



Dundee Local Heat and Energy Efficiency Delivery Plan 2024-2028



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2 INTRODUCTION

The LHEES Delivery Plan sets out how Dundee City Council (the Council) proposes to support implementation of its LHEES Strategy.

In this document there are nine chapters, followed by an Action Progress Tracker table.

Chapter 2 introduces the aims and objectives of the LHEES Delivery Plan and identifies the governance and mechanism for monitoring and evaluating the progress of the LHEES.

Chapter 3 explains Strategic Zones and Delivery Areas.

Chapter 4 identifies the key stakeholders and outlines the plans to engage with them.

Chapter 5 outlines overarching actions that need to be delivered to enable other actions outlined in the Strategy and the Delivery Plan.

Chapter 6 outlines the actions to enable energy efficiency improvement of the buildings in Dundee considering the initial delivery area initiatives and building level assessment.

Chapter 7 outlines the actions that will be taken to decarbonise heat in buildings in Dundee.

Chapter 8 outlines the actions to tackle fuel poverty in Dundee considering the local drivers and the Council's strategic priorities.

Chapter 9 outlines the actions to enable the delivery of heat networks in Dundee considering the outputs from the LHEES Heat Network Zoning, Local Area Energy Plan and ongoing Heat Network feasibility studies.

The actions in the Delivery Plan will be formally reviewed and updated every two years.

2.1 AIMS AND OBJECTIVES

The aim of this document is to outline how the LHEES will be delivered. As this is the first Delivery Plan the focus is on near term actions, opportunities and priorities given the existing and known policy landscape however we recognise that certain standards and interim targets are currently under review. We will therefore evolve the scope of the LHEES Delivery Plan as the Scottish Government introduces future standards, regulation and methodology of measuring progress to Net Zero as well as new delivery and funding programmes.

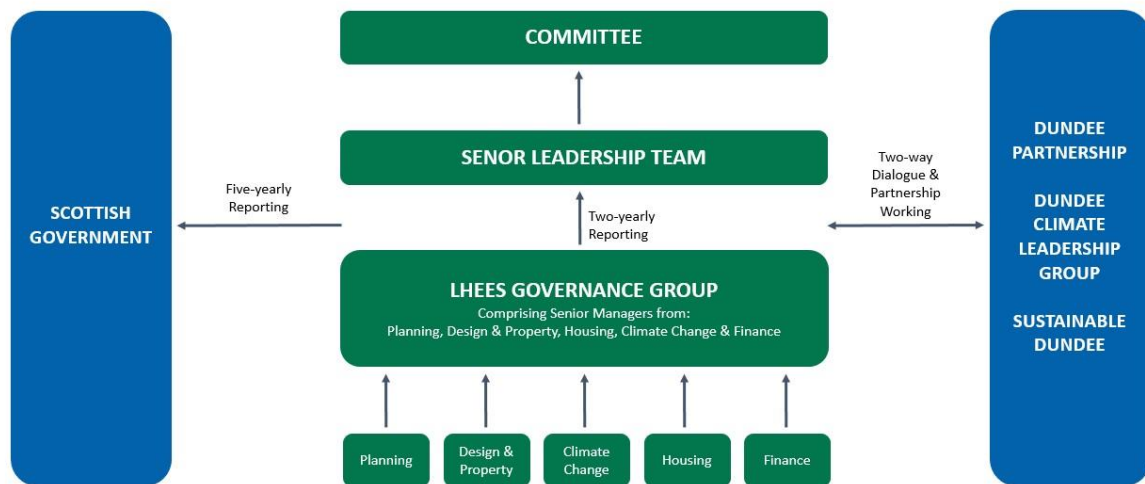
The objectives of the Delivery plan are as follows:

- Identify overarching LHEES actions and outline plans for delivering them.
- Set up a clear monitoring and evaluation plan to track the progress towards national and local targets and any key performance indicators.
- Identify specific actions based on the Delivery Areas and opportunities generated as part of the LHEES process.
- Identify resources, relevant funding and delivery programmes that could be utilised to support the LHEES Delivery actions.
- Align LHEES actions with the existing funding programmes and schemes for fuel poverty, energy efficiency and heat decarbonisation and consider how these could be better integrated and targeted strategically.

- Set out stakeholder engagement plan to engage with and promote more effective working with stakeholders around implementing prioritised Delivery Areas and Heat Network Zones.

2.2 GOVERNANCE OF LHEES DELIVERY PLAN

The LHEES Delivery Plan will be overseen by the LHEES Governance Group as set out in in the LHEES Strategy.



Each of the Delivery Plan actions will be assigned to a team in the Council or a specific stakeholder to lead on and co-ordinate. Partner roles have then been identified where actions will require the support of either the Council, or relevant stakeholders such as Housing Associations. The relevant Council team will report on or co-ordinate the report on the assigned actions.

2.3 THE LHEES MONITORING AND EVALUATION PLAN

The LHEES Monitoring and Evaluation Plan (MEP) is divided into the following themes:

1. Energy Efficiency
2. Fuel Poverty
3. Heat Decarbonisation
4. Overall emissions reduction

Each theme has different priorities, and each priority has a target identified according to the current national and local policies, standards and targets. Each target is tracked against an indicator. To measure the progress of each target, a baseline has been established. For consistency and transparency, the data source of each baseline is stated in the MEP.

For example, under the energy efficiency theme, the Plan has identified that meeting the current targets set out in 'Heat in Buildings Strategy 2021' is a priority. The target is that 'all Private Rented sector properties in Dundee are EPC C or above by 2028'. To track this target, the indicator is set to be "% of private rented properties that are EPC A – C". The baseline (2023/24) data for this target is the latest available data from Energy Savings Trust's Home Analytics dataset. It suggests that 51% of total private rented properties already meet this target. Or 49% of the private rented properties don't meet

this target. The MEP will be formally refreshed every two years, and progress can be measured against the baseline. By using quantitative metrics like this, the MEP can be used to calculate additional information such as the number of private rented properties that need to be retrofitted each year until 2028 to meet the 2028 target, and the indicative cost, based on the Energy Saving Trust's Portfolio Energy Analysis Tool (PEAT) which models the climate and cost impact of energy saving measures.

The LHEES Monitoring and Evaluation Plan (MEP) table of current priorities, targets and indicators is set out on the following page, these will remain under review pending future Scottish Government standards, regulation and methodology of measuring progress to Net Zero.

