving 'net zero by 2030' is therefore beyond the means of the Council alone, and this remains an area where the need for additional support from Government will remain paramount.
- 10.4 The financial implications arising from the proposed Low Carbon Housing Action Plans which are the subject of this report are factored into the Housing Revenue Account (HRA) business plan. It is difficult to identify precisely the total expenditure which will contribute to carbon reduction from RBC housing stock within this, as it is spread across many budget lines for both capital and revenue expenditure, and many fabric improvements will have the effect of reducing energy use and/or emissions even if that is not their primary purpose. However, by identifying major retrofit projects within the current HRA business plan, we can say with confidence that the Council will be committing a minimum of £34 million over the period 2022-2027 to furthering the objectives set out in these Action Plans.

## **11. BACKGROUND PAPERS**

- 11.1 There are none.

## APPENDIX 1:

### LOW CARBON HOUSING ACTION PLAN FOR RBC HOUSING & PRIVATE SECTOR HOUSING

#### 1. BACKGROUND

The Reading Climate Emergency Strategy 2020-25 and the Council's Housing Strategy 2020-25 both identify housing retrofit as a key priority in realising the Climate Emergency Strategy's vision for a 'net zero carbon, resilient Reading by 2030'. In July 2021 the Council committed to the development of Low Carbon Housing Action Plans for the Council's housing stock, and for the private sector respectively. These Action Plan take forward that commitment in relation to the Council's housing stock, which represents about 10% of the total housing stock for Reading, and private sector housing.

The Council has a long-track record of investment in the fabric of its housing stock which has improved energy efficiency. The Council also has a more recent track record of building new housing to high energy standards, so the Action Plan builds on this by setting out key actions to be taken between now and the end of the period covered by the Climate Emergency and Housing Strategies (2025).

#### 2. ACTION PLAN OBJECTIVES

The Low Carbon Housing Action Plans seek to take forward three related objectives:

- A reduction in carbon emissions
- A reduction in fuel poverty
- An improvement in security of energy supply

To give an example of how these objectives relate to each other, by investing in energy efficiency in RBC housing we can tackle fuel poverty by reducing the amount of energy tenants are paying for whilst improving security of supply and reducing emissions in the process. Not all interventions will address all three objectives at the same time but if we can identify actions which do address all three the case for investment will be strengthened.

#### 3. FORMAT OF THE ACTION PLANS

The Action Plans identify action at a reasonably high level, much of which sits within the remit of the Housing & Communities Service. Further detail on how these actions will be taken forward will therefore be included in the annual Housing & Communities Service Plan and the Annual Programme of Works which is reported to HNL Committee each year. The structure of the Action Plans is informed by the headings identified in the UK Green Building Council's 'Retrofit Playbook' which has been used by other local authorities to shape their approach to this policy area. However, the Low Carbon Action Plan for RBC Housing covers new build homes as well as retrofit so there is not a direct read across to the Playbook headings. The Playbook does, however, present a menu of options for local authorities to consider, and this has been instructive in developing the Action Plan.

The Action Plans therefore sets out

- (i) Principles which will inform the Council's approach in relation to:
  - New build (RBC housing and private sector housing)
  - Existing housing (RBC housing and private sector housing)
- (ii) A table summarising the actions comprising:

- The key policy area within which the actions sit
- Summary of the specific action
- Details of teams/officers responsible for delivering the action
- Approximate timescale for delivery of the action

#### 4. PRINCIPLES INFORMING THE ACTION PLANS

##### 4.1 RBC new build

RBC has sought to set an example for new housing in the Borough by adopting high standards in its own developments and applying Passivhaus principles, as exemplified by the principles adopted for the Wensley Road development in Coley, namely:

- All dwellings designed to Passivhaus principles, achieving space heating consumption of less than 15 kWh/m<sup>2</sup>/per year (a key requirement for Passivhaus design)
- A communal wet distribution heating network for space heating and hot water provision to dwellings, supplied from a central air source heat pump (ASHP);
- Individual ASHPs serving space heating and hot water to each townhouse;
- Solar PV panels on house and apartment block rooftops for renewable electricity;
- The intention to achieve the zero-carbon homes policy via on-site measures rather than relying on carbon offsetting payments to reduce emissions to zero.

