

An aerial photograph of Aberdeen, Scotland, showing a dense urban landscape. The image features a mix of historic stone buildings, modern high-rise apartment blocks, and green spaces. A prominent building with a large dome is visible in the lower center. The title text is overlaid on the left side of the image.

# LOCAL HEAT AND ENERGY EFFICIENCY STRATEGY: DELIVERY PLAN

Aberdeen City Council  
October 2024



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# EXECUTIVE SUMMARY





# 1. Executive Summary

## 1.1. Purpose of this report

Local Heat and Energy Efficiency Strategies (LHEES) are at the heart of a place based, locally-led, and tailored approach to the transition to net zero. The aim of LHEES is to provide a long-term and evidence-based plan for decarbonising heat in buildings and improving their energy efficiency across an entire local authority area. LHEES is primarily driven by Scotland's statutory targets for greenhouse gas emissions reduction and fuel poverty reduction:

- Net zero emissions by 2045 and 75% reduction by 2030
- In 2040, as far as reasonably possible, no household in Scotland is in fuel poverty

This LHEES Delivery Plan should be considered in conjunction with Aberdeen City Council's LHEES Strategy. The Delivery Plan sets out how the Council will support implementation of the LHEES. It identifies areas for targeted intervention through early, low-regret measures to decarbonise heat in buildings. This is the first LHEES Delivery Plan, and it focuses initially on immediate and medium term (5-year) actions. The Council has identified four main priorities for the LHEES, which have been further developed in Section 2.1:

- **Priority A: Heat network development** - The Council want to provide affordable, reliable, and decarbonised heating to homes and businesses. Expanding heat networks will provide a method to do this. Aberdeen Heat and Power (AHP) are an established provider of heat networks in the area and will be key in delivering this priority.
- **Priority B: Building level decarbonisation** - Decarbonising heat across buildings in Aberdeen City will ensure the Council meets its net zero targets. Whilst the Council will connect buildings to heat networks where possible, properties that are unable to join a network will be encouraged to install a zero direct emissions heating system.
- **Priority C: Improving building energy efficiency** - Improving the energy efficiency of buildings reduces heat demand, whilst simultaneously addressing fuel poverty and climate change. Aberdeen City Council has made significant improvements to the energy efficiency of domestic and non-domestic properties. However, a significant number of properties require improved insulation.
- **Priority D: Alleviating fuel poverty** - The LHEES presents an opportunity to address the high levels of fuel poverty within Aberdeen City. Aberdeen City Council has worked through a range of programmes to target support to fuel poor households. The Council aim to build on these through the LHEES strategy.

This Delivery Plan sets out the Council's approach to delivering the LHEES over the next five years. The Council's approach is to primarily prioritise heat network development to deliver clean heat across the city. Further, the Council will aim to build on the success of their existing insulation programmes. Finally, heat pumps will be considered for properties unable to connect to an existing or future heat network.



At this early stage in the LHEES process, many of the actions detailed in this plan are developmental or reflect projects and initiatives which are already underway. The analysis undertaken to date as part of the LHEES process will be further expanded to develop a more detailed and strategic delivery framework. This will form the basis of the next iteration of the LHEES, which will be reviewed every five years.

## 1.2. Delivery Plan layout

The actions in this Delivery Plan are split across three areas:

- Heat network delivery areas
- Energy efficiency programmes and upgrades delivery areas
- Heat pump delivery areas

For each chapter, the actions are summarised in a table format shown below. Actions have been prioritised as one of:

- **Immediate:** to be implemented in the next two years.
- **Medium-term:** to be implemented in the next 2-5 years.

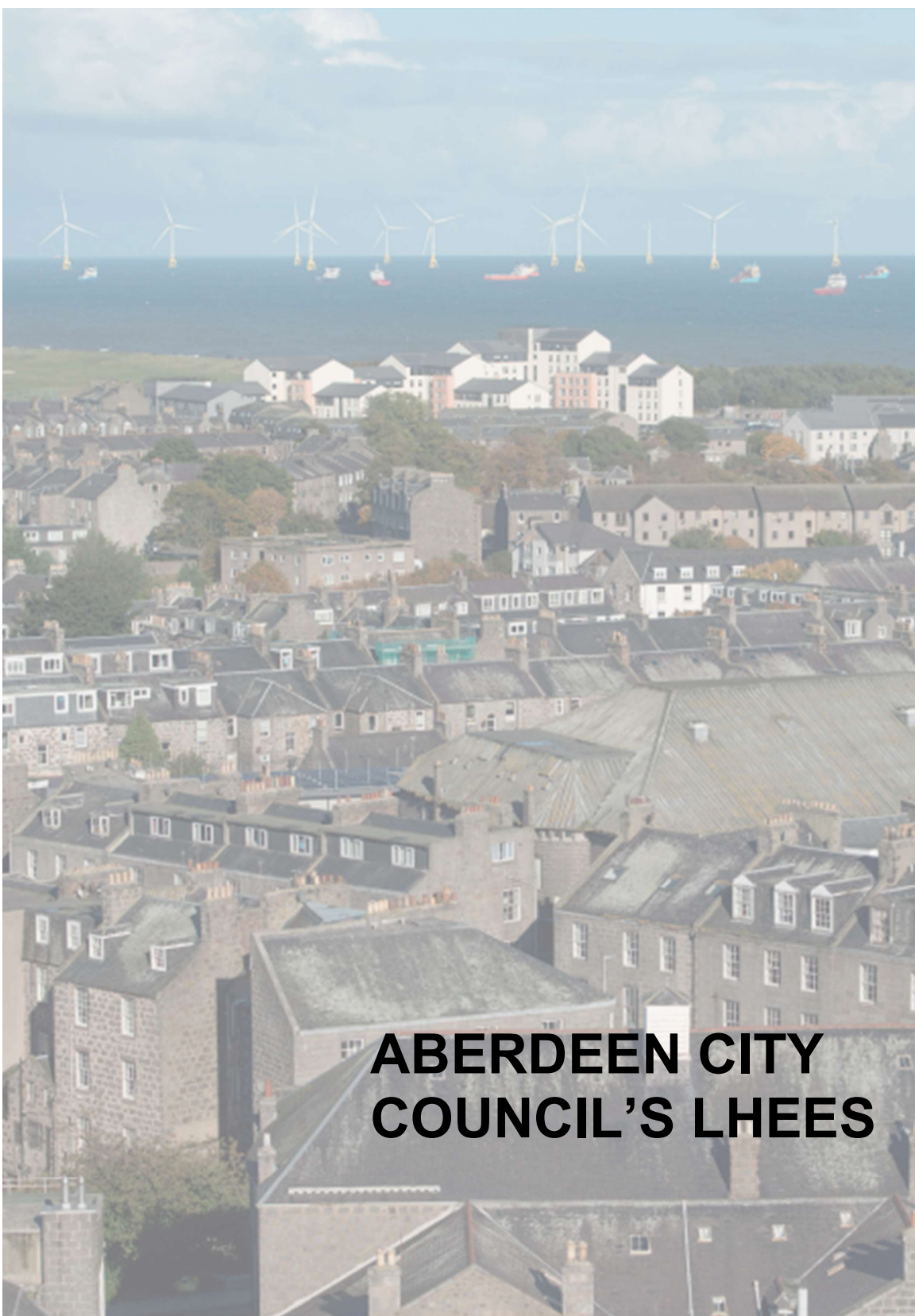
Action	Priority	Description	Responsibility	Key stakeholders	Measure of success
Action required to implement the LHEES	Immediate / Medium-term	Additional detail of how the Council and its partners will achieve this	Lead responsible for delivery	Key stakeholders to engage on specific action	How LA will know goal of action is achieved

## 1.3. Delivery Plan scope and limitations

The LHEES is being developed in the context of changing national policies and targets. Multiple relevant national policies and their specific targets are under review, such as the Heat in Buildings Bill. Equally, established targets have been pulled, such as the Scottish Government’s interim target to reduce greenhouse gas emissions by 75% by 2030.

Local programmes are subject to change. For example, Aberdeen City is drafting an updated Local Housing Strategy to be published later in 2024 which makes reference to LHEES. This Delivery Plan looks at actions over a five-year period, however, the Plan will be reviewed at a later stage to take into account these changing plans and limitations.





# **ABERDEEN CITY COUNCIL'S LHEES**



## 2. Aberdeen City Council's LHEES

### 2.1. LHEES Priorities

Aberdeen City Council's key priorities for this LHEES have been informed by the six LHEES considerations (detailed in the LHEES Strategy), the local policy context, stakeholder engagement, and analysis of the Council's building stock. The Council has identified four priorities for the first LHEES.

#### **Summary of Priority A: Heat Network Development**

Heat networks can provide affordable, reliable, and decarbonised heating to homes and businesses. Aberdeen is unique compared to other local authorities in that it already has a developed network of heat networks operated by AHP. Expanding the existing networks, decarbonising heat sources and developing new heat networks elsewhere are important priorities for Aberdeen City Council.

#### **Summary of Priority B: Improving Building Energy Efficiency**

Improving the energy efficiency of buildings reduces heat demand, whilst simultaneously addressing fuel poverty and climate change. Aberdeen City Council has made significant improvements to the energy efficiency of domestic and non-domestic properties. However, a significant number of properties require improved insulation.

#### **Summary of Priority C: Building Level Decarbonisation**

Decarbonising heat across buildings in Aberdeen City will ensure the Council meets its net zero targets. While the Council will connect buildings to heat networks where possible, households that are unable to join a network will be supported to install a zero direct emissions heating system.

#### **Overview of Priority D: Alleviating Fuel Poverty**

The LHEES presents an opportunity to address the high levels of fuel poverty within Aberdeen City. Aberdeen City Council targets support fuel poor households through a range of programmes. The Council has made the alleviation of fuel poverty a priority within the LHEES strategy.

Zero emission heating will primarily be achieved by the development of heat networks across the city. Heat pumps will be considered for properties unable to connect to an existing or future heat network. LHEES implementation will be planned based on potential heat network zones. This allows for domestic and non-domestic buildings to be addressed as part of local area-based approaches.





Action	Priority	Description	Responsibility	Key stakeholders	Measures of success
Identify leads and champions for the actions arising from the Delivery Plan	Immediate	Leads will be appointed at Executive Director or Head of Service level	Aberdeen City Council	Executive directors and heads of services	Each action in delivery plan has confirmed champion  Meetings scheduled to support champions to deliver actions
Enact LHEES governance arrangements	Immediate	LHEES to be integrated into existing Steering Group and governance structure for Sustainable Development and Climate Change (SDCC)	Aberdeen City Council	Steering Groups	Aberdeen Home Energy Team to meet with all steering groups to ensure plan integration of LHEES plans
Develop a monitoring and evaluation framework for the LHEES delivery actions	Immediate	For delivery actions, identify the owner and the indicators to be measured	Changeworks and Aberdeen City Council	Changeworks and Aberdeen City Council	Changeworks completes framework  Aberdeen City Council reviews framework and creates system to ensure it is reviewed on ongoing basis
Review both the Strategy and Delivery Plan every 5 years	Immediate	Update and amend both documents considering regulatory changes. Identify local targets	Aberdeen City Council	Aberdeen City Council and partner organisations	Aberdeen City Council to set up system to prepare and deliver workshop with key stakeholders to review LHEES plans on a 5-year basis



## 2.2. Implementation and governance

The implementation of the LHEES will be driven by Aberdeen City Council. The LHEES requires a collaborative cross-sectoral approach, engaging with partners and stakeholders is essential to achieving the goals set out. It will be integrated into existing steering groups and governance structure for sustainable development and climate change.





# ENGAGEMENT APPROACH



### 3. Engagement Approach

The LHEES Strategy and Delivery Plan have been developed in consultation with stakeholders across Aberdeen City Council, and through engagement with external stakeholders. Implementation will also be a collaborative effort.