Theme	Priority	Targets	Indicators	Baseline Performance (2023/24)	Year 1	Year 3	Year 5	Data Type and Source	Target Date
Energy Efficiency	Heat in Buildings Strategy 2021	All Private-Rented sector properties are EPC C or above by 2028	% of private-rented properties that are EPC A - C	51%				EST Home Analytics	2028
		All Owner-Occupied sector properties are EPC C or above by 2033	% of owner-occupied properties that are EPC A- C	42%				EST Home Analytics	2033
	Energy Efficiency Standard for Social Housing post 2020 (ESSH2)	All Social-Rented sector properties are EPC B or above by 2032	% of social-rented properties that are EPC A - B	18%				EST Home Analytics	2032
Fuel Poverty	Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019	No more than 15% of households in Dundee are in fuel poverty	% of Households in fuel poverty	31%				Home Analytics, Scottish House Condition survey	2030
		No more than 5% of households in Scotland are in extreme fuel poverty	% of households in extreme fuel poverty	21%				Home Analytics, Scottish House Condition survey	2030

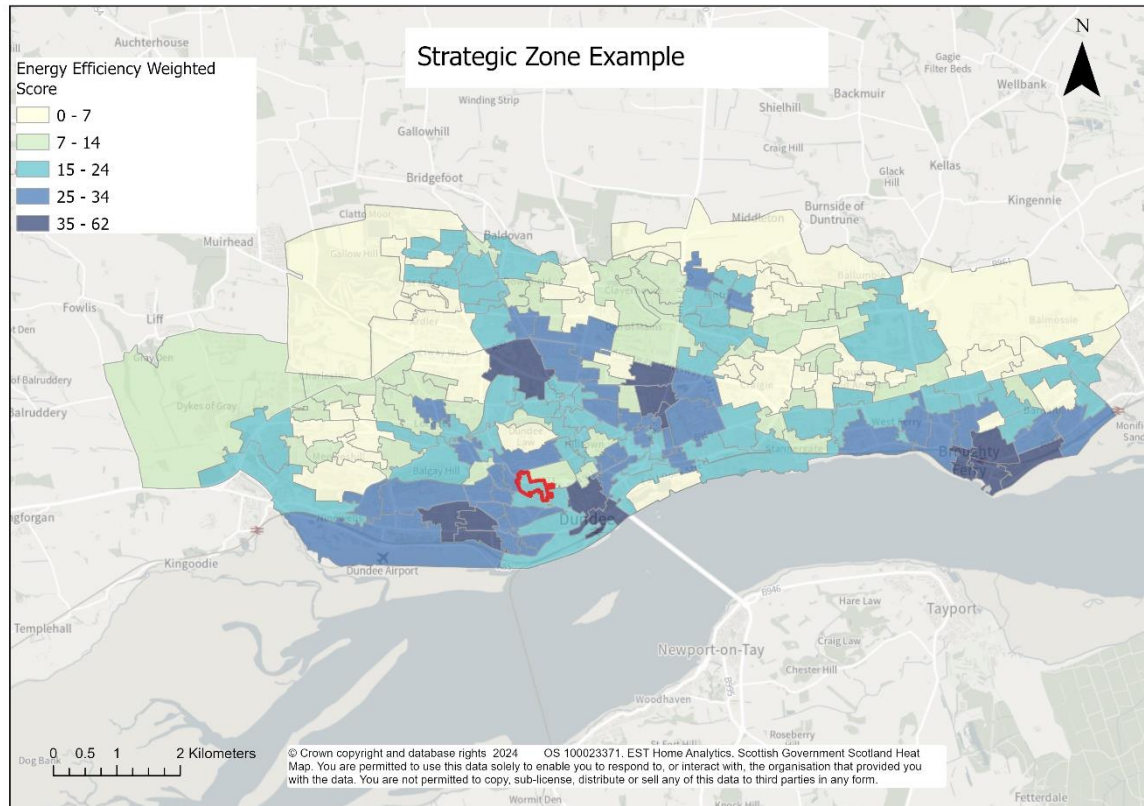
Heat Decarbonisation	Heat in Buildings Strategy 2021	22% of heat in domestic buildings in Dundee to be directly supplied from renewable sources by 2030	% of domestic properties in Dundee with heat pump or similar Low or Zero Carbon (LZC) heating system	3%				EST Home Analytics	2030
		22% of heat in non-domestic buildings in Dundee to be directly supplied from renewable sources by 2030	% of non-domestic properties in Dundee with heat pump or similar LZC heating system	0.80%				EST non-domestic analytics and Skenario Lab data	2030
	Heat Networks (Scotland) Act, 2021	Combined supply of thermal energy by heat networks in Dundee is 8% of total heat demand by 2030	% of heat supplied by Heat Network in Dundee	3.8%				Home Analytics, Non-domestic analytics	2030
		Dundee City Council has a designated Heat Network Zone	Dundee City Council has a designated Heat Network Zone						2026
		Building Assessment Reports (BAR) are completed for Council owned non-domestic buildings	Building Assessment Reports (BAR) are completed for Council owned non-domestic buildings						2026
Emission Reduction	Heat in Buildings Strategy 2021	By 2030 achieve a 75% emissions reduction from public sector buildings against a 2020 baseline.	% of emission reduction from public sector non-domestic buildings in Dundee	-18%				DESNZ- UK local authority and regional greenhouse gas emissions national	2030

								statistics, 2005 to 2021	
		By 2038 all public sector buildings to have zero emissions heat	Total emissions from public sector non-domestic buildings in Dundee (KtCO2e)	84.14				DESNZ	2038
	Climate Change Plan 2018 – 2032, updated in 2020	68% reduction in emissions from all buildings in Dundee by 2030 against a 2020 baseline	% of emission reduction from all buildings in Dundee	-5%				DESNZ	2030

3 STRATEGIC ZONES AND DELIVERY AREAS

3.1 STRATEGIC ZONES

The delivery plan refers to the Strategic Zones and Delivery Areas throughout the document. Strategic Zones present a visualisation of the potential pathways to decarbonise and improve energy efficiency of the building stock in Dundee. These are split out by data zones in the Dundee LHEES. They are useful to understand the baseline performance, the scale of potential and initial areas of focus which could be used to inform Delivery Areas and follow on engagement. For example, let us look at the energy efficiency performance of data zone – City Centre 01 circled red in the map below.