Key design themes for RBC new-build include:

- Locking in carbon as part of the design process
- Maximum levels of insulation and triple-glazing as standard
- Properties to be designed with 'heat sinks' to retain embedded heat
- Minimise air leakage through design
- Deployment of Mechanical Ventilation with Heat Recovery (MVHR) accompanied by education of tenants on its necessity and appropriate use
- Increased deployment of solar PV
- Explore use of battery storage technology
- Explore thermo-solar options and the ability to link existing heating/hot water systems
- Application of passivhaus principles
- EV charging to be incorporated

##### 4.2 RBC retrofit

The Council recognises that refurbishment rather than replacement of existing, good quality homes provides an opportunity to make vast savings in terms of embodied carbon of new construction materials. This is particularly true for a large, well-constructed residential development such as the existing homes in Wensley Road, where it is viable to improve the buildings fabric to meet and exceed modern standards. The proposed refurbishment of the existing homes is intended to address resource efficiency, environmental protection and to facilitate and encourage sustainable behaviours for residents. The key elements can be summarised as:

- A fabric first approach to the building envelope, aspiring to achieve Enerphit standards for thermal performance, combined with the installation of Mechanical Ventilation with Heat Recovery (MVHR) systems to improve internal air quality and ventilation
- An holistic approach to improving the environment for existing residents leading to a positive impact on mental health and personal wellbeing
- Encouraging and supporting residents to improve recycling habits by providing new user-friendly refuse, recycling and food waste facilities

- Providing enhanced external landscape with increased biodiversity value, creating a key link with existing rich natural habitats in the surrounding area
- Making effective use of resources by re-using materials on-site where possible, reducing waste and specifying materials with low embodied carbon, minimising waste and reducing material transportation
- Supporting active travel through increased provision of safe, secure and easily accessible cycle storage, combined with improved connections to the green travel network provided as part of Phase 1 works

The above principles illustrate how the Council is taking an holistic approach to housing retrofit which considers its context as well as the fabric of the building. That said, a number of actions have already been taken in the housing retrofit area and these principles will continue to inform our approach:

- All RBC housing refurbishment projects to have a key goal of being as energy efficient as possible, cutting our carbon footprint and reducing waste
- Alternative forms of heating to be investigated and tested with a view to replacement of the existing gas central heating programme, including trials of alternative technologies
- The cost:benefit equation for installing Triple Glazed windows in place of the existing double-glazing programme, including prospective trial installations, to be reviewed
- Loft information data to be reviewed with a view to targeting the remaining properties which have less than 300mm
- Electrically heated properties which have cavity walls to be reviewed with a view to establishing the effectiveness of the insulation - any that is not up to current standards will be stripped and renewed using grant funding where possible
- Mechanical Ventilation with Heat Recovery (MVHR) to be examined and installed as an alternative to extract fans
- Programme of upgrading insulation to Cross Wall properties to continue
- Increased use of solar panels on the existing stock to be investigated to supplement the 457 Council homes which were equipped with solar in 2014-15

In addition, in terms of the wider supply chain, the Council is:

- Encouraging trades to recycle, specifically using scrap metal bins when stripping out old fittings and heating systems
- Working with suppliers to reduce single use plastic products and ensuring that materials supplied meet low carbon standards
- Encouraging suppliers and contractors to increase energy efficiency and reduce carbon usage through increased weighting of these elements within specifications and tender evaluation
- Working with trades to reduce the number of trips to and from stores and therefore reduce fuel usage
- Encouraging tenants to purchase energy from renewable energy suppliers

#### **4.3 Private sector new build**

The Reading Local Plan (Policy H5) sets out the key principles which the Council will apply to new housing in Reading (including its own developments), and specifically the 'zero carbon homes' policy which applies to all major new build (more than 10 dwellings). This policy requires that:

- where homes are not designed to be carbon neutral, this will mean as a minimum a 35% improvement in the dwelling emission rate over the 2013 Building Regulations plus a contribution of £1,800 per tonne towards carbon offsetting within Reading (calculated as £60 per tonne over a 30 year period).