A key priority for the delivery of the LHEES is for the Council to develop an engagement strategy. This will draw on the stakeholder identification and mapping work which took place as part of the LHEES development. Key stakeholder groups that the Council will work with include:

- Local community groups
- Public sector partners
- Housing providers
- Delivery partners
- Electricity and gas network operators
- Aberdeen Heat and Power
- Anchor load organisations
- Owner Occupiers
- Tenants
- Contractors and installers delivering energy efficient retrofits
- Advice organisations, such as Scarf

#### Engagement Strategy

The Council have a range of plans for future engagement already in place. These are detailed below:

Key Stakeholders	Specific outcomes of engagement	Stakeholder priorities in relation to LHEES	Existing methods of engagement	Action
<b>Council Strategy Board</b>	The Board's remit includes oversight of the Council Place Based Strategy Framework. Input is needed to enact LHEES projects	Ensuring the LHEES is linked with the Place Based Strategic Framework	Briefings and reports	Brief the Board on LHEES plans. Highlight the need to include LHEES in Place Based Strategy Framework
<b>Aberdeen Net Zero and Adaptation Board</b>	The Board's remit includes oversight of the Net Zero Routemap, LHEES needs to be fed into this	Oversight of the Net Zero Routemap and enabling strategies	Briefings	Inform of the LHEES plans ahead of November 2024 meeting



<b>Climate Oversight Group</b>	Internal group covering the Council Climate Change Plan, which LHEES needs to be fed into	Oversight of Climate Change Plan	Briefings	Meeting to highlight LHEES strategy and delivery plan, and have it included in Climate Change Plan
<b>Net Zero Aberdeen microsite</b>	Ensure that LHEES plans are included on the site	Report on net zero projects in Aberdeen	Send information to publish	Send details of LHEES to publish
<b>Public</b>	To get public feedback on LHEES plans	How new policies will impact their homes	CommonPlace citizen engagement platform, and events	Promote and hold consultation
<b>Elected members</b>	Need to get approval for public consultation	LHEES policies and public benefit	Briefing sessions	Host briefing sessions and gain approval for public consultation
<b>Youth Climate Group</b>	UN requirement to engage views of young people	How LHEES plans will impact climate and housing	Meetings	Hold meeting to discuss LHEES plans
<b>Aberdeen Community Planning, Sustainable City Group</b>	Remit includes Local outcomes improvement plans (LOIP), which need to reference LHEES	How LHEES will support local improvement planning	Meetings	Hold meeting to discuss LHEES plans and feed into LOIP





# HEAT NETWORK DELIVERY AREAS



## 4. Heat Network Delivery Areas

### 4.1. Heat Network Zones

#### Background

Section 47 of the Heat Network (Scotland) Act states that each local authority is required to carry out a review to consider whether one or more regions in its area is likely to be particularly suitable for the construction and operation of a heat network. This should be done within the LHEES. Following this review, the Act requires that a decision is made (by the local authority or Scottish Ministers) to consider designation of areas as Heat Network Zones. The local authority must publish a statement in relation to each area considered which provides a rationale for decisions made.

Heat networks can provide affordable, reliable, and decarbonised heating to homes and businesses. Aberdeen is unique compared to other local authorities in that it already has a developed network of heat networks operated by AHP. Expanding the existing networks, decarbonising heat sources and developing new heat networks elsewhere are important priorities for the city. See the LHEES Strategy for more details.

#### Approach to Selecting Heat Network Delivery Areas

As part of the LHEES Stage 4 process, Changeworks conducted GIS analysis using Scotland Heat Map data to create initial heat network delivery areas. The analysis used heat load data from non-domestic public/semi-public buildings. For a detailed insight into the methodology for heat network identification, refer to the Appendices of the Strategy Document.

Changeworks facilitated a workshop to share findings on the heat network outputs, with various stakeholders from key heat network operators and organisations (AHP, University of Aberdeen and NHS Grampian), and members of relevant local authority departments. A collaborative sense checking process took place, with outputs being assessed against the local knowledge of the area and knowledge of those involved. Following further communication with the heat network operators, Changeworks updated several anchor loads data addressing any heat load inaccuracies and missing anchor loads. AHP and The University of Aberdeen further shared their plans for heat network connections not highlighted in Scotland Heat Map. As a final step, the Council collated all information, engagement and data outputs to shortlist heat network developments as priority zones.



## 4.2. Priority Heat Network Zones

The LHEES analysis has identified five heat network zones in Aberdeen that are the priority for development as well three additional heat network zones the Council has identified as suitable for development. These areas have been selected by the Council in order to target high density, poorly heated tower blocks where residents are at risk of fuel poverty. Potential heat network zones containing non-domestic public buildings have been prioritised as they have high heat loads to provide a steady heat demand. These types of buildings will also contribute to efforts in making the networks as efficient as possible, while offering potential connection to existing heat networks operated by AHP and NHS Grampian.

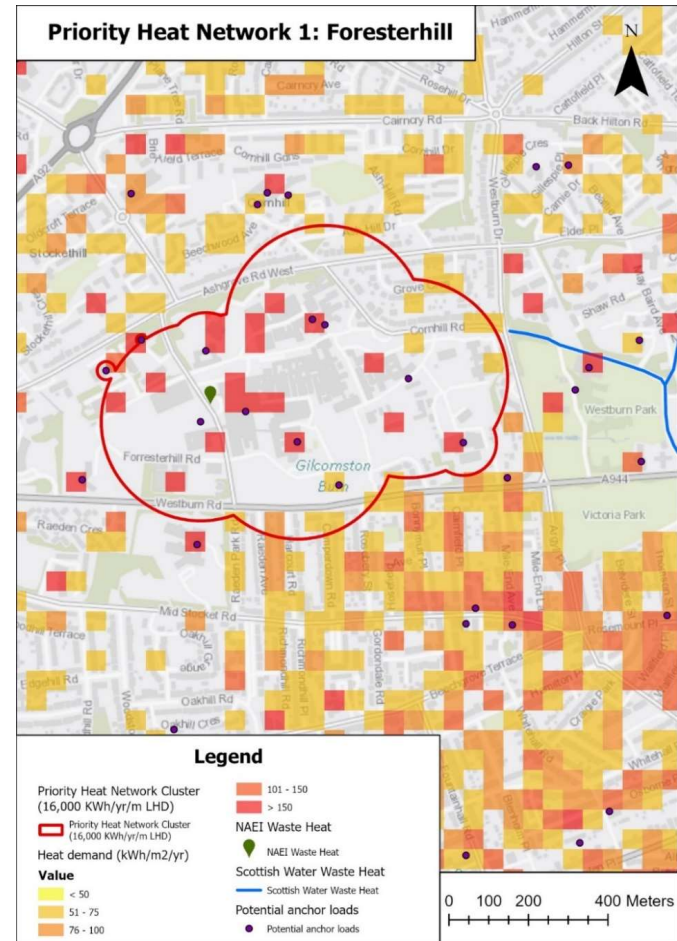


### Priority Heat Network Zone 1: Foresterhill

The Foresterhill indicative heat network zone has an area of 54 hectares. Within the outlined zone there are 10 non-domestic public buildings registering a total estimated annual heat demand of 152,962 MWh/yr. The cluster is marked by pockets of very high heat demand (above 150 kWh/m<sup>2</sup>/yr). The two key anchor loads underpinning this area include the Aberdeen Royal Infirmary (109,647 MWh/yr) and the University of Aberdeen (Cornhill Road) (23,687 MWh/yr). There are four intersecting natural gas-powered heat networks with moderate heat generation capacity such as Woodhill House and Stocket Grange (320 MWh – 1860 MWh) which position this potential heat network zone in a strategic connection spot.

A waste heat facility operated by NHS Grampian intersects the cluster which could be of use as a potential heat source for the heat network zone. Similarly, extraction of heat from Scottish Water's wastewater network nearby could provide a low carbon heat source.

Zone Name	Foresterhill
Zone Area (ha)	54.9
Count of Anchor Loads	10
Estimated Zone Heat Demand (MWh/yr)	152,962
Number of Domestic Buildings	275
Number of Domestic Buildings in SIMD 1-5	54



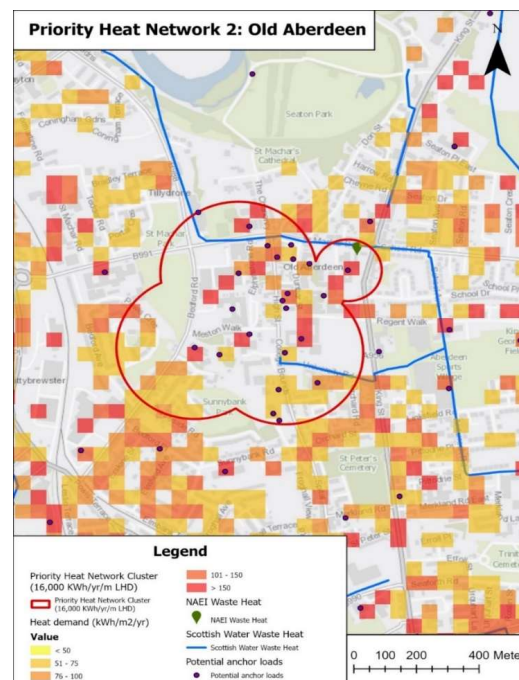


## Priority Heat Network Zone 2: Old Aberdeen

The Old Aberdeen heat network zone has an area of 44.6 hectares. Within the outlined zone there are 23 non-domestic public buildings registering a total estimated annual heat demand of 78,622 MWh/yr. The cluster is marked by pockets of very high heat demand (above 150 kWh/m<sup>2</sup>/yr) neighboured by moderately high heat demand (76 kWh/m<sup>2</sup>/yr – 150 kWh/m<sup>2</sup>/yr). All the anchor loads are located within the University of Aberdeen Campus, and all are currently connected to the University owned King's College district heat network. Two of the three natural gas fuelled heat networks with high heat generation capacity are located within the cluster and are either connecting to or part of the King's College heat network, all with high heat generation (above 7,900 MWh). Another existing heat network named Bede House Court intersects the potential heat network zone, and acts as a possibility for connection to the University of Aberdeen heat networks.

A combined heat and power plant operated by the University Court is located within the cluster which could be of use as a potential heat source for the heat network zone. A vast section of Scottish Water's wastewater network intersecting the cluster could help facilitate low carbon heat source for development.

In terms of Council plans, the City Centre heat network has a current expansion plan to connect to the New Market Development and the potential to connect to the Maritime Museum. Further expansion plans to serve established city centre properties are under consideration. A further expansion from NESCol to the current communal heat system at Denburn Court is under review with a potential to connect the Woolmanhill site, Broadford Works site and His Majesty's Theatre enroute.



Zone Name	Old Aberdeen
Zone Area (ha)	44.6
Count of Anchor Loads	23
Estimated Zone Heat Demand (MWh/yr)	78,622
Number of Domestic Buildings	577
Number of Domestic Buildings in SIMD 1-5	368

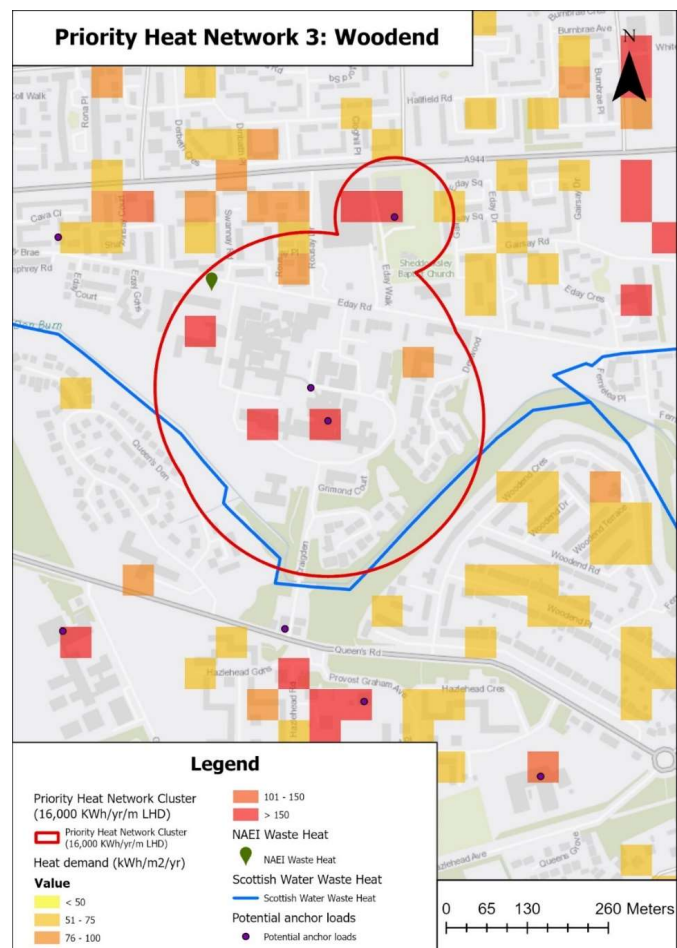


### Priority Heat Network Zone 3: Woodend

The third heat network zone is located in the Woodend area and has an area of 22.6 hectares. There are 3 non-domestic public buildings registering a total estimated annual heat demand of 25,392 MWh/yr. The cluster is marked by a few pockets of very high heat demand (above 150 kWh/m<sup>2</sup>/yr). Woodend Hospital acts as the main anchor load supplying an estimated combined 23,866 MWh/yr. Three natural gas fuelled heat networks including the Hazlehead Energy Centre with high heat generation capacity intersect the cluster, and acts as a possibility for connection to this heat network cluster.