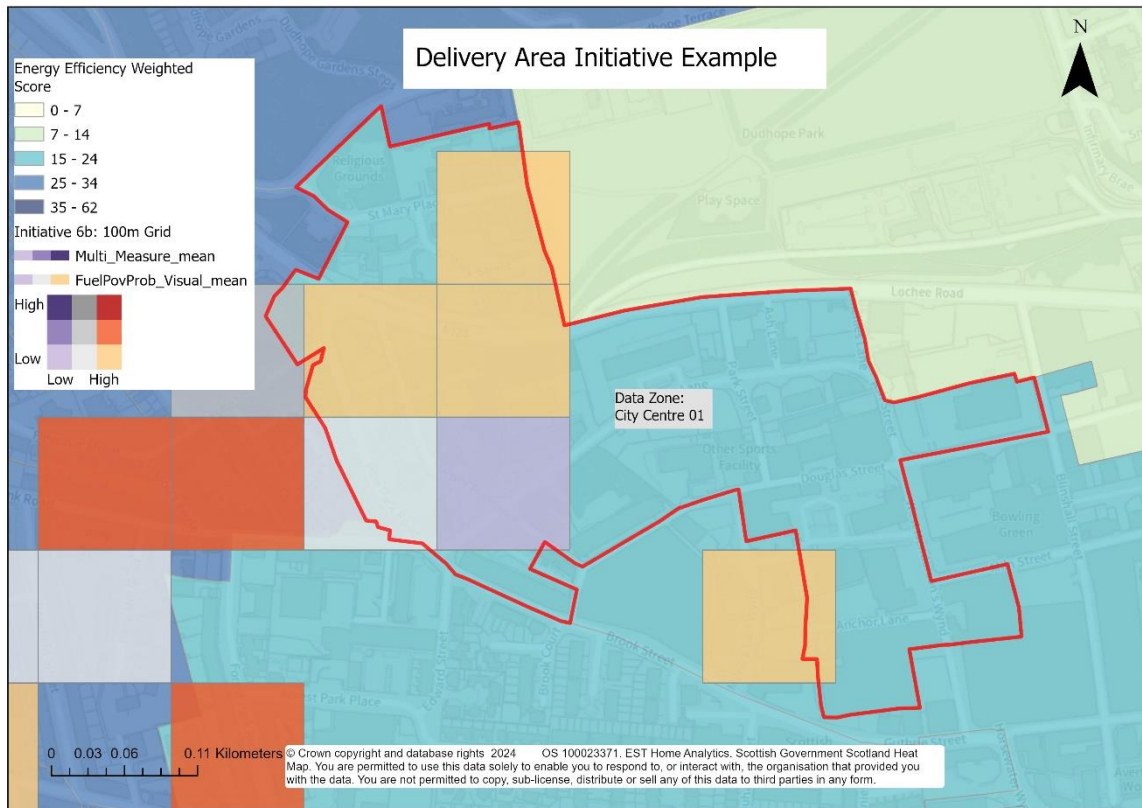


This map indicates that the City Centre 01, circled in red is a strategic zone which ranks upper middle amongst the other data zones and has relatively good energy performance. This ranking is based on a scoring methodology which has been developed, based on data in the Home Analytics dataset (Version 3.8), which allows us to calculate the probability of an area being in fuel poverty and its energy efficiency score. The data fields and the calculations used within this methodology are set out in the table below:

Strategic zone: City Centre - 01		
Total number of properties the zone		364
Loft Type & Insulation	0-99mm	2%
Glazing	Single glazed windows	15%
Wall Insulation	Uninsulated (all construction types)	40%
Number of properties	0-99mm	6
	Single glazed windows	55
	Uninsulated (all construction types)	146
	Number of potential interventions identified	207
Total Weighted Score		18.8
Ranking amongst all other data zones (total 188) in Dundee		80

3.2 DELIVERY AREAS

The data zone can be further interrogated to identify a 'delivery area' or 'focus area.' Delivery Areas, often referred to as focus areas, are at a higher granularity than Strategic Zones. These spatial zones set out clusters of buildings in a 100-metre cell within a Strategic Zone that identify potential solution(s) at a delivery level. In the map below each square box represents a cell. They are an important starting point for identifying a range of projects, and actions that are within the competence of the Scottish Government, Dundee City Council, and wider partners (included as actions to be developed in this Delivery Plan). A Delivery Area may comprise of streets or blocks, be a subset area of existing place-based or city-wide activity or be centred around specific technology interventions.



This map displays social housing properties in City Centre 01 with poor energy efficiency, high heat demand intensity, and high fuel poverty probability - which are recommended for multiple retrofit measures by the Portfolio Energy Analysis Tool (PEAT). Measures recommended are external wall insulation, loft insulation, window, and door replacement. These properties can be targeted as one delivery area due to their similar property characteristics, tenure type, geographical clustering, and similar PEAT recommendations. The map suggests that there is not a high concentration of buildings which are recommended for multiple retrofit measures in City Centre 01, but there is a high concentration of properties which have a high probability of fuel poverty. This means that this delivery area would benefit from prioritising heating system change/upgrade or connection to a heat network over fabric retrofit.

4 STAKEHOLDER ENGAGEMENT

Stakeholder engagement is the key component that informs LHEES development and ensures the delivery of the Strategy. A Stakeholder Engagement Plan was devised for the development of the LHEES. The following section is focused on the stakeholder engagement which has informed the delivery of the Strategy, considering the stakeholders for the domestic sector, non-domestic sector, and heat networks.

4.1 DOMESTIC SECTOR ENGAGEMENT

The domestic sector requires a greater level of engagement with the wider public, private landlords and homeowners in Dundee. A number of engagement materials, campaigns, tools, and support are available for this sector, but the existing support/resources are fragmented and are often not tailored to the local need. Holistic engagement with the domestic sector is likely to require more resources than currently available and will require closer collaboration with the existing network of actors such as Dundee Energy Efficiency Advice Project (DEEAP)¹, SCARF², Home Energy Scotland³ and the Hillcrest Heat Team. Where feasible and subject to the availability of additional resource, the Council will support and work with relevant partners to engage with the domestic sector to:

1. Explore the potential of developing an enhanced energy advice service, to expand local engagement with tenants, residents and homeowners through workshops and surgeries providing practical guidance on installation and trusted installers, operation, and maintenance of heat pumps, increasing awareness, and understanding of energy efficiency measures and low carbon heating technologies in a safe and trusted space. This will involve assessing local needs and gaps in current services, defining the scope of an enhanced service, developing a delivery plan and securing funding and resources.
2. Work specifically with private landlords to understand current and future Energy Efficient Scotland requirements and provide support, resources, and advice.