- Where it is proposed to meet the zero carbon homes requirement in another way, clear evidence should be provided to demonstrate how it will be achieved at planning application stage.
- Zero carbon homes is an achievable standard that, until recently, was intended to be a national requirement in the Building Regulations.
- All other housing should be built to a level equivalent to the emissions requirement of former Code for Sustainable Homes Level 4, which is a 19% improvement in the dwelling emission rate over the target emission rate, as defined in the 2013 Building Regulations.
- Where the 19% reduction in carbon dioxide emissions cannot be achieved on site, an offset may be possible through planning contributions.

Implementation of this policy via the development control process will therefore be a key part of the Council's approach to reducing emissions from new housing in Reading.

#### 4.4 Private sector retrofit

The Council's influence over, and the resources it has available to devote to, improvement of its own housing are significantly greater than it can devote to the private sector, and this is reflected in the relative scope of the Action Plans. Reading's climate emergency declaration made clear that additional powers and resources would be needed from Government to enable the achievement of net zero by 2030, and private sector retrofit remains one of the key policy areas where this remains the case. Nonetheless, the Action Plan identifies areas where the Council can support efforts to encourage and/or require landlords and private homeowners to reduce emissions.

#### 4.5 KEY RISKS TO & CONSTRAINTS ON ACTION PLAN IMPLEMENTATION

A number of significant risks and constraints will need to be taken into account in delivery of the Action Plans and how they are reflected in Service Plans. Key among these are:

- **Finance:** after a government acted to remove various social and environmental 'policy costs' from domestic energy bills in 2013, leading to significant reductions in funding to support domestic energy efficiency, installation of energy saving measures in UK homes such as loft insulation and cavity wall insulations fell dramatically, and has yet to recover. Various phases of the Green Homes Grant have offered more funding for retrofit measures, but it is widely acknowledged this is not yet at the scale required to rise to the challenge of the Government's target of net zero by 2050, let alone Reading's more ambitious goal of net zero by 2030. A particular challenge for Reading is that Government funding is currently targeted at bringing UK housing up to EPC band 'C' but the vast majority of RBC Housing is already 'C'. This severely restricts our eligibility to access grant support for our own housing.
- **Staff capacity:** with high demands on staff time and tight constraints on revenue funding, identifying the staff capacity required to take forward housing retrofit projects has been challenging. A new post of Low Carbon Housing Project Manager is in the process of being created which will provide additional resource to drive forward the Action Plan, though responsibility for doing so will still be a shared responsibility across the services identified in the Action Plans, led by the Housing & Communities Service.
- **Cost of electrical heating relative to gas:** at present, and in the context of extreme energy price volatility, electrical heating is likely to be more expensive than gas, at least in the short-term, unless other energy efficiency measures are taken to reduce overall demand for energy. While we expect this to change over time as government has indicated a desire to close and ultimately reverse the price differential, in the short-term there may be a conflict in some properties between electrification of heating and reducing heating costs/tackling fuel poverty. Priority may therefore have to be given to



energy saving measures which offer a 'no regret' option in the context of high and volatile energy prices.

- **Hard-to-treat properties:** as suggested above, the operating costs of electrical heating systems such as heat pumps can be reduced by improving insulation, improving air tightness, installing MVHR and installing PV to offset running costs. However, some properties will not be suitable for some or all of these approaches which may reduce scope for their application.
- **Key meters:** the use of key meters is widespread in social housing and energy providers tend to charge more for this facility. Moreover, key meters may not work effectively with some of the more energy efficient systems being contemplated as they require longer periods drawing energy at a low level, and generate spikes in power use when self-cleansing.
- **Communal heating systems:** these may be required for some blocks, which could require RBC to become registered as an energy supplier, creating an increased need to manage energy centrally and recharge tenants individually.