Waste heat from the Woodend Hospital could be the main potential heat source for the heat network zone alongside part of Scottish Water's wastewater network in the south.

Zone Name	Woodend
Zone Area (ha)	22.6
Count of Anchor Loads	3
Estimated Zone Heat Demand (MWh/yr)	25,392
Number of Domestic Buildings	239
Number of Domestic Buildings in SIMD 1-5	110







#### Priority Heat Network Zone 4: Queen's Link

Queen's Link is another priority heat network cluster with an area of 21.9 hectares from LHEES analysis. This is currently already in place to be developed with plans to be connected to the Linx Energy Centre heat network based at Seaton (produces around 3,706 MWh of waste heat). Within the outlined zone there are 4 non-domestic public buildings registering a total estimated annual heat demand of 12,604 MWh/yr. The cluster is marked by pockets of very high heat demand (above 150 kWh/m<sup>2</sup>/yr). Key anchor loads underpinning this area include the Linx Ice Area (7,069 MWh/yr), Beach Ballroom (258 MWh/yr) and Beach Leisure Centre (1,191 MWh/yr). The latter is planned to be demolished, opening up plans for a new leisure centre in years to come. Furthermore, Beach Ballroom will continue to be heated through the heat network.

Zone Name	Queen's Link
Zone Area (ha)	21.9
Count of Anchor Loads	4
Estimated Zone Heat Demand (MWh/yr)	12,604
Number of Domestic Buildings	0
Number of Domestic Buildings in SIMD 1-5	0

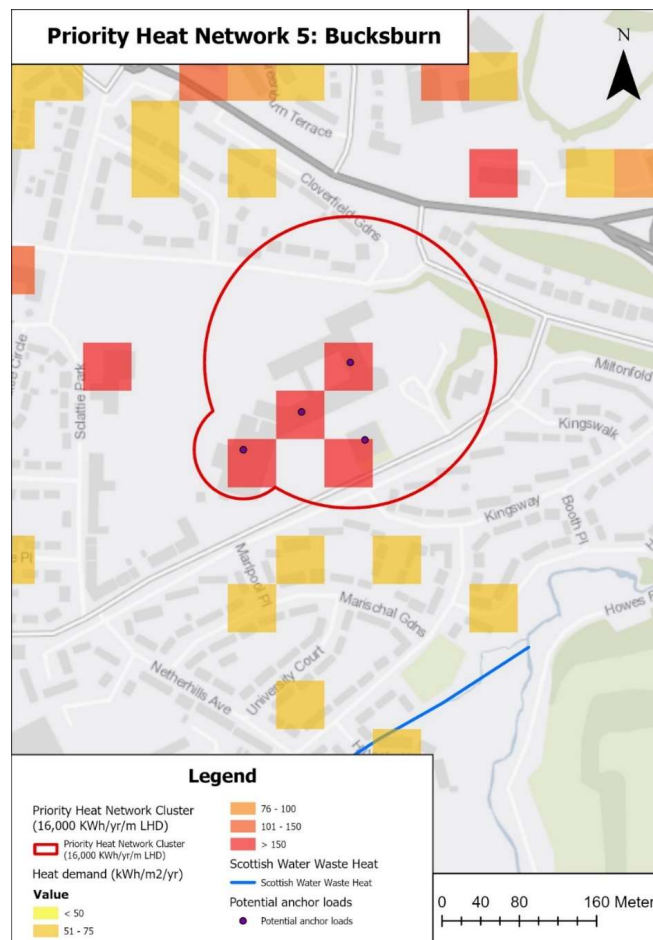




### Priority Heat Network Zone 5: Bucksburn

The final heat network zone is located in the Bucksburn area with an area of 7.5 hectares. There are 4 non-domestic public buildings registering a total estimated annual heat demand of 4,968 MWh/yr. The cluster is marked by a dense grid of very high heat demand (above 150 kWh/m<sup>2</sup>/yr). Bucksburn Academy acts as the main anchor load supplying an estimated 2,412 MWh/yr followed by the Bucksburn Swimming Pool registering a heat load of 906 MWh/yr. Nearby, the natural gas fuelled heat network at Fairley Den Sheltered Housing acts as a possibility for connection to this heat network cluster.

Zone Name	Bucksburn
Zone Area (ha)	7.5
Count of Anchor Loads	4
Estimated Zone Heat Demand (MWh/yr)	4,968
Number of Domestic Buildings	24
Number of Domestic Buildings in SIMD 1-5	24





#### **Priority Heat Network 6: Sillerton Lane Energy Centre**

The Sillerton Lane Heat Network is currently in development, which will soon serve the residential sites at the former Craighill and Kincorth schools. Further development and connections throughout Kincorth are being reviewed with care homes and primary schools under consideration. The Council has a longer-term plan to connect the network to the NESS Energy from Waste network to provide low carbon heat.

#### **Priority Heat Network 7: Stockethill**

The Council are reviewing the potential to connect the Stockethill and TECA networks through a connection at the proposed residential site in Greenferns and Landward. This may allow further connections across the school and social housing portfolios whilst establishing a low carbon heat solution through the TECA Energy Centre.

#### **Priority Heat Network 8: Tillydrone**

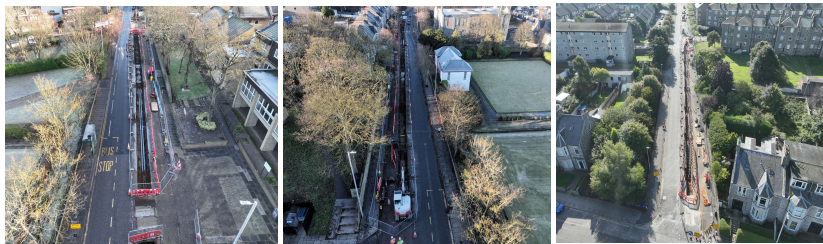
The Council are reviewing the potential to interconnect the Seaton and Tillydrone Energy Centres with a co-connection at the already connected St Machar Academy. This will open up a potential to expand the Tillydrone network across the social housing portfolio in Tillydrone. The Tillydrone network would also be expanded to connect through the Murray and Fullerton communal heating network to the existing network at The Haudagain site. This would then establish a link from NESS Energy from Waste Facility (Torry) – City Centre – Seaton – Tillydrone – Stockethill. Furthermore, the Council will review potential connections commercially and through the NHS Grampian and University sites if the opportunity arose.



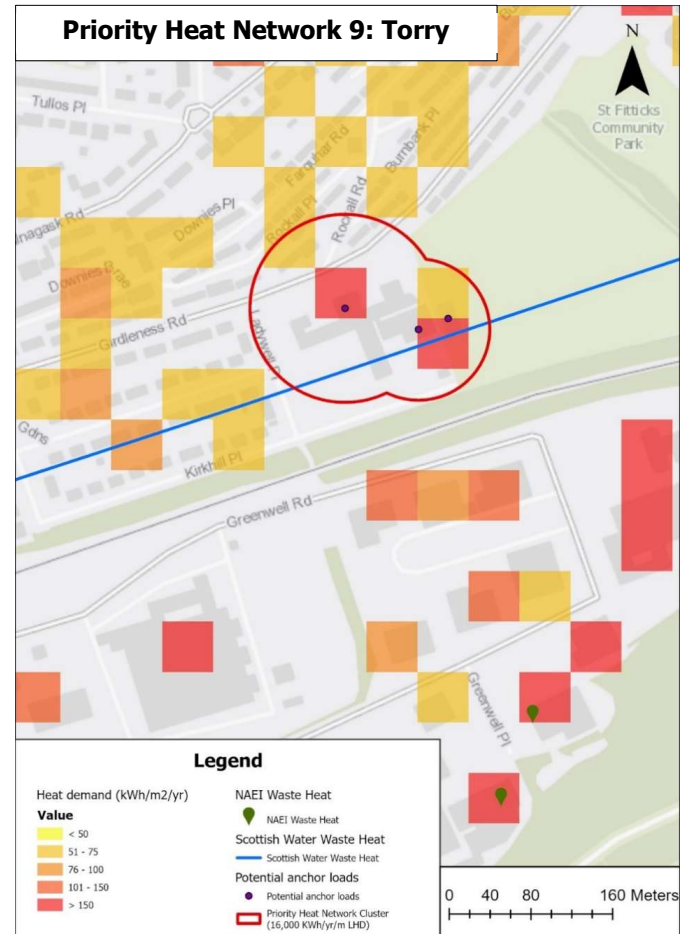
### Priority Heat Network 9: Torry

The final priority heat network in Torry has a high density of heat demand, as indicated by the presence of red cells. There are two key anchor loads including Tullos Primary School and the Tullos Swimming Pool. The heat network partially intersects the Ness Energy Project, a nearby waste fuelled heat network. Connection to this will require a study to be conducted to explore heat extraction capacity.

Figure 1: Development of the Torry heat network at Victoria Road (left and middle) and Abbey Place (right). Source: Vital Energi



Zone Name	Tullos
Zone Area (ha)	3.4
Count of Anchor Loads	3
Estimated Zone Heat Demand (MWh/yr)	2,770
Number of Domestic Buildings	14
Number of Domestic Buildings in SIMD 1-5	14





### 4.3. Further Heat Network Opportunities

The following five indicative heat network zones have smaller area sizes than the priority clusters shown above and should be considered as additional opportunities for the Council to consider in the longer term. Further exploration will be required to assess viability of these opportunities. This is likely to include:

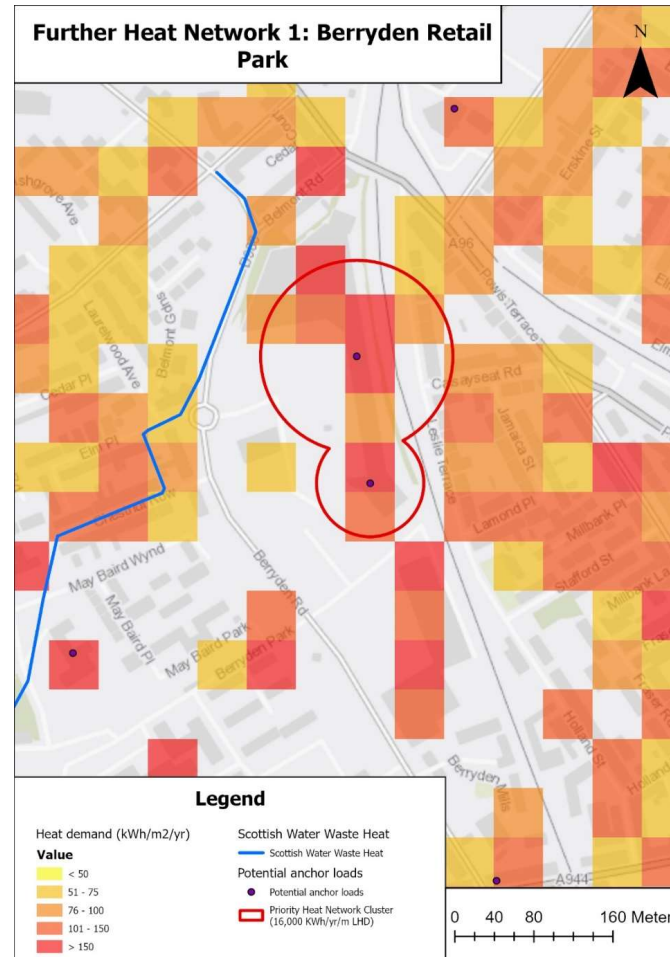
- Connection possibilities with existing heat networks
- Determining existing system capacity and suitability for expansion
- Design considerations such as heat source appraisal (e.g. ASHP, GSHP), energy centre location and layout, grid capacity constraints, pipework distribution routes, operating temperatures, individual building upgrades required (e.g. heat interface unit installation)



### Opportunity 1: Berryden

This indicative zone in Berryden has a high density of heat demand, as indicated by the large presence of red rasters. One of key anchor loads is the Berryden Retail Park. The heat network intersects the Berryden Mills existing heat network, although its use for heat extraction will need to be further explored. Nearby is the NHS Grampian (Cornhill Site) which could further be tied in with the existing heat network there, although a feasibility study will need to be conducted first. A longer-term prospect would be to connect to the larger Foresterhill heat network, subject to NHS approval.