4.2 NON-DOMESTIC SECTOR ENGAGEMENT

Non-domestic sector engagement is critical for the large-scale decarbonisation of heat in the City and to enable heat network deployment. Unlike the domestic sector, the engagement materials, tools, and resources available for this sector are limited. Therefore, engaging with this sector will require a dedicated engagement plan. Where feasible and subject to availability of additional resource, the Council will work with relevant partners to engage with non-domestic sector to:

¹ <https://www.dundee.gov.uk/service-area/neighbourhood-services/housing-and-construction/energy-advice>

² <https://www.scarf.org.uk/>

³ <https://www.homeenergyscotland.org/>

1. Create an online tool kit for the non-domestic sector that covers public and private building owners, focusing on available advice, support and funding.
2. Develop a programme of engagement activities, focusing on both the public and private sector, to promote advice and support on heat decarbonisation and energy efficiency initiatives, including heat networks.
3. Engage with non-domestic properties within the five prioritised heat network zones with the highest heat demand to verify heat demand data and engage on organisations' heat decarbonisation plans.

4.3 DNO ENGAGEMENT

The Council has close working relationships with both the electricity distribution network operator (DNO) SSEN, and the gas network operator (GDN) SGN. The Council will continue to collaborate with the networks and share the results of Dundee's LHEES with them. Dundee's LHEES and innovative partnerships such as the Local Energy Net Zero Accelerator (LENZA) will be utilised to co-ordinate network infrastructure reinforcement and local energy decarbonisation plans. This will help both the networks and the Council to reduce costs, accelerate the transition and ensure a Just Transition. The Council will take the following actions to continue its engagement with the DNO:

1. Engage with SSEN and other significant partners, sharing LHEES data and scenarios, to produce an evidence base which will support its grid infrastructure planning so that there is sufficient capacity to enable future heat pump installations.
2. Explore the prioritisation of energy efficiency projects in areas where there are electricity network constraints, including opportunities for joint funding and cost-sharing mechanisms.

4.3.1 Local Energy Net Zero Accelerator (LENZA)

The Council, in partnership with SSEN, has spearheaded the development of Dundee's LHEES and Local Area Energy Plan (LAEP), leveraging an innovative visualisation tool named LENZA. Advanced Infrastructure Trading Limited (AITL) is actively engaged in developing LENZA on behalf of SSEN and facilitating the visualisation of LHEES and LAEPs within the tool. The project is funded by SSEN through Ofgem's Network Innovation Allowance, with LENZA initially tested at an early Alpha stage in Dundee and now progressing to the Demonstration stage.

LENZA's visualisation capabilities empower the Council to selectively share pertinent information with the Distribution Network Operator (DNO), facilitating coordinated development of local energy projects and network infrastructure upgrade requirements. This tool streamlines data sharing, management, and mitigates copyright concerns, affording both the Council and DNO control over the information they choose to share and visualise.

Key features of LENZA include the ability for the Council to outline high-level projects, assess network constraints and capabilities, and evaluate cost and carbon implications. These functions are invaluable for conceptualising projects and preparing preliminary business cases for local energy initiatives.

Looking ahead, if LENZA is integrated into regular operations (Business as Usual), it will support the ongoing review, monitoring, and evaluation of the LHEES with minimal external consultant involvement. Given the complexity and extensive dataset underpinning the LHEES, which demands specialised skills and knowledge, LENZA offers substantial resource and time savings for the Council by providing intuitive functions for in-house review and development of future LHEES iterations.

As such, the Council remains committed to collaboration with the DNO and AITL to advance LENZA to its next stage, recognising its pivotal role in optimising local energy planning and management.

4.4 DUNDEE CLIMATE LEADERSHIP GROUP

The Dundee Climate Leadership Group (DCLG) is an executive partnership of key players in Dundee providing active leadership on Dundee's Net-Zero challenge. The group aims to leverage expertise from across the City to engage and inspire collective ownership and a shared commitment to tackling climate change. The DCLG has supported the development of the LHEES, and its sub-group, the Energy Systems and Retrofit Working Group (ESRWG) has been closely consulted throughout the development of the LHEES. To maintain this momentum the Council will take the following action:

1. Continue to engage with both the DCLG and ESRWG to ensure that there is city-wide ownership and buy-in of the LHEES.

4.5 LOCAL AUTHORITIES

Reaching decarbonisation targets is a challenge faced by all Scottish local authorities. Therefore, it is important for councils to communicate regularly; to promote knowledge sharing and lessons learned from energy efficiency and heat decarbonisation projects and collaborate where project synergies exist to realise the benefits from economies of scale.

1. Host a stakeholder session, initially with other neighbouring Local Authorities, to provide an overview of key findings and delivery plan actions from the LHEES and LAEP and to identify synergies and specific areas for collaboration in order to uncover potential opportunities for delivering cross-boundary initiatives.

5 OVERARCHING ACTIONS

LHEES requires wider collaboration and strategic thinking. To achieve the principal aims of heat decarbonisation and fuel poverty reduction, wider local and national socio-economic and policy contexts need to be considered. Creating economies of scale, ensuring the smooth transition of supply chains of products

and services, training greater numbers of the existing and emerging workforce in new skills and the co-ordination of project planning and policymaking are key to the success of the LHEES.

5.1 PROJECT AND POLICY COORDINATION

The LHEES has highlighted several policy gaps at national level that need to be addressed to ensure the successful delivery of LHEES actions and priorities. The Council will continue engaging with the Scottish Government to address those gaps. At a local level, the Council will take the following actions to enable early coordination between local policy, planning, and projects.

1. Proceed with designation of Heat Network Zones as required by The Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023 (Section 47) and (Section 48).
2. Proceed with Building Assessment Reports (BARs) as required by The Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023 (Section 63).
3. Develop public guidance around planning requirements for heat pumps in domestic and non-domestic properties.
4. At the site assessment stage of the review of the Local Development Plan (LDP), consider the potential for proposed sites to connect to heat network zones identified in the LHEES).
5. Work with the DCLG to explore contracts to support training, retraining, and upskilling in the future/existing workforce to support supply chain development.

5.2 ADDRESSING SKILLS SHORTAGE

To deliver the LHEES, the supply chain in Dundee needs to be equipped with the right capacity and skills. For example, only 3% of the domestic properties in Dundee are supplied directly from renewable heat. To meet the target of “22% of heat in domestic buildings in Dundee to be directly supplied from renewable sources by 2030”, on average 2,453 heat pumps or Low or Zero Carbon (LZC) heating systems should be installed each year until 2030. And to meet the EPC targets, 36,737 (on average 4,082 per year) domestic properties should be retrofitted by 2033. To understand the current capabilities and skills in Dundee and to prepare for the delivery of the LHEES, the following actions will be taken:

1. Collaborate with Dundee and Angus College, the University of Dundee, and Abertay University to build an understanding of the current and future skills and training offering. Create a skills matrix for interventions to highlight gaps.
2. Establish a campaign strategy, including signposting to available funding, to encourage training and establish and deliver targeted training programmes to increase the number of skilled workers in sectors such as building retrofit, heat pump installation, solar PV installation, heat network installation and operation in the region, to help towards closing the skills gap.
3. Align skills and supply chain priorities with community wealth building work.