| LOW CARBON HOUSING ACTION PLAN (RBC HOUSING)                                     |  |   |   |
|--|--|---|---|
| ACTION AREA<br>(as per heading in UK Green Building Council 'retrofit playbook') | SPECIFIC ACTION  | TIMESCALE   | LEAD SERVICE/TEAM/OFFICER   |
| New build  | Embed principles set out in 4.1 in all RBC new build   | Immediate/ongoing   | Property & Assets/Daryn Inston - as 'agent'; Housing & Communities/Zelda Wolfle - as 'client'   |
| Stocktake  | Investigate measures of actual carbon emissions from RBC housing (as opposed to EPC/SAP ratings)   | Q4 2022   | H&C/Trevor Wooldridge, Climate Change & Sustainability/Ben Burfoot  |
| Pilots/case studies  | <p>Install 40 Air Source Heat Pumps (ASHPs) in first block Granville Road</p> <p>Installation of a further 40 ASHP's at Granville Road in block 42</p> <p>Installation of Ground Source Heat Pumps at Granville Road in block 28 - procurement to be undertaken with a view to commencement late in 2022</p> <p>Study performance of ASHPs and Ground Source Heat Pumps installed and apply lessons learnt.</p> <p>Remaining 8 story block at Granville Road to be trialled with Quantum Storage Heaters</p> | <p>Complete</p> <p>2022</p> <p>2022</p> <p>Underway and ongoing</p> <p>2022</p> | <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> |

| LOW CARBON HOUSING ACTION PLAN (RBC HOUSING)   |   |  |                                    |
|--|---|--|------------------------------------|
| Skills and capacity  | Recruit Low Carbon Housing officer to co-ordinate retrofit efforts  | March 2022                                   | Housing & Communities/Zelda Wolfle |
|  | Support local training and supply chain development (e.g. by building social value requirements into third-contracts)                                     | 2022 and ongoing                             | Housing & Communities/Zelda Wolfle |
|  | Appoint an energy efficiency consultant to provide thermal modelling expertise and make recommendations on where efficiencies can be made                 | Investigation of suitable companies underway | H&C/Mike Carpenter                 |
| Existing and new technology  | Top up loft insulation to 300mm across the stock wherever possible  | Underway and ongoing                         | H&C/Mike Carpenter                 |
|  | Continue programme of upgrading insulation to Cross Wall properties - Works to be tendered and commenced at Bamburgh Close                                | 2022   | H&C/Mike Carpenter                 |
|  | Recommission and maintain biomass boiler at Cedar Court   | 2022-2023                                    | H&C/Mike Carpenter                 |
|  | Investigate and trial alternative forms of heating to gas boilers   | Underway and ongoing                         | H&C/Mike Carpenter                 |
|  | Continue to install Mechanical Ventilation with Heat Recovery (MVHR) instead of extract fans. Includes feasibility options with different property types. | Underway and ongoing                         | H&C/Mike Carpenter                 |
|  | Use only 'A' rated condensing appliances when replacing older, less efficient boilers   | Underway and ongoing                         | H&C/Mike Carpenter                 |
|  | Trial alternatives to gas boilers - Air Source, Ground Source and Quantum Storage Heaters   | Underway                                     | H&C/Mike Carpenter                 |
|  | Integrate successful technologies after trials into future boiler replacement programme   | 2023-2025                                    | H&C/Mike Carpenter                 |
| Upgrade external insulation to walls and roofs when existing systems are due for replacement | Underway and ongoing  | H&C/Mike Carpenter                           |                                    |