Zone Name	Berryden
Zone Area (ha)	0.1
Count of Anchor Loads	2
Estimated Zone Heat Demand (MWh/yr)	2,426
Number of Domestic Buildings	22
Number of Domestic Buildings in SIMD 1-5	22

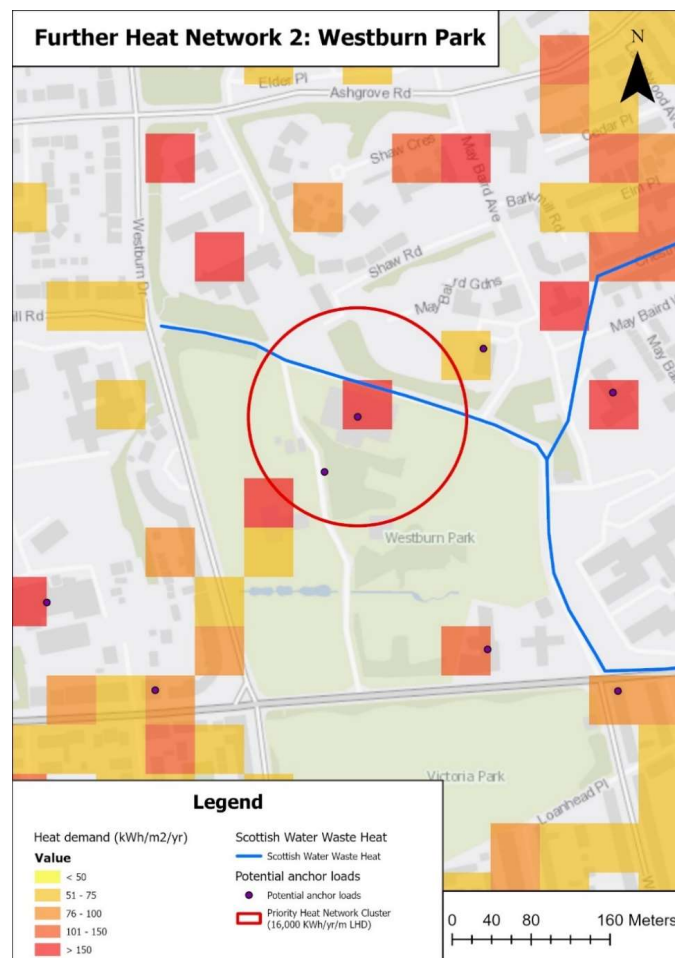




## Opportunity 2: Westburn Park

The next further heat network cluster in Westburn Park area has a self-contained high heat demand underlying the key anchor load, Aberdeen Tennis Centre, Leisure Active and Westburn Centre. There is also a heat network located nearby operated by NHS Grampian, which opens up the possibility for both to be connected in the future. A feasibility study will need to be conducted to assess the feasibility.

Zone Name	Westburn Park
Zone Area (ha)	3.8
Count of Anchor Loads	2
Estimated Zone Heat Demand (MWh/yr)	2,460
Number of Domestic Buildings	0
Number of Domestic Buildings in SIMD 1-5	0



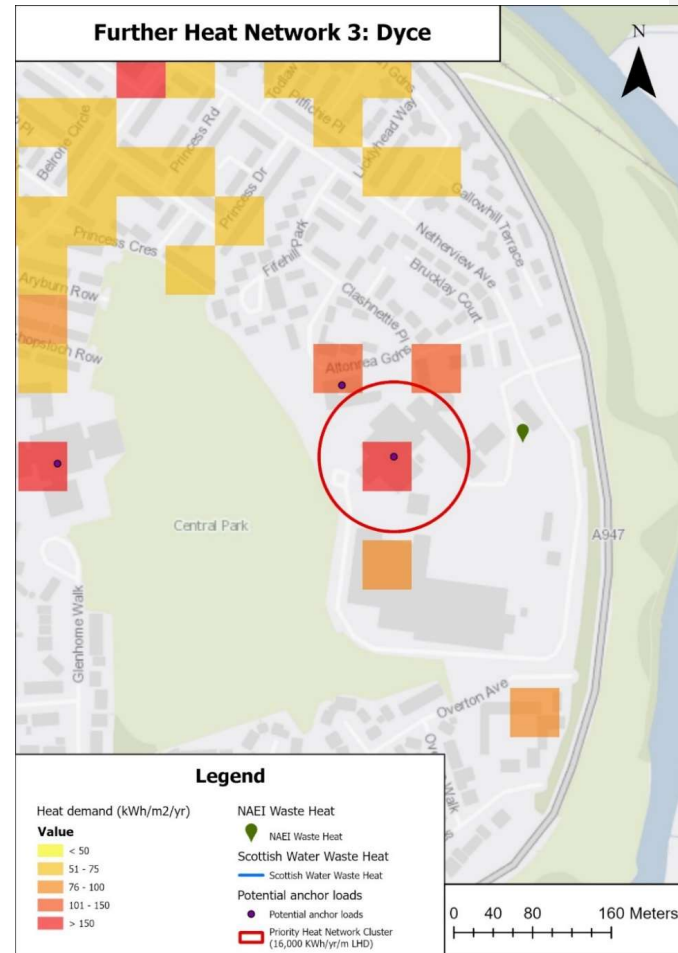




### Opportunity 3: Dyce

This indicative zone in Dyce has a self-contained high heat demand underpinned by Dyce Academy. The cluster partially intersects the natural gas fuelled heat network at Berry Moss Court which opens up the possibility of expansion following further feasibility assessment. If the Stockethill/TECA connection is established (see Priority Heat Network 7), there is a possibility for a further connection in the future with the Dyce cluster.

Zone Name	Dyce
Zone Area (ha)	13.4
Count of Anchor Loads	2
Estimated Zone Heat Demand (MWh/yr)	2,132
Number of Domestic Buildings	0
Number of Domestic Buildings in SIMD 1-5	0

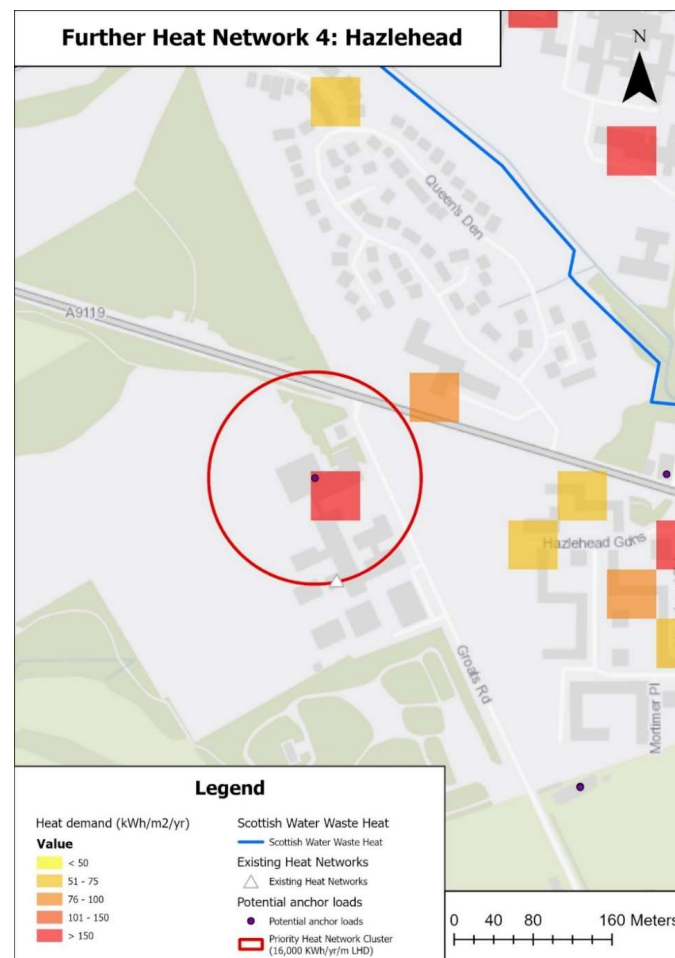




#### Opportunity 4: Hazlehead

The further heat network in Hazlehead has a self-contained high heat demand underpinned by Hazlehead Academy. The heat network is fully covered by the existing district heat network at the Hazlehead Energy Centre from the analysis, however this is due to be replaced by a new low carbon heat network powered Energy Centre at a new site nearby. On completion, the Council will look to expand the heat network across the NHS site and connect to the already connected new residential site at Summerhill.

Zone Name	Hazlehead
Zone Area (ha)	23.6
Count of Anchor Loads	2
Estimated Zone Heat Demand (MWh/yr)	2,887
Number of Domestic Buildings	2
Number of Domestic Buildings in SIMD 1-5	0





#### Opportunity 5: Bridge of Don

The further heat network in Bridge of Don is an opportunity under early discussion but is driven by larger plans to replace the boiler at Bridge of Don Academy. The heat network in the area would act as a solution to heat decarbonisation in the area, starting with public buildings.

### 4.4. Summary of Actions for Heat Networks

Action	Priority	Description	Responsibility	Key stakeholders	Measure of success
Strategy development	Immediate / Medium-term / Long-term	Delivery lead to detail how the Council and its partners will achieve the development of the Strategy	Lead responsible for delivery	Key stakeholders to engage on specific action	How LA will know goal of action is achieved
Ensure feasibility studies are up to date	Immediate	Home Energy Team to ensure that there is a feasibility study for each heat network that reflects current development	Home Energy Team	Changeworks, AHP	Home Energy Team to Meet with AHP to confirm all feasibility studies are updated
Business case	Immediate	The Council to review progress of business cases.	Aberdeen City Council and expert consultant	Home Energy Team, AHP, Private Investors	Ensure outline of business cases are completed, with plan in place to develop
Determining delivery vehicles and models	Medium-term	The Council and AHP to determine the roles of different parties, the commercial agreements governing these relationships and the regulation that allows for the heat network service to be delivered to customers	AHP	AHP, Aberdeen City Council, building owners and residents within heat network zones	Agreements made for each heat network between key stakeholders, to ensure the heat network is financed and can provide for high quality service to customers
Review further development and connections for The Sillerton Lane Heat Network	Immediate	The Council to review further development and connections between Kincorth and care homes and primary schools, alongside a plan to connect the network to the Energy from Waste Facility	AHP	AHP, building owners and occupiers who will be connected to network	Confirm new connections to The Sillerton Lane Heat Network
Deliver and confirm further expansion to the City Centre Network	Immediate	AHP to deliver the current expansion plan to connect The City Centre network to the New Market Development and potentially the Maritime Museum. The Council to further consider expansion plans to serve additional city centre properties. AHP to confirm further expansion plans from NESCol to the current	AHP	AHP, building owners and occupiers who will be connected to network	Deliver plan to connect to New Market Development and confirm other expansion opportunities.



		communal heat system at Denburn Court, and potential connections to the Woolmanhill site, Broadford Works site and His Majesty's Theatre enroute.				
Review the expansion of the Tillydrone Network	Immediate	The Council to review the potential to interconnect the Seaton and Tillydrone energy centres with a co-connection at the already connected St Machar Academy. This will open up a potential to expand the Tillydrone network across the social housing portfolio in Tillydrone. The Tillydrone network would also be expanded to connect the Murray and Fullerton communal heating network through to the existing network at The Haudagain site. This will establish a link between multiple heat networks in the city.	AHP	AHP, building owners and occupiers who will be connected to network	Confirm which expansion plans will be delivered for the Tillydrone Network	
Review connection of the Stockethill and TECA networks	Immediate	The Council are reviewing the potential to connect the Stockethill and TECA networks through a connection at the proposed residential site in Greenferns and Landward. This may allow further connections across the school and social housing portfolios	AHP	AHP, building owners and occupiers who will be connected to the network	Confirm new connection of the Stockethill and TECA networks	
Deliver the replacement of the Hazlehead Energy Centre with the new Low Carbon Energy Centre	Medium Term	AHP to complete delivery of the Low Carbon Energy Centre (formerly the Hazelhead Energy Centre) which will be a low carbon heat network. Once complete, the Council will consider options for connections to the network	AHP	AHP, Hazlehead Energy Centre	Complete the delivery of the new energy centre	





## 4.5. Funding Heat Networks

Currently there is an under-developed pipeline of heat network projects across Scotland. The Scottish Government is providing funding to stimulate and accelerate the development and growth of heat networks, as detailed below. Significant investment from the private sector and heat network developers is also required to achieve heat network deployment at the scale required to reach the national targets of 2.6 TWh of heat output by 2027 and 6 TWh of output by 2030.