5.3 CREATING ECONOMIES OF SCALE

LHEES proposes a place-based approach to enable retrofit at scale, delivering efficiencies and economies of scale through demand aggregation. This approach typically requires a funding vehicle to be established and can include blended public/private sector financing. There are limited options for such funding at a national level, and this is highlighted in the LHEES strategy under policy gaps. Where feasible and subject to availability of additional resource, the Council will work with relevant partners to stimulate the market, explore local opportunities for collaboration and enable economies of scale.

5.4 AVAILABILITY OF OPEN AND TRANSPARENT DATA

The availability of open and transparent data is critical to local energy planning. Due to the compact urban nature of Dundee, there is limited possibility for on-site renewable generation and mass electrification of heat is not feasible in some areas due to grid constraints. Due to these constraints, demand-side management, coordination with DNOs, engagement with consumers and households and locally tailored smart local energy systems are likely to play a bigger role in Dundee's energy transition. This requires open and transparent data at a local level. Where feasible and subject to availability of additional resource, the Council will take the following actions to ensure the availability of open and transparent data to support the Net Zero energy transition:

1. Work with the Council's GIS team and other relevant teams to explore the feasibility of making Council-owned LHEES data public in line with the Council's information governance policy.
2. Where feasible, continue working with Energy Saving Trust, Scottish Government, the DNO, Ordnance Survey (OS) and other data providers/data owners to ensure the LHEES data is publicly accessible.
3. Explore opportunities to improve domestic, non-domestic and fuel poverty data through collaboration with Energy Saving Trust and the Scottish Government.
4. Continue to collaborate in projects such as LENZA and identify innovative ways of managing and sharing data with key stakeholders if the data cannot be made public.

6 ENERGY EFFICIENCY ACTIONS

The LHEES has adopted a "fabric first" approach in line with the Council's Housing Strategy. This means that energy efficiency retrofit will be prioritised for all buildings in Dundee before heating system upgrades, replacement or connecting to heat networks. Instead of shallow retrofit interventions and focusing on so called "low-hanging fruit," the focus of the Delivery Plan will be to ensure that building fabric improvements are sufficient for the switch to a heat pump or similar Low or Zero Carbon (LZC) heating system be feasible, to avoid installing fossil fuel heating systems at all costs. To deliver this ambition, following actions will be taken:

1. Collaborate with Hillcrest and other Registered Social Landlords (RSLs), using Strategic Zones and Delivery Areas, along with the PEAT dataset to understand recommended interventions, identify and prioritise community-scale retrofit projects exploring funding and reducing costs. Use projects to boost supply chain and inform success stories.
2. Raise awareness of relevant funding schemes available from trusted providers to owners of private properties in data zones identified in the Strategic Zoning as having poor energy efficiency.
3. Identify opportunities to improve energy efficiency in Council and wider housing stock in Area-Based Scheme (EES:ABS) areas.

7 HEAT DECARBONISATION ACTIONS

Decarbonising heat is one of the biggest challenges to reach Net Zero nationally and locally. LHEES analysis suggests that 87% (62,765) of the domestic properties in Dundee are connected to mains gas, posing a significant challenge and the need to radically transform the way homes are heated in Dundee. The following actions will be taken to decarbonise heat in Dundee:

1. Identify opportunities to decarbonise heating in Council housing using communal systems such as communal heat pump deployment. Use projects to boost supply chain and inform success stories.
2. Collaborate with Registered Social Landlords (RSLs) to encourage communal heat pump installations. Provide support in securing funding and grants, such as the Social Housing Net Zero Heat Fund. Work to streamline the installation process for Registered Social Landlords (RSL) through partnerships with suppliers and installers.
3. Collaborate with DCLG members to design pilot studies to explore how domestic buildings could adopt demand-side management strategies, including optimisation of heat pump usage during peak periods.
4. Identify opportunities to improve heat decarbonisation in Council and wider housing stock in Area-Based Scheme (EES:ABS) areas.

8 FUEL POVERTY ACTIONS

According to the LHEES analysis, in Dundee 31% of households are in fuel poverty and 21% are in extreme fuel poverty. This higher than national average rate poses significant challenges to Dundee's heat decarbonisation. The LHEES outputs will ensure these challenges are overcome, creating economies of scale, bringing down the cost of retrofit, identifying cheaper sources of heat, and delivering tailored support to fuel poor households. To help meet the City's fuel poverty target the following actions will be taken:

1. Develop a prioritised list of social housing properties identified through Strategic Zoning as having poor energy efficiency as a driver of fuel poverty.

2. Raise awareness amongst residents about the available funding assistance schemes and trusted providers that can support fuel-poor households and provide support services and guidance to households that require assistance with the application process.
3. Explore innovative approaches to financing retrofit projects. Collaborating with local financial institutions, building societies, and mortgage providers to open up possibilities for funding solutions aimed at making retrofitting more accessible to homeowners.

9 HEAT NETWORK ACTIONS

Heat Networks provide the opportunity to decarbonise heat at scale but also require greater engagement, buy in from stakeholders and large-scale, longer-term investment. It is critical to engage with the stakeholders at an early stage to enable heat network deployment. The focus of this iteration of the Delivery Plan is to start engaging with the non-domestic sector and social housing providers to kick-start the development of heat networks in the City. Where feasible and subject to availability of additional resource, the Council will work with relevant partners to take following actions to enable heat network development in the City:

1. Continue engagement with the HNSU to unlock support for: more detailed technical assessments and phasing strategies, including reviewing the findings of previous feasibility studies; delivery models; building business cases; accessing funding; and the overall development of heat networks in Dundee.
2. Conduct soft market testing with suppliers and engage with key partners in Dundee to understand delivery models and test appetite for connecting to heat networks.
3. Engage with all potential partners with waste heat sources such as Scottish Water and their technology partner, NHS and industry to further identify and quantify opportunities for waste heat extraction to inform further finalisation of heat network zones or designation.
4. Engage and collaborate with Vital Energi and NHS Tayside to gain further insight into Ninewells Hospital's current energy system, contractual arrangements, and existing plans for decarbonisation and also gain an understanding of other NHS Tayside assets (e.g. Kings Cross Hospital, Royal Victoria Hospital, Kingsway Care, Wedderburn, Alloway, Maryfield, Carseview, the Young Person's Unit at Dudhope, and Health Centres) and their plans to decarbonise.
5. Work with the University of Dundee to determine sites within their ownership suitable for heat network integration and explore delivery models.
6. Continue collaboration between Abertay University to support their plan for a new energy centre and communal heating in the City Centre with potential to expand.
7. Engage with SSEN to understand how recommendations from the past and future heat network feasibility studies around optimal network routing, decarbonisation options, and prioritised anchor loads should inform infrastructure development, with grid capacity scaled to match projected electricity demand.
8. Explore innovative approaches to financing heat network projects. Collaborating with Scottish and national financial institutions to open up possibilities for funding solutions.