| LOW CARBON HOUSING ACTION PLAN (RBC HOUSING) |  |   |   |
|--|--|---|---|
|  | <p>Identify options to increase insulation levels on ‘hard to insulate’ properties</p> <p>Research ‘smart’ systems which may monitor and control systems to minimise emissions</p> <p>Continue window replacement programme</p> <p>Trial triple-glazed timber framed windows</p> <p>Review plans to replace electric storage heaters with gas central heating</p> <p>Review flat roof properties with a view to providing additional insulation retrofit or as part of flat roof replacements</p> <p>Seek more efficient, thicker insulation products for external wall insulation</p> | <p>Ongoing</p> <p>2022 -2023</p> <p>Underway and ongoing</p> <p>Underway and ongoing</p> <p>2022-2023</p> <p>Underway and ongoing</p> <p>Investigations and trials underway</p> | <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> <p>H&amp;C/Mike Carpenter</p> |
| Policy                                       | <p>Report on progress via Climate Emergency Strategy annual report</p> <p>Report on progress with Action Plans via HNL</p> <p>Apply Local Plan zero carbon homes policy to planning applications</p>   | <p>Annual and ongoing</p> <p>Annual and ongoing</p> <p>Ongoing</p>  | <p>Climate Change &amp; Sustainability/Peter Moore</p> <p>H&amp;C/Mike Carpenter, PTPP/James Crosbie, CC&amp;S/Peter Moore</p> <p>PTPP/James Crosbie</p>  |

| LOW CARBON HOUSING ACTION PLAN (RBC HOUSING) |   |                       |  |
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|  | Ensured Action Plan actions are fully embedded in annual HRA Business Plan Review   | Annual Review         | Housing & Communities/Zelda Wolfle             |
| Finance and incentives                       | Ensure adequate resource for implementation in annual HRA Business Plan Review  | Annual Review         | Housing & Communities/Zelda Wolfle             |
|  | Identify and pursue additional grant funding opportunities  | Underway and ongoing  | H&C/Mike Carpenter                             |
| Engagement with Householders                 | Continue education programme for tenants to advise on managing home energy use  | Ongoing               | H&C/Mike Carpenter                             |
|  | Work with energy providers to allow tenants to better understand how to manage their energy consumption via e.g. smart meters and other monitoring devices                                  | Ongoing               | H&C/Mike Carpenter                             |
| Making the case for investment               | Investigate scope for new solar PV programme for RBC Housing (focusing on blocks)   | 2022                  | H&C/Mike Carpenter; Sustainability/Ben Burfoot |
|  | Review cost-benefit for triple-glazing in place of existing double-glazing programme<br>Review all electrically heated properties with cavity walls and upgrade insulation where possible   | Underway<br>2022-2025 | H&C/Mike Carpenter<br>H&C/Mike Carpenter       |
| Supply chain                                 | Encourage (and where possible through contracts, required) trades to recycle old fittings and heating systems   | On-going              | H&C/Mike Carpenter                             |
|  | Work with contractors to reduce single use plastic products   | On-going              | H&C/Mike Carpenter                             |
|  | Increase weighting of energy efficiency and carbon reduction criteria within tender specification/evaluation  | On-going              | H&C/Mike Carpenter                             |
|  | Work with the trades to reduce number of vehicular movements and therefore fuel   | Ongoing               | H&C/Mike Carpenter                             |
|  | Review general product holding with our Stored Provider and the materials specified on all refurbishment works to use most environmentally friendly, low carbon materials wherever possible | Ongoing               | H&C/Mike Carpenter                             |

| LOW CARBON HOUSING ACTION PLAN (RBC HOUSING) |   |         |                    |
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|  | Develop in house skills to carry out retrofit works including specialist trades. Train internal PAS surveyor(s) | Ongoing | H&C/Mike Carpenter |