**Scotland's Heat Network Fund** is designed to support the development and roll out of heat networks across Scotland. It is open to any organisation seeking to develop and deploy heat networks in Scotland. In total £300 million is being made available to stimulate investment and grow the low carbon heat sector. The project must be large scale, deliver emissions reductions, and demonstrate a positive social and economic benefit. Applications can be made for enabling costs, commercialisation costs, and capital costs. The SHNF will only support projects that would not progress without capital grant funding or would not progress to the same scale. Therefore, applicants to the scheme need to clearly demonstrate how the grant money will be used to expand the project outcomes and provide evidence the value of the grant is appropriate. Up to a maximum of 50% of the total eligible capital costs can be covered through this fund.

**The Heat Network Support Unit** identifies, supports, and develops heat network projects for the public sector. The support available includes expert advice and grant funding to develop projects until they have a clear financial strategy and a well-defined business model. The unit is active in project identification, aggregation, and stakeholder engagement and can support with working group management, stakeholder workshops, and policy linkage and review. The Heat Network Support Unit is no longer accepting applications for funding for the 2024-25 financial year. However, the unit is still accepting applications for advisory-only support and discussions on potential future applications.

**Efficiency Programmes for Scotland: Area Based Schemes (EES:ABS)** are designed and delivered by local authorities, in combination with utility companies and local delivery partners. This funding is provided by Scottish Government. Schemes are targeted in areas in or at risk of fuel poverty and are intended for owner-occupiers and private landlords. Aberdeen City Council plan to use 10% of the EES:ABS funding to support the development of heat networks. In addition, energy from Torry Waste Heat will be used to power properties funded through EES:ABS.

**The Social Housing Net Zero Heat Fund** supports social housing landlords across Scotland to install zero direct emission heating systems. Funding for fabric first energy efficiency projects is also available; however, applicants are required to demonstrate a commitment to installing eligible ZDEH systems into these properties. There is currently £200 million available over five years up to 2026 and the fund supports capital costs and provides resource support to help build a pipeline of future projects. The fund can cover a maximum of 60% of total capital expenditure costs for ZDEH elements and 50% of the fabric and energy efficiency measures. The Fund has previously been put towards the cost of developing local heat networks in other regions. This can be combined with other funding to support with the cost such as electrical mains systems changes and additional planning requirements.

# ENERGY EFFICIENCY PROGRAMMES AND UPGRADES



## 5. Energy Efficiency Programmes & Upgrades

### 5.1. Outline of Approach

Improving the energy efficiency of buildings reduces heat demand, whilst simultaneously addressing fuel poverty and climate change. Aberdeen City Council has made significant improvements to the energy efficiency of domestic and non-domestic properties. However, a significant number of properties still require improved insulation.

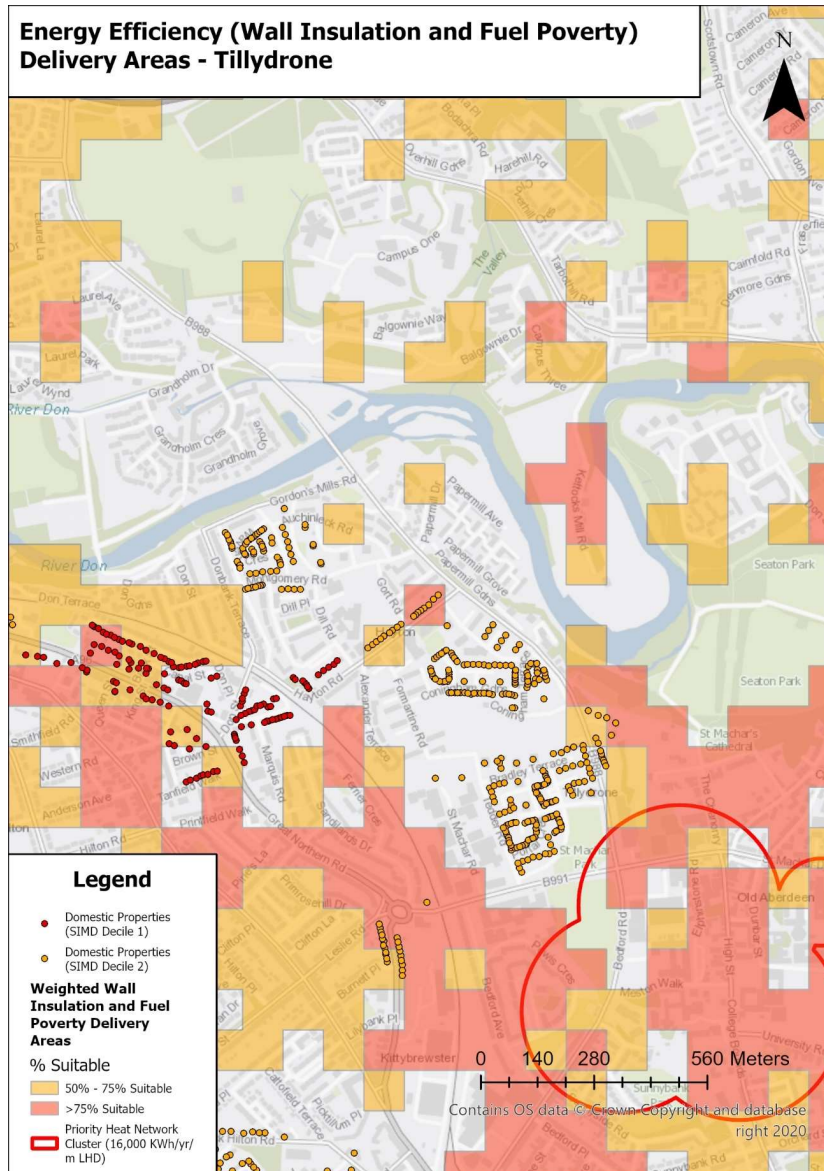
#### **Approach to Energy Efficiency Programmes and Upgrades**

The Council aims to build on the success of its existing insulation programmes. While the Council wish to not focus on specific delivery areas at this current time, the Council are exploring the potential of energy efficiency programmes as a priority and various areas of the city have been flagged in discussions for potential work in the future. With properties in Tillydrone and Torry potentially being connected to the heat network, energy efficiency of these properties will be the first priority for the existing housing stock being connected. EES:ABS will continue to target home owners through external wall insulation for domestic properties of non-traditional builds that meet the requirements of the Scottish Government along with those identified as most at need through the SIMD. Future plans will include internal wall insulation especially for areas of traditional stone-built properties.

To identify energy efficiency delivery areas for the Council, energy efficiency delivery area maps were produced using the Scottish Government LHEES methodology as part of the Stage 4 analysis. For this approach, wall insulation and fuel poverty were combined to measure energy efficiency. These are represented by 100m<sup>2</sup> cells in amber indicating moderate (50%-75%) suitability for energy efficiency programmes, and red cells indicating very high (>75%) suitability for energy efficiency programmes. Underlying these are a high to very high density of domestic properties that do not have wall insulation and are at risk of fuel poverty. The Council wish to provide a high-level approach to energy efficiency with delivery areas in or nearby heat network developments being prioritised for consideration. The following maps outline the scale of potential delivery areas near heat network developments, and the number of domestic properties with a high deprivation.