10 ACTION PLAN AND PROGRESS TRACKER

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
Theme: Stakeholder Engagement						
1	Explore the potential of developing an enhanced energy advice service, to expand local engagement with tenants, residents and homeowners through workshops and surgeries providing practical guidance on installation and trusted installers, operation, and maintenance of heat pumps, increasing awareness, and understanding of energy efficiency measures and low carbon heating technologies in a safe and trusted space. This will involve assessing local needs and gaps in current services, defining the scope of an enhanced service, developing a delivery plan and securing funding and resources.	Action planned, detailed proposal to be developed	November 2024 – November 2025		SCARF DCC (S&CC)	Registered Social Landlords (RSLs) Dundee Energy Efficiency Advice (DEEAP) DCC Private Sector Services Unit
2	Work specifically with private landlords to understand current and future Energy Efficient Scotland requirements and provide support, resources, and advice.	Action planned, detailed proposal to be developed	November 2024 – December 2028		DCC Private Sector Services Unit	SCARF
3	Create an online tool kit for the non-domestic sector that covers public and private building owners; focusing on available advice, support and funding.	Existing resources on Sustainable Dundee website to be developed further	November 2024 – November 2025		DCC (S&CC)	Dundee Climate Leadership Group DCC (Economic Development) Dundee Chamber of Commerce

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
						Dundee Business Gateway
4	Develop a programme of engagement activities, focusing on both the public and private sector to promote advice and support on heat decarbonisation and energy efficiency initiatives, including heat networks.	Action planned, detailed proposal to be developed	November 2025 – December 2028		DCC (S&CC)	Dundee Climate Leadership Group DCC (Economic Development) Dundee Chamber of Commerce Dundee Business Gateway
5	Engage with non-domestic properties within the five prioritised heat network zones with the highest heat demand to verify heat demand data and engage on organisations' heat decarbonisation plans.	Work has recently commenced through the Zero Waste Scotland contractor framework	November 2024 – December 2026		DCC (Architectural Services & S&CC)	Heat Network Support Unit (HNSU) DCLG (ESRWG)
6	Engage with SSEN and other significant partners, sharing LHEES data and scenarios, to produce an evidence base which will support its grid infrastructure planning so that there is sufficient capacity to enable future heat pump installations.	Engagement is established through LENZA and LHEES data and scenarios will be shared with DNOs	November 2024 – December 2028		DCC (S&CC)	SSEN
7	Explore the prioritisation of energy efficiency projects in areas where there are electricity network constraints, including opportunities for joint funding and cost-sharing mechanisms.	Action planned, detailed proposal to be developed	November 2024-2028		DCC (S&CC)	SSEN

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
8	Continue to engage with both the DCLG and ESRWG to ensure that there is city-wide ownership and buy-in of the LHEES.	Engagement with DCLG is ongoing	November 2024 - December 2028		DCC (S&CC)	DCLG
9	Host a stakeholder session, initially with other neighbouring Local Authorities, to provide an overview of key findings and delivery plan actions from the LHEES and LAEP and to identify synergies and specific areas for collaboration in order to uncover potential opportunities for delivering cross-boundary initiatives.	Action planned, detailed proposal to be developed	April 2025 - December 2028		DCC (S&CC)	DCC (Economic Development)
Theme: Overarching Actions						
10	Proceed with designation of Heat Network Zones as required by The Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023 (Section 47) and (Section 48).	Work is in progress to designate Heat Network Zones	November 2024 - March 2026		DCC (S&CC)	DCC (Planning, Legal, Architectural Services, Housing)
11	Proceed with Building Assessment Reports (BARs) as required by The Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023 (Section 63).	The Council has designated a team to discharge BAR function	November 2024 - March 2026		DCC (Architectural Services)	DCC (S&CC)
12	Develop public guidance around planning requirements for heat pumps in domestic and non-domestic properties.	Action planned, detailed proposal to be developed	November 2024 -		DCC (Planning)	DCC (S&CC)

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
			March 2026			
13	At the site assessment stage of the review of the Local Development Plan (LDP), consider the potential for proposed sites to connect to heat network zones identified in the LHEES.	Action planned, detailed proposal to be developed	November 2024 - December 2027		DCC (Planning)	DCC (S&CC)
14	Work with DCLG to explore contracts to support training, retraining, and upskilling in the future/existing workforce to support supply chain development.	Action planned, detailed proposal to be developed	November 2024 - November 2026		DCC (Procurement)	DCC (S&CC) DCLG
15	Collaborate with Dundee and Angus College, the University of Dundee, and Abertay University to build an understanding of the current and future skills and training offering. Create a skills matrix for interventions to highlight gaps.	Action planned, detailed proposal to be developed	November 2024 - November 2026		D&A College	DCC (S&CC) University of Dundee Abertay University
16	Establish a campaign strategy, including signposting to available funding, to encourage training and establish and deliver targeted training programmes to increase the number of skilled workers in sectors such as building retrofit, heat pump installation, solar PV installation, heat network installation and operation in the region, to help towards closing the skills gap.	Action planned, detailed proposal to be developed	November 2024 - December 2028		D&A College	DCC (S&CC) University of Dundee Abertay University
17	Align skills and supply chain priorities with community wealth building work.	Action planned, detailed proposal to be developed	November 2024 - December 2028		DCC (Procurement)	DCC (S&CC) DCLG

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
18	Work with the Council's GIS team and other relevant teams to explore the feasibility of making Council-owned LHEES data public in line with the Council's information governance policy.	Action planned, detailed proposal to be developed	November 2024 - November 2025		DCC (S&CC)	DCC (GIS)
19	Where feasible, continue working with Energy Saving Trust, Scottish Government, the DNO, Ordnance Survey (OS) and other data providers/data owners to ensure the LHEES data is publicly accessible.	The work is progressing through the adoption of LENZA. Further engagement with SG, OS and EST will be pursued	November 2024 - March 2026		DCC (S&CC)	SSEN, OS, Scottish Government, Improvement Service, Energy Savings Trust
20	Explore opportunities to improve domestic, non-domestic and fuel poverty data through collaboration with Energy Saving Trust and the Scottish Government.	This work is progressing on domestic data and will be extended to non-domestic data	November 2024 - March 2026		DCC (S&CC)	DCC (Energy Management and Housing), EST, Skenario Lab
21	Continue to collaborate in projects such as LENZA and identify innovative ways of managing and sharing data with key stakeholders if the data cannot be made public.	Further projects not yet initiated, however potential relevant projects are continually being investigated	November 2024 – December 2028		DCC (S&CC)	SSEN, AITL
Theme: Energy Efficiency						
22	Collaborate with Hillcrest and other RSLs, using Strategic Zones and Delivery Areas, along with the PEAT dataset to understand recommended interventions, identify and prioritise area-based community-scale retrofit projects exploring funding and reducing costs. Use projects to boost supply chain and inform success stories.	Action planned, detailed proposal to be developed. Meeting with Hillcrest has taken place to discuss initiation.	November 2024 - December 2028		DCC (S&CC)	DCC (Housing) Hillcrest Registered Social Landlords (RSLs)