**LOW CARBON HOUSING ACTION PLAN (PRIVATE SECTOR)**

| ACTION AREA<br>(informed by<br>'retrofit<br>playbook') | SPECIFIC ACTION  | TIMESCALE                              | LEAD<br>SERVICE/OFFICER   |
|--|--|--|---|
| Fuel poverty   | <p>Maintain 'Winter Watch' service</p> <p>Promote 'Draughtbusters' scheme</p> <p>Promote general energy savings advice to households</p>   | <p>Ongoing</p> <p>2022</p> <p>2022</p> | <p>H&amp;C/Richard Lewis<br/>(supported by Public Health)</p> <p>H&amp;C/Low Carbon Housing Project Manager; Comms support</p> <p>H&amp;C/Low Carbon Housing Project Manager; Comms support</p> |
| Regulation   | <p>Undertake Housing, Health &amp; safety Rating Inspections as part of proactive and reactive inspection programmes (primarily in the private rented sector) to minimise the impact of fuel poverty.</p> <p>Where development is being delivered, ensure compliance with the energy efficiency standards as set out in the Building Regulations</p> | Ongoing                                | PTPP/Yasmin Ahmad   |
| Stock Condition  | Complete and publish Stock Condition Survey to help inform retrofit planning   | Q3 2022                                | PTPP/Yasmin Ahmad   |
| Pilots/case studies                                    | Working with landlords and/or Empty Home owners, identify case studies which demonstrate how retrofitting can be effectively delivered in Reading's housing stock.   | Q4 2022                                | PTPP/Yasmin Ahmad   |

|                              |  |  |   |
|------------------------------|--|--|---|
| Skills                       | Work with training providers and colleges and skills programmes to develop skills for hard to treat insulation, PAS surveyors, heat pumps, ventilation.<br><br>Create local jobs through social value clauses in contracts.  | 2022 to 2025   | Greater South East Energy Hub<br><br>RBC  |
| Technology                   | Work with University of Reading on research and innovation in retrofit to inform retrofit planning   | Ongoing  | H&C/Low Carbon Housing Project Manager  |
| Policy                       | Report on progress via Climate Emergency Strategy annual report<br><br>Report on progress with Action Plans via HNL<br><br>Apply Local Plan zero carbon homes policy to planning applications<br><br>Enforce Minimum Energy Efficiency Standards to ensure that the private rented sector meets the latest enforceable standards | Annual and ongoing<br><br>Annual and ongoing<br><br>Ongoing<br><br>Ongoing | Climate Change & Sustainability/Peter Moore<br><br>H&C/Low Carbon Housing Project Manager<br><br>PTPP/Julie Williams<br><br>PTPP/Yasmin Ahmad |
| Finance & Incentives         | Promote opportunities for households in Reading to access government grants<br><br>Promote uptake of Boiler Upgrade Scheme (heat pumps)  | Ongoing  | H&C/Low Carbon Housing Project Manager; Comms support   |
| Engagement with Householders | Promote retrofit opportunities to 'willing and able to pay'  | Ongoing  | H&C/Low Carbon Housing Project Manager; Comms support   |
| Tenure type                  | Proactive advice to landlords to improve energy efficiency<br><br>Promote energy efficiency via the 'Reading Rent With Confidence' scheme  | Ongoing<br><br>Ongoing   | PTPP/James Crosbie  |



|                                |   |              |   |
|--------------------------------|---|--------------|---|
| LA sources of finance          | Work with managing agents for Greater South East Energy Hub LAD2 and LAD3 projects to identify retrofit pipeline and maximise potential for projects to benefit Reading | Ongoing      | H&C/Low Carbon Housing Project Manager  |
|                                | Revisit scope for ECO scheme in Reading   | Q3 2022      | H&C/Low Carbon Housing Project Manager  |
|                                | Ring-fence offset funding under zero carbon homes policy to housing retrofit projects   | Ongoing      | PTPP/Yasmin Ahmad<br>H&C/Mike Carpenter |
|                                | Explore opportunities for adjoining private residents to 'buy-in' to large scale solutions/installations at same contract rates for RBC housing contract work           | Ongoing      |   |
| Making the case for investment | Explore potential for additional community solar programmes with Reading Community Energy Society.  | 2022         | CC&S/Ben Burfoot                        |
|                                | Investigate collective Power Purchase Agreement to sell excess solar to grid as green electricity.  |              |   |
| Retrofit Design                | Establish standards for climate-conscious retrofit  | 2022 to 2025 | RBC working with UoR, Warmworks, SECBE  |