## Potential Energy Efficiency Area: Tillydrone

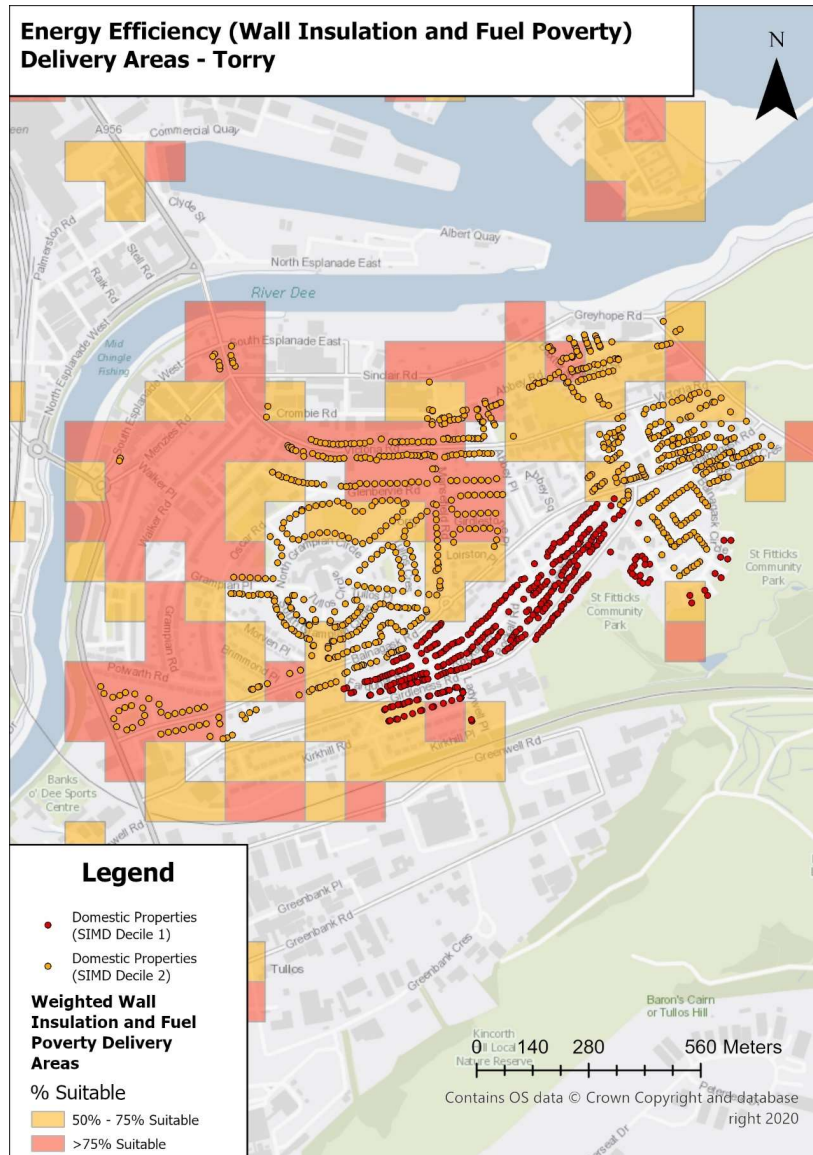


Area	Count of properties (SIMD deciles 1 and 2)
Tillydrone	949





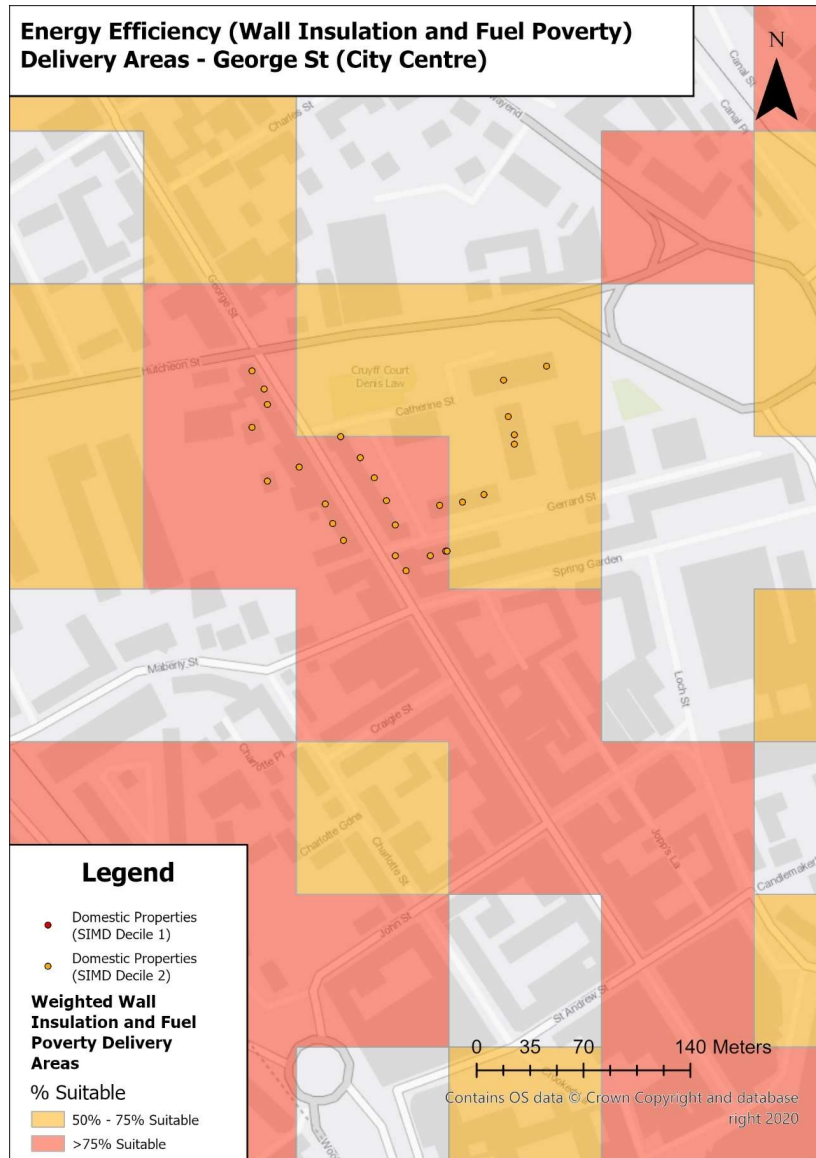
## Potential Energy Efficiency Area: Torry



Area	Count of properties (SIMD deciles 1 and 2)
Torry	3,432



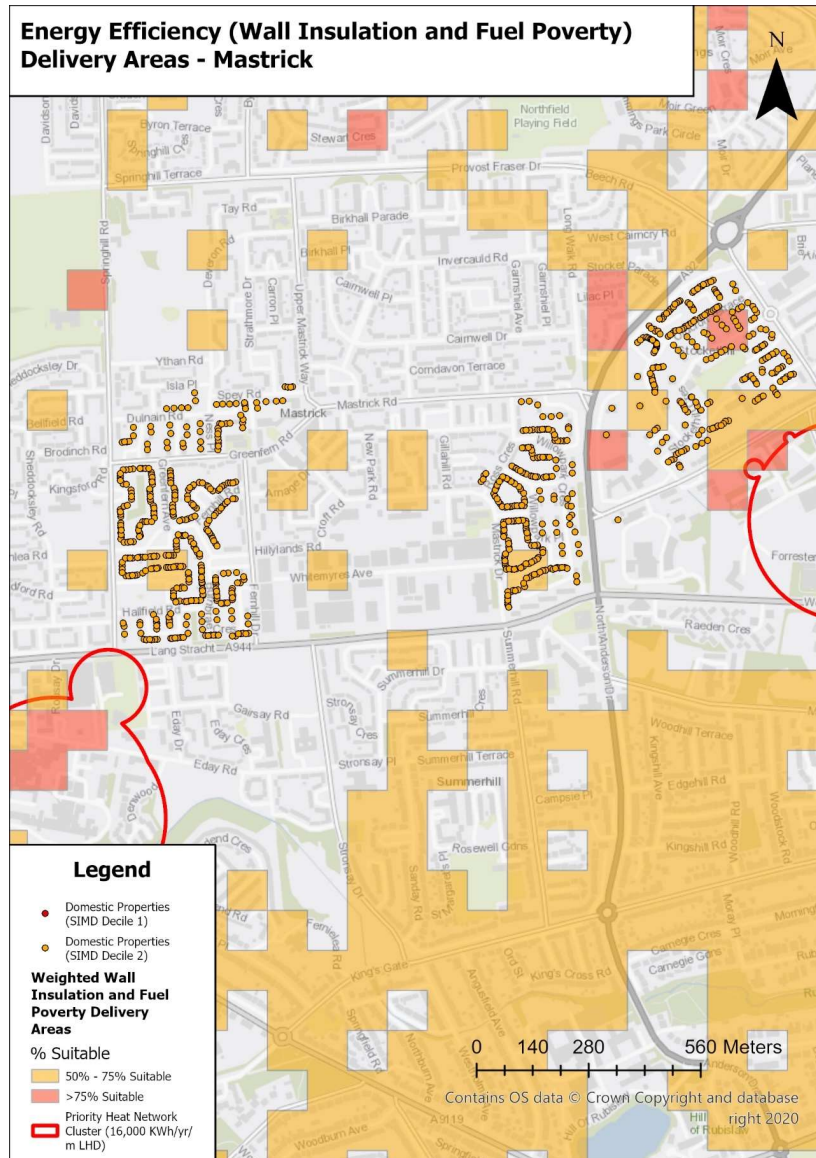
## Potential Energy Efficiency Area: George Street



Area	Count of properties (SIMD deciles 1 and 2)
George Street	414



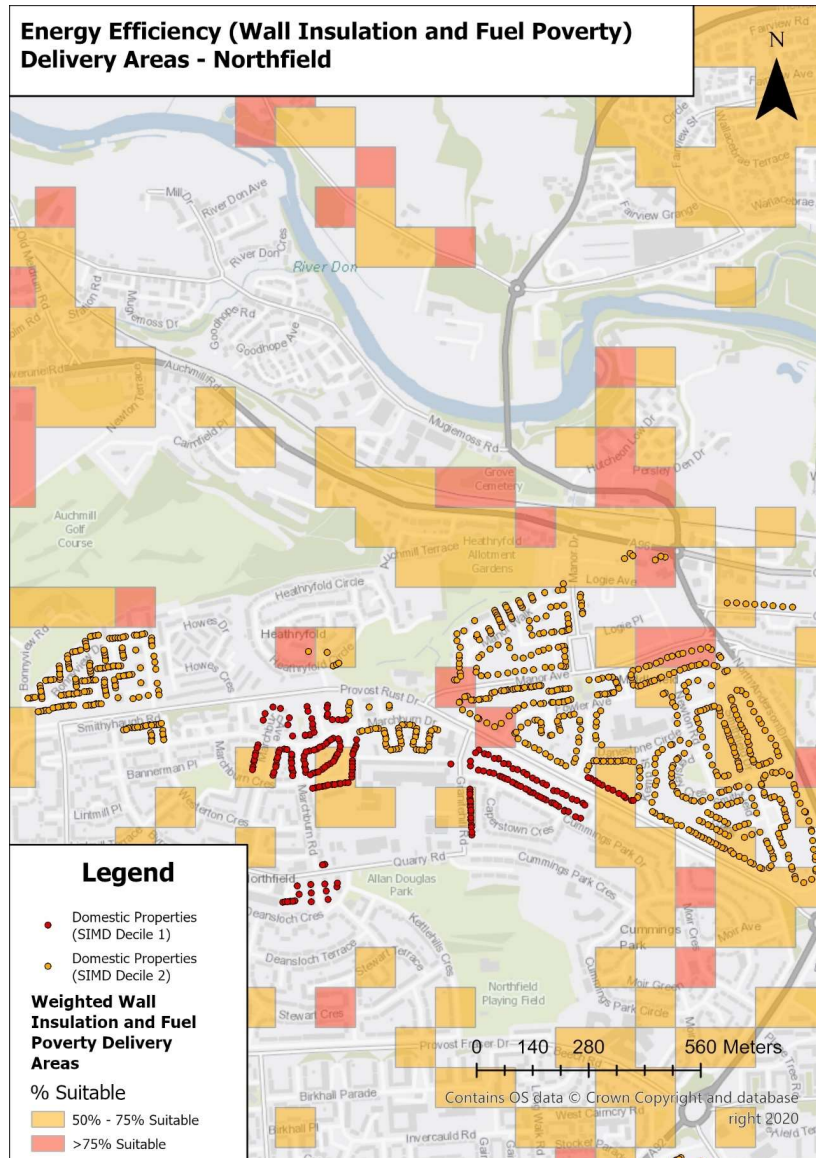
## Potential Energy Efficiency Area: Mastrick



Area	Count of properties (SIMD deciles 1 and 2)
Mastrick	1,155

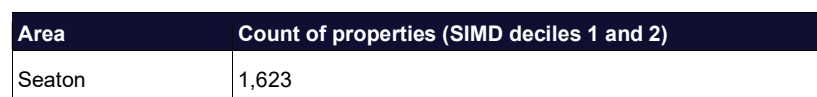


## Potential Energy Efficiency Area: Northfield



Area	Count of properties (SIMD deciles 1 and 2)
Northfield	1,893







## 5.2. Actions

Action	Priority	Description	Responsibility	Key stakeholders	Measure of success
Build on existing insulation programmes	Medium-term	Home Energy Team to promote the ECO 4 Flex, Aberdeen Victorian Tenement Project and in house programme	Home Energy Team	Households of all tenures, contractors	Increased engagement from households
Promote partners services	Medium-term	Work with Scarf and Home Energy Scotland to promote services and funding	Home Energy Team	Households of all tenures, contractors, Scarf, Home Energy, Scotland	Increased engagement from households
Continuation of EES:ABS funding	Medium-term	Home Energy Team to secure ongoing EES:ABS funding from Scottish Government to allow ongoing fabric first works on private properties to be completed	Home Energy Team	Owner-occupiers, Scottish Government	Secure ongoing funding
Integrate EES:ABS with similar programmes	Medium-term	Home Energy Team to explore ways to integrate EES:ABS funding with another fabric scheme to allow retrofit measures to be delivered throughout the whole building, by supporting different tenures through different funding schemes	Home Energy Team	Scottish Government, owner-occupiers, social tenants, housing associations	Integration of EES:ABS with another fabric scheme for both private and social housing. This will ensure that all households can take part in multi-tenure building schemes

## 5.3. Funding

The Council will draw on available funding from the Scottish Government and other providers to support the insulation of buildings.

### Social housing

**The Social Housing Net Zero Heat Fund** supports social housing landlords across Scotland to install zero direct emission heating systems. Funding for fabric first energy efficiency projects is also available; however, applicants are required to demonstrate a commitment to installing eligible ZDEH systems into these properties. There is currently £200 million available over five years up to 2026 and the fund supports capital costs and provides resource support to help build a pipeline of future



projects. The fund can cover up to a maximum of 60% of total capital expenditure costs for ZDEH elements and 50% of the fabric and energy efficiency measures.

### Mixed tenure

**Efficiency Programmes - Energy Efficient Scotland (EES:ABS)** are designed and delivered by local authorities, in combination with utility companies and local delivery partners. This funding is provided by Scottish Government. Schemes are targeted in areas in or at risk of fuel poverty and are intended for owner-occupiers and private landlords. EES:ABS have historically focussed on installing single insulation measures but are now expanding to a 'whole house' approach. Schemes include other measures such as zero emissions heating systems, solar PV and renewables. By working on an area-based delivery model, the programme enables mixed-tenure projects, bringing together homeowners, social housing providers and private landlords.