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
23	Raise awareness of relevant funding schemes available from trusted providers to owners of private properties in data zones identified in the Strategic Zoning as having poor energy efficiency.	Action planned, detailed proposal to be developed	November 2024 - December 2028		SCARF DCC (S&CC)	DCC (S&CC) DCLG (ESRWG) DCC (Housing)
24	Identify opportunities to improve energy efficiency in Council and wider housing stock in Area-Based Scheme (EES:ABS) areas.	Action planned, detailed proposal to be developed	November 2024 - December 2028		DCC (Housing)	DCC (S&CC and Design & Property)
	Theme: Heat Decarbonisation					
25	Identify opportunities to decarbonise heating in Council housing using communal systems such as communal heat pump deployment. Use projects to boost supply chain and inform success stories.	Action planned, detailed proposal to be developed	November 2024 - March 2026		DCC (Housing)	DCC (Architectural Services)
26	Collaborate with Registered Social Landlords (RSLs) to encourage communal heat pump installations. Provide support in securing funding and grants, such as the Social Housing Net Zero Heat Fund. Work to streamline the installation process for Registered Social Landlords (RSLs) through partnerships with suppliers and installers.	Action planned, detailed proposal to be developed	November 2024 - December 2028		DCC (S&CC)	DCC (Housing) Hillcrest Registered Social Landlords (RSLs)
27	Collaborate with DCLG members to design pilot studies to explore how domestic buildings could adopt demand-side management strategies,	Action planned, detailed proposal to be developed	November 2024 –		DCLG (ESRWG)	DCC (S&CC)

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
	including optimisation of heat pump usage during peak periods.		December 2028			
28	Identify opportunities to improve heat decarbonisation in Council and wider housing stock in Area-Based Scheme (EES:ABS) areas.	Action planned, detailed proposal to be developed	November 2024 - December 2028		DCC (Housing)	DCC (S&CC and Design & Property)
Theme: Fuel Poverty						
29	Develop prioritised list of social housing properties identified through Strategic Zoning as having poor energy efficiency as a driver of fuel poverty.	Action planned, detailed proposal to be developed	November 2024 – November 2025		DCC (S&CC)	DCC (Housing) Hillcrest Registered Social Landlords (RSLs)
30	Raise awareness amongst residents about the available funding assistance schemes and trusted providers that can support fuel-poor households and provide support services and guidance to households that require assistance with the application process.	Action planned, detailed proposal to be developed	November 2024 – December 2028		SCARF	DEEAP
31	Explore innovative approaches to financing retrofit projects. Collaborating with local financial institutions, building societies, and mortgage providers to open up possibilities for funding solutions aimed at making retrofitting more accessible to homeowners.	Action planned, detailed proposal to be developed	November 2024 – December 2028		DCLG (ESRWG)	DCC (S&CC)
Theme: Heat Network						
32	Continue engagement with the HNSU to unlock support for: more detailed technical assessments and phasing strategies, including	Engagement with the HNSU is ongoing and work to identify	November 2024 –		DCC (S&CC)	HNSU

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
	reviewing the findings of previous feasibility studies; delivery models; building business cases; accessing funding; and the overall development of heat networks in Dundee.	appropriate delivery models is underway	December 2028		DCC (Architectural Services)	
33	Conduct soft market testing with suppliers and engage with key partners in Dundee to understand delivery models and test appetite for connecting to heat networks.	Action planned, detailed proposal to be developed	November 2024 – November 2026		DCC (S&CC, Architectural Services and Procurement)	HNSU
34	Engage with all potential partners with waste heat sources such as Scottish Water and their technology partner, NHS and industry to further identify and quantify opportunities for waste heat extraction to inform further finalisation of heat network zones or designation.	Action about to commence	November 2024 - November 2025		Zero waste Scotland HNSU	DCC (Architectural Services and S&CC) Scottish Water and Scottish water Horizon NHS Tayside
35	Engage and collaborate with Vital Energi and NHS Tayside to gain further insight into Ninewells Hospital's current energy system, contractual arrangements, and existing plans for decarbonisation and also gain an understanding of other NHS Tayside assets (e.g. Kings Cross Hospital, Royal Victoria Hospital, Kingsway Care, Wedderburn, Alloway, Maryfield, Carseview, the Young Person's Unit at Dudhope, and Health Centres) and their plans to decarbonise.	Action planned, detailed proposal to be developed	November 2024 - November 2026		DCC (S&CC)	NHS Tayside University of Dundee
36	Work with the University of Dundee to determine sites within their ownership suitable	Engagement with the University of Dundee has commenced	November 2024 -		DCC (Architectural)	HNSU

Number	Actions	Progress	Timescale	Status (Red, Green, Amber)	Lead	Partner
	for heat network integration and explore delivery models.		November 2025		Services and S&CC) University of Dundee	
37	Continue collaboration between Abertay University to support their plan for a new energy centre and communal heating in the City Centre with potential to expand.	Abertay University, the Council and key stakeholders are in active discussion to pursue phase one of a city centre heat network	November 2024 - November 2025		Abertay University DCC (Architectural Services and S&CC)	HNSU
38	Engage with SSEN to understand how recommendations from the past and future heat network feasibility studies around optimal network routing, decarbonisation options, and prioritised anchor loads should inform infrastructure development, with grid capacity scaled to match projected electricity demand.	Action planned, detailed proposal to be developed	November 2024 – December 2028		DCC (S&CC)	SSEN
39	Explore innovative approaches to financing heat network projects. Collaborating with Scottish and national financial institutions to open up possibilities for funding solutions.	Engagement with the HNSU and UK Infrastructure Bank has commenced	November 2024 – December 2028		DCC (S&CC)	DCLG (ESRWG)