### Owner-occupiers

**The HES grant and loan** is available to homeowners and offers grant funding for heat pumps of £7,500, or £9,000 to those living in rural areas. There is also £7,500 available as an optional interest free loan to further help towards the installation of a heat pump. £6,000 of interest free loan funding is available for households for solar PV panels when taken as a package of measures including a heat pump. In addition to this funding, up to 75% of the cost of energy efficiency measures can be covered by grant funding, up to a maximum of £7,500 (£9,000 in rural areas). The final 25% can be covered by an interest free loan or paid by the customer as the loan is optional. These energy efficiency measures include, but are not limited to, cavity wall insulation, solid wall insulation, loft insulation, and floor insulation.

**Warmer Homes Scotland (WHS)** offers funding and support to households struggling to stay warm and keep on top of energy bills. This programme is available for homeowners and private sector tenants. WHS takes a 'whole house' approach, offering eligible households a bespoke package of measures that take account of both the needs of the property and the needs of the household. Heating measure installations are not available in private rented properties. This programme is often fully grant funded. Potential improvements include wall insulation, loft insulation, draught-proofing, central heating, and renewables. Households must meet the eligibility criteria<sup>1</sup> and live in a property with a low efficiency rating. Interest free loans of up to £10,000 are available for homeowners or landlords who require further assistance to help pay a contribution towards the work.

**The Energy Company Obligation (ECO 4)** is in its fourth round as a scheme which provides insulation and heating measures for low income, vulnerable owner occupiers and private rented sector landlords with tenants at risk of fuel poverty. The measures and funding available are based on specific eligibility criteria and can include insulation, district heating connection, renewable measures, heating installation and repair. This funding is managed through Ofgem, with energy companies determining which retrofit projects they choose to fund and what level of funding they

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<sup>1</sup> Eligibility criteria detailed on the [Home Energy Scotland website](#)



provide. It is available to households in an Affordable Warmth Group in receipt of benefits or tax credits. This fund is also available to households in properties with an EPC of D, E, F, or G. The scheme is part of an obligation on energy suppliers to improve domestic energy efficiency.

**ECO Flex** is a household referral mechanism made available through the wider ECO 4 scheme. This program allows local authorities to widen the eligibility criteria to include households that would otherwise not be eligible through the ECO 4 standard criteria. Under this scheme, participating local authorities can refer owner occupied and private rented households considered to be at risk of living in fuel poverty or on low income and vulnerable to the impacts of living in a cold home.



# BUILDING LEVEL DECARBONISATION





## 6. Building level decarbonisation

### 6.1. Background

Whilst the Council will connect buildings to heat networks where possible, properties that are unable to join a network will be supported to install a zero direct emissions heating system. A fabric first approach will be taken, meaning that the energy efficiency of individual buildings should be up to standard before the install of a zero direct emissions heating system.

Building level decarbonisation is the lower level priority set by Aberdeen City Council. No specific delivery areas have been identified so far. Due to the extensive heat network throughout the city centre, it is likely that building level decarbonisation will focus on targeting areas of the city by construction age and construction type.

### 6.2. Actions

Action	Priority	Description	Responsibility	Key stakeholders	Measure of success
Identify properties suitable for heat pumps outside of heat network zones	Medium-term	See Strategic Plan for key zones	Home Energy Team	Households of all tenures	Target to be set
Improve fabric of remaining properties to ensure they are heat pump ready	Medium-term	Home Energy Team to ensure households are aware of programmes	Home Energy Team	Contractors, households of all tenure	Target to be set

### 6.3. Funding

Funding opportunities are similar to those identified in section 6.3, please review this section for details.



# MONITORING AND EVALUATION FRAMEWORK

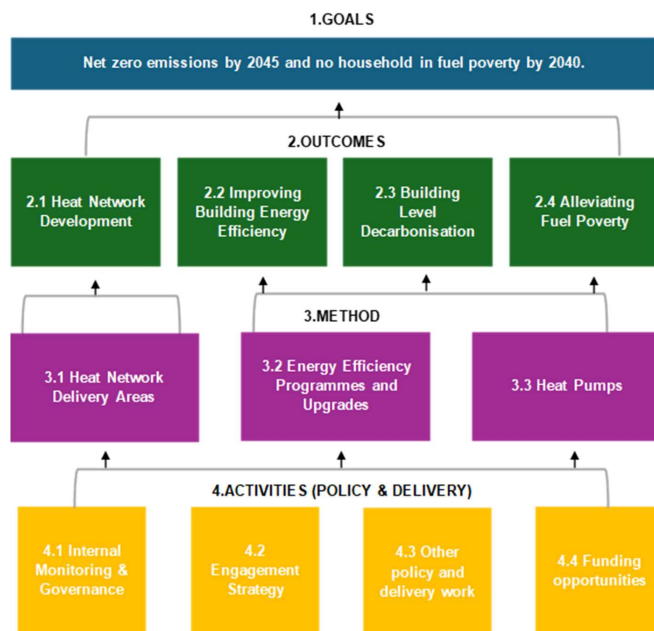
## 7. Monitoring and evaluation framework

The monitoring and evaluation frameworks should be used by the Council to measure progress against LHEES considerations, local priorities and targets identified in LHEES Stage 1 and reported against in Stage 3, and to report on the effectiveness of their LHEES delivery.

They should also set out, as far as reasonably possible, a portfolio of projects that are to be taken forward, and track progress of ongoing projects related to LHEES. The frameworks below provide a useful starting point, however, are to be completed and updated by Aberdeen City Council as per the Council's governance arrangements. The council is responsible for identifying quantifiable, time-measured targets in line with statutory requirements and local priorities. The monitoring and evaluation frameworks can be found in the Appendix at the end of this document.

A monitoring map has also been developed to show the enabling factors that will need to be in place, in order to fulfil the overarching objectives of Aberdeen City Council's LHEES Strategy and Delivery Plan.

Figure 2: A Monitoring Map to show Aberdeen City Council's pathway for decarbonising heat in buildings and improving energy efficiency







# BUILDING THE LOCAL SUPPLY CHAIN





## 8. Building the local supply chain

### Skills gap

There are major shortfalls facing the retrofit and decarbonisation industry in many specific trades and professions such as plumbers, HVAC (Heating, Ventilation, and Air Conditioning) specialists, surveyors and Retrofit Coordinators.<sup>2</sup> Investment is needed to encourage existing contractors to upskill and train young workers to enter the retrofit and decarbonisation workforce. This is a particular challenge in rural areas where training and upskilling opportunities are limited and where there is lower demand for green skills.

The Just Transition Commission has stated that the market will not drive the change required, and systemic change must be driven by legislation and regulation from Scottish Government.<sup>3</sup> Similarly, reforming public procurement mechanisms can create demand and support growth of local workforces. The Scottish Government has committed to a £100m Green Jobs Fund over the next five years, which will be used to support the development of sustainable and low-carbon products and services.

Aberdeen City Council acknowledges the need to develop the local supply chain. This will involve promoting employment opportunities created by LHEES projects. Developing the supply chain will also involve supporting young people into the green energy sector and offering reskilling opportunities to those in the oil and gas industry. This will involve supporting a network of existing programmes in the region including:

- **The Northeast Scotland College ‘energy transition’ programmes** - designed to ensure students leave College equipped with the knowledge, technical capability and experience to undertake opportunities associated with the energy transition. The college works closely with industry partners within the region to ensure students are developing skills in line with local supply chain needs. The Council has met with the college to encourage further uptake of courses within the heat network and energy efficiency sectors. The Council plans to promote the programmes to improve renewable and energy efficiency training.
- **The Aberdeen & Grampian Chamber of Commerce** - rolling out an innovative approach to career development in schools as the city continues to build its future energy workforce. Aberdeen City Council will work with employers in the energy sector to strengthen educational links and help pupils learn about the industry, careers, and various routes into them.
- **The Energy Transition Zone** - a private sector led and not-for-profit company, which provides training within the sector. It is developing a skills campus that will enable and promote a future in clean fuel technologies and low carbon careers. The campus will be home to Scotland's first dedicated ‘Energy Transition Skills Hub’ This will support full and

<sup>2</sup> ClimateXChange (2022) [Clean Heat and Energy Efficiency Workforce Assessment](#)

<sup>3</sup> Just Transition Commission (2023) [Scotland's Retrofit Workforce: A Briefing on the Built Environment and Construction](#)





part time students to develop skills for the energy transition and provide local employers a go to pool of talent to expand their workforce.

- **Aberdeen Heat and Power** – working closely with local contractors in offering training on heat networks to maintain capacity and expertise in Aberdeen City.



# CONCLUSION AND NEXT STEPS



## 9. Conclusion and next steps

This Delivery Plan is designed to sit alongside the LHEES Strategy. It provides a more detailed view of the actions required over the next five years to decarbonise Aberdeen City Council's domestic and non-domestic building stock. This Delivery Plan details the immediate and medium-term actions that can be delivered now, given the existing policy landscape.

It is a statutory duty for the Council to update the LHEES every five years. Due to the urgency of the climate emergency, and the rapidly evolving policy landscape, the Strategy and Delivery Plan will both be reviewed every five years. This means they should be treated as live documents which will respond to the introduction of new standards, regulation, and delivery programmes, to any changes in the LHEES process, and to future opportunities within Aberdeen City Council.



## 10. Appendix: Monitoring and evaluation frameworks broken down by Goals, Outcomes, Method and Activities

### Key

Status	Colour
Not yet started	Red
In progress	Yellow
Achieved	Green

Table 1: Goals: an evaluation framework to monitor progress towards national decarbonisation targets.

Target	Relevant indicators	Data type and source	Baseline (data)	Progress 2024-25	Timescale	Status
1.1 Net zero emissions by 2045	Greenhouse gas emissions statistics				2045	Yellow
1.2 No household in poverty by 2040	Fuel poverty statistics				2040	Yellow



Table 2: Outcomes: an evaluation framework to monitor progress of Aberdeen City Council's LHEES Priorities.

Priority	Target	Relevant indicators	Data type and source	Baseline (data)	Progress 2024-25	Timescale	Status
2.1 Heat Network Development	The Council is focused on expanding existing heat networks by connecting new buildings and heat sources	Number of heat networks established				By October 2029	
2.2 Improving Building Energy Efficiency	Improving the energy efficiency of buildings to reduce heat demand, whilst simultaneously addressing fuel poverty and climate change	EPC energy efficiency rating C or above				By October 2029	
		EPC energy efficiency rating D or below				By October 2029	
		Domestic wall insulation				By October 2029	
		Nondomestic wall insulation				By October 2029	
		Number of energy efficiency retrofits completed				By October 2029	
2.3 Building Level Decarbonisation	Decarbonising heat across buildings in Aberdeen City will ensure the Council meets its net zero	Carbon emissions from the built environment in ACC				By October 2029	





Priority	Target	Relevant indicators	Data type and source	Baseline (data)	Progress 2024-25	Timescale	Status
	targets. While the Council will connect buildings to heat networks where possible, households that are unable to join a network will be supported to install a zero direct emissions heating system	% of building stock powered by renewable sources				By October 2029	
2.4 Alleviating Fuel Poverty	Reduce energy costs as a driver of fuel poverty	Number of households in fuel poverty				By October 2029	
		Average household energy cost as a percentage of income				By October 2029	



Table 3: Method: an evaluation framework to monitor progress within Aberdeen City Council's delivery areas.

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
3.1 Expand Heat Network Delivery Areas and expand heat networks elsewhere	To continue to develop and confirm plans to expand heat network development detailed in section 5		Home Energy Team		AHP, NHS, University of Aberdeen	By October 2029	
3.2 Improve energy efficiency of buildings to reduce heat demand and address fuel poverty and climate change	Build on existing insulation programmes	Promote ECO4 Flex, Aberdeen Victorian Tenement Project and in house programme to reach X number of households by X.	Home Energy Team		Households; contractors	By October 2029	
	Promote partners' services	Work with Scarf and Home Energy Scotland to promote services and funding.  <i>Target number of households to reach?</i> <i>How will engagement be measured?</i>	Home Energy Team		Households; contractors; Scarf; Home Energy Scotland	By October 2029	
	Continuation of the EES:ABS funding	Maximise ongoing EES:ABS funding from Scottish Government to allow ongoing fabric first works on private properties to be completed.	Home Energy Team		Owner-occupiers; Scottish Government	By October 2029	

Commented [JT1]: ACC to add targets here

Commented [JT2]: ACC to add targets here



Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		<i>How much funding are you aiming to secure?</i> <i>When would you like this secured by?</i>					
	Support all households in mixed tenure buildings to contribute to retrofit schemes	Look at where EES:ABS funding could be supported with funding for social housing in mixed tenure buildings, so that retrofit measures can be installed across the whole building, which is more efficient	Home Energy Team		Scottish Government; owner-occupiers; social tenants; Housing Associations	By October 2029	
3.3 Taking a 'fabric first' approach to building level decarbonisation	Identify properties already suitable for heat pumps outside of heat network zones	<i>Specific, measurable target to be set by the council</i>	Home Energy Team		Households	By October 2029	

Commented [JT3]: ACC to add targets here



Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
	Improve fabric of remaining properties to ensure they are heat pump ready	<i>Specific, measurable target to be set by the council</i>	Home Energy Team		Households; Contractors	By October 2029	

Table 4a: Activities: an evaluation framework to monitor progress with governance, stakeholder engagement and other policy work to support LHEES delivery.