5 YEAR PLAN

Year 1

Stakeholder Engagement

Explore the potential of developing an enhanced energy advice service, to expand local engagement with tenants, residents and homeowners through workshops and surgeries providing practical guidance on installation and trusted installers, operation, and maintenance of heat pumps, increasing awareness, and understanding of energy efficiency measures and low carbon heating technologies in a safe and trusted space. This will involve assessing local needs and gaps in current services, defining the scope of an enhanced service, developing a delivery plan and securing funding and resources

Create an online tool kit for the non-domestic sector that covers public and private building owners; focusing on available advice, support and funding

Overarching Actions

Work with the Council's GIS team and other relevant teams to explore the feasibility of making Council-owned LHEES data public in line with the Council's information governance policy

Fuel Poverty

Develop prioritised list of social housing properties identified through Strategic Zoning with poor energy efficiency as a driver of fuel poverty

Heat Network

Engage with all potential partners with waste heat sources such as Scottish Water and their technology partner, NHS and industry to further identify and quantify opportunities for waste heat extraction to inform further finalisation of heat network zones or designation

Work with the University of Dundee to determine sites within their ownership suitable for network integration and explore delivery models

Continue collaboration between Abertay University to support their plan for a new energy centre and communal heating in the City Centre with potential to expand

Heat Network

Engage and collaborate with Vital Energi and NHS Tayside to gain further insight into Ninewells Hospital's current energy system, contractual arrangements, and existing plans for decarbonisation and gain an understanding of other NHS Tayside assets (e.g. Kings Cross Hospital, Royal Victoria Hospital, Kingsway Care, Wedderburn, Alloway, Maryfield, Carseview, the Young Person's Unit at Dudhope, and Health Centres) and their plans to decarbonise

Conduct soft market testing with suppliers and engage with key partners in Dundee to understand delivery models and test appetite for connecting to heat networks

Continue engagement with the HNSU to unlock support for: more detailed technical assessments and phasing strategies, including reviewing the findings of previous feasibility studies; delivery models; building business cases; accessing funding; and the overall development of heat networks in Dundee

Year 2

Overarching Actions

Proceed with designation of Heat Network Zones as required by The Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023 (Section 47) and (Section 48)

Proceed with Building Assessment Reports (BARs) as required by The Heat Networks (Heat Network Zones and Building Assessment Reports) (Scotland) Regulations 2023 (Section 63)

Develop public guidance around planning requirements for heat pumps in domestic and non-domestic properties

Collaborate with Dundee and Angus College, the University of Dundee, and Abertay University to build an understanding of the current and future skills and training offering. Create a skills matrix for interventions to highlight gaps

Work with DCLG to explore contracts to support training, retraining, and upskilling in the future/existing workforce to support supply chain development

Where feasible, continue working with Energy Saving Trust, Scottish Government, the DNO, OS and other data providers/data owners to ensure the LHEES data is publicly accessible

Explore opportunities to improve domestic, non-domestic and fuel poverty data through collaboration with Energy Saving Trust and the Scottish Government

Energy Efficiency

Identify opportunities to improve energy efficiency in Council and wider housing stock in Area-Based Scheme (EES:ABS) areas

Heat
Decarbonisation

Identify opportunities to decarbonise heating in Council housing using communal systems such as communal heat pump deployment.
Use projects to boost supply chain and inform success stories

Heat Network

Engage with SSEN to understand how recommendations from the past and future heat network feasibility studies around optimal network routing, decarbonisation options, and prioritised anchor loads should inform infrastructure development, with grid capacity scaled to match projected electricity demand

Explore innovative approaches to financing heat network projects. Collaborating with Scottish and national financial institutions to open up possibilities for funding solutions

Years 3-5

Stakeholder Engagement

Work specifically with private landlords to understand current and future Energy Efficient Scotland requirements and provide support, resources, and advice

Develop a programme of engagement activities, focusing on both the public and private sector, to promote advice and support on heat decarbonisation and energy efficiency initiatives, including heat networks

Engage with non-domestic properties within the five prioritised heat network zones with the highest heat demand to verify heat demand data and engage on organisations' heat decarbonisation plans

Engage with SSEN and other significant partners, sharing LHEES data and scenarios, to produce an evidence base which will support its grid infrastructure planning so that there is sufficient capacity to enable future heat pump installations

Explore the prioritisation of energy efficiency projects in areas where there are electricity network constraints, including opportunities for joint funding and cost-sharing mechanisms

Continue to engage with both the DCLG and ESRWG to ensure that there is city-wide ownership and buy-in of the LHEES

Host a stakeholder session, initially with other neighbouring Local Authorities, to provide an overview of key findings and delivery plan actions from the LHEES and LAEP and to identify synergies and specific areas for collaboration in order to uncover potential opportunities for delivering cross-boundary initiatives

Overarching Actions

At the site assessment stage of the review of the Local Development Plan (LDP), consider the potential for proposed sites to connect to heat network zones identified in the LHEES

Establish a campaign strategy, including signposting to available funding, to encourage training and establish and deliver targeted training programmes to increase the number of skilled workers in sectors such as building retrofit, heat pump installation, solar PV installation, heat network installation and operation in the region, to help towards closing the skills gap

Align skills and supply chain priorities with community wealth building work

Continue to collaborate in projects such as LENZA and identify innovative ways of managing and sharing data with key stakeholders if the data cannot be made public

Energy Efficiency

Collaborate with Hillcrest Housing Association and other RSLs, using Strategic Zones and Delivery Areas, along with the PEAT dataset to understand recommended interventions, identify and prioritise community-scale retrofit projects exploring funding and reducing costs. Use projects to boost supply chain and inform success stories

Raise awareness of relevant funding schemes available from trusted providers to owners of private properties in data zones identified in the Strategic Zoning as having poor energy efficiency

Heat Decarbonisation

Collaborate with Registered Social Landlords (RSLs) to encourage communal heat pump installations. Provide support in securing funding and grants, such as the Social Housing Net Zero Heat Fund. Work to streamline the installation process for Registered Social Landlords (RSL) through partnerships with suppliers and installers

Collaborate with DCLG members to design pilot studies to explore how domestic buildings could adopt demand-side management strategies, including optimisation of heat pump usage during peak periods

Identify opportunities to improve heat decarbonisation in Council and wider housing stock in Area-Based Scheme (EES:ABS) areas

Fuel Poverty

Raise awareness amongst residents about the available funding assistance schemes available from trusted providers that can support fuel-poor households and provide support services and guidance to households that require assistance with the application process

Explore innovative approaches to financing retrofit projects. Collaborating with local financial institutions, building societies, and mortgage providers to open up possibilities for funding solutions aimed at making retrofitting more accessible to homeowners