Strategic actions	Actions	Target	Lead	Resources required	Partners	Timescale	Status
4.1 Develop clear governance framework for LHEES delivery	Identify LHEES leads and champions	Leads and champions ensure that actions identified in Delivery Plan are realised as per their timescale and measures of success	Aberdeen City Council, Executive Director/ Head of Service Level	-	-	By 2026	
	Enact LHEES governance arrangements	LHEES to be integrated into existing Steering Group and governance structure for Sustainable Development and Climate Change (SDCC)	Aberdeen City Council, Executive Director/ Head of Service Level	-	-	By 2026	
	Monitoring and evaluation framework review	Monitoring and evaluation framework should be updated to include specific measurable targets, clear timescales and a full portfolio of	Aberdeen City Council, Executive Director/ Head of Service Level	-	-	By 2026	



Strategic actions	Actions	Target	Lead	Resources required	Partners	Timescale	Status
		ongoing and planned projects					
	Light touch annual review of both the strategy and delivery plan	Update and amend both documents in light of regulatory changes. Identify local targets	Aberdeen City Council, Executive Director/ Head of Service Level	-	-	By 2029	
	Full review of LHEES Strategy and Delivery Plan	Update and amend both documents in light of regulatory changes. Identify local targets	Aberdeen City Council, Executive Director/ Head of Service Level	-	-	By 2029	
4.2 Engage with relevant stakeholders to support with LHEES delivery	Council Strategy Board: Brief them on LHEES plans	LHEES is embedded into The Council Place Based Strategy Framework's goals, outcomes and activities	Aberdeen City Council	-	Council Strategy Board	By 2026	
	Aberdeen Net Zero and Adaptation Board: Inform of the LHEES plans	LHEES is incorporated into the Net Zero Routemap's	Aberdeen City Council	-	Aberdeen Net Zero and Adaptation Board	Immediate (by November 2024 meeting)	

Strategic actions	Actions	Target	Lead	Resources required	Partners	Timescale	Status
		goals, outcomes and activities.					
	Climate Oversight Group: Meeting to highlight LHEES strategy and delivery plan	LHEES is embedded into the Council's Climate Change Plan's goals, outcomes and activities	Aberdeen City Council	-	Climate Oversight Board	By 2026	
	Net Zero Aberdeen microsite: Send details of LHEES to publish	LHEES plans are included on the microsite	Aberdeen City Council	-	Net Zero Aberdeen	By 2026	
	Public: Promote and hold consultation	The public are consulted, and feedback incorporated into LHEES plans. Feedback and follow-up actions will be recorded in the annual review	Aberdeen City Council	-	Public	By 2026	
	Elected Members: Host briefing sessions and gain approval for public consultation	Approval for public consultation is obtained	Aberdeen City Council	-	Elected Members	By 2026	
	Youth Climate Group: Hold meeting to discuss LHEES plans	As per UN requirement, young people are	Aberdeen City Council	-	Youth Climate Group	By 2026	

Strategic actions	Actions	Target	Lead	Resources required	Partners	Timescale	Status
		engaged with, and their views are incorporated into LHEES plans. Feedback will be recorded in the annual review					
	Aberdeen Community Planning, Sustainable City Group: Hold meeting to discuss LHEES plans	Local outcome improvement plans' (LOIP) aims reference LHEES, to ensure alignment between LOIP and LHEES.	Aberdeen City Council	-	Aberdeen Community Planning	By 2026	
4.3 Other policy and delivery work	Net Zero Adaptation Board	The LHEES and Delivery Plan contributes to the <a href="#">Net Zero Aberdeen Routemap</a> and enabling strategies (including ones for <a href="#">Buildings and Heat</a> ; <a href="#">Energy Supply</a> ; <a href="#">Empowerment</a> ) which cover the city's journey to	Aberdeen City Council	-	Council's Net Zero Environment and Transport Committee	By 2026	

Strategic actions	Actions	Target	Lead	Resources required	Partners	Timescale	Status
		achieve net zero carbon by 2045. An annual report on progress with Net Zero Aberdeen Routemap and Aberdeen Adapts is reported to the Council's Net Zero, Environment and Transport Committee (last reported March 2024)					
	Aberdeen Local Outcome Improvement Plan	Progress against the Aberdeen LOIP is monitored. This includes a number of initiatives to address LOIP drivers and Improvement aims – including those relating to fuel poverty <a href="#">SO 1 Poverty - Community</a>	Aberdeen City Council	-	Community Planning Team	By 2026	

Strategic actions	Actions	Target	Lead	Resources required	Partners	Timescale	Status
		<a href="#">Planning Aberdeen's</a> Stretch Outcome 1 for Economy, which states a "20% reduction in the percentage of people who report they have been worried they would not have enough food to eat and/or not be able to heat their home by 2026". This supports ACC's priority to "Support mitigation of fuel poverty". As well as those relating to climate <a href="#">Place - Community Planning Aberdeen</a>					



Table 4b: Activities: an evaluation framework to monitor progress with funding opportunities to support LHEES delivery.

Funding source	Description	Action	Deadlines/ key dates	Lead	Partners	Status
4.4 Funding opportunities	<a href="#">Scotland's Heat Network Fund</a>	Designed to support the development and roll out of heat networks across Scotland. It is open to any organisation seeking to develop and deploy heat networks in Scotland. In total £300 million is being made available to stimulate investment and grow the low carbon heat sector. Up to a maximum of 50% of the total eligible capital costs can be covered through this fund	ACC to research eligibility, submit expression of interest	Application deadline ongoing	Successful projects must draw down funding in full by March 2026	
	<a href="#">The Heat Network Support Unit</a>	Unit identifies, supports, and develops heat network projects for the public sector. The support available includes expert advice and grant funding to develop projects until they have a clear financial strategy and well-defined business model	The unit is still accepting applications for advisory-only support and discussions on potential future applications.  ACC to research eligibility to determine if they will apply for the 2025-26 financial year funding, or for advisory support for existing projects	No longer accepting applications for the 2024-25 financial year		

Funding source	Description	Action	Deadlines/ key dates	Lead	Partners	Status
<a href="#">The Social Housing Net Zero Heat Fund</a>	Supports social housing landlords across Scotland to install zero direct emission heating systems. Funding for "fabric first" energy efficiency projects is also available; however, applicants are required to demonstrate a commitment to installing eligible ZDEH systems into these properties	ACC to research eligibility and apply for funding if appropriate	Funding available until 2026			
Energy Efficiency Programmes Scotland: Area Based Schemes (EES:ABS)	This funding is provided by Scottish Government. Schemes are targeted in areas in or at risk of fuel poverty, the fund is intended for owner-occupiers and private landlords	ACC to continue allocating funding for EES:ABS projects	Ongoing			
<a href="#">The HES grant and loan</a>	Available to homeowners and offers grant funding for heat pumps of £7,500, or £9,000 to those living in rural areas. There is also £7,500 available as an optional interest free loan to further help towards the installation of a heat pump. £6,000 of interest free loan funding is available for households for solar PV panels when taken as a package of measures including a heat pump. In addition to this funding, up to 75% of the cost of energy	ACC to research eligibility and apply for funding if appropriate.	Ongoing			

Funding source	Description	Action	Deadlines/ key dates	Lead	Partners	Status
	efficiency measures can be covered by grant funding, up to a maximum of £7,500, or £9,000 in rural areas. The final 25% can be covered by an interest free loan, or paid by the customer as the loan is optional					
<a href="#">Warmer Homes Scotland (WHS)</a>	Offers funding and support to households struggling to stay warm and keep on top of energy bills. This programme is available for homeowners and private sector tenants	ACC to research eligibility and apply for funding if appropriate	Ongoing			
<a href="#">The Energy Company Obligation (ECO 4)</a>	Provides insulation and heating measures for low income, vulnerable owner occupiers. It is available to households in an Affordable Warmth Group in receipt of benefits or tax credits. This fund is also available to households in properties with an EPC of D, E, F, or G	ACC to research eligibility and apply for funding if appropriate	Ongoing			
ECO Flex	Participating local authorities can refer owner occupied and private tenured households considered to be at risk of living in fuel poverty or on low income and vulnerable to the impacts of living in a cold home	ACC to identify eligible households for funding	Ongoing			

# 11. Glossary

## 11.1. Abbreviations

Acronym	Description
EES	Energy Efficient Scotland
EESSH	Energy Efficiency Standard for Social Housing
EPC	Energy Performance Certificate
EST	Energy Saving Trust
GIS	Geographic Information System
EES:ABS	Energy Efficiency Programmes for Scotland: Area Based Schemes
IZ	Intermediate Zone
LA	Local Authority
LHEES	Local Heat and Energy Efficiency Strategy
LPG	Liquefied Petroleum Gas
mxd	Map Exchange Document
NAEI	National Atmospheric Emissions Inventory
PEAT	Portfolio Energy Analysis Tool
SAP	Standard Assessment Procedure
ToC	Table of Contents
UPRN	Unique Property Reference Number

## 11.2. Terms

Terms	Description
Baselining	Baselining is the purpose of understanding at local authority or strategic level, the current status of the buildings against the LHEES Considerations, Targets and Indicators.
Building-level Pathway	As part of LHEES Stage 5, a building-level pathway is the outcome of the assessment undertaken using PEAT. It provides the likely energy efficiency retrofit technologies, as well as the low carbon heating system (where applicable) to support building level decarbonisation.
Criteria	Criteria are the settings applied to the Indicators for each Consideration in order to support Baselining, Strategic Zoning and the identification of Delivery Areas. An example of Criteria is a simple "no" applied to the indicator of "wall insulation (Y/N)" to identify properties with uninsulated walls. Another example is the definition of an "anchor load" within the Heat Networks analysis, which applies a minimum threshold to the "heat demand" Indicator. The LHEES methodology provides a set of default Criteria that local authorities may wish to use, with flexibility to update and augment these to support local needs or for more focused analysis linked to specific actions and project identification within the Delivery Plan.
Data - Alternative	Alternative data can overwrite the Core data to improve accuracy (national to local level of detail, e.g. local housing data to overwrite fields in Home Analytics).
Data - Core	Core data is the data that is essential to complete the minimum requirements of the LHEES analysis. Core data will come from national datasets e.g. Home Analytics or the Scotland Heat Map.
Data - Supplementary	Supplementary data allows inclusion of additional Indicators to inform specific, local targets; also, Supplementary data can be used in GIS investigation to complement the Core analysis carried out in any assessment. An example of Supplementary data would be the inclusion of a constraints appraisal as part of a district heating analysis.
Data Zone	Data zones are output areas which have populations of around 500 to 1,000 residents.
Delivery Area	Delivery areas are at a higher granularity than Strategic Zones. These spatial zones should set out clusters of buildings within a Strategic Zone or across the whole local authority that identify potential solution(s) at a delivery level. They will be an important starting point for identifying a range of projects, regulations and actions that are within the competence of the Scottish Government, local authorities and wider partners (included as actions to be developed in the LHEES Delivery Plan).
Detailed practitioner approach	These Steps form part of the detailed practitioner approach in LHEES Stage 4, Generation of Initial Areas to set out particularly suitable heat network zones and to support project identification.
Indicator	For a given Consideration, the purpose of an Indicator is: 1) to act as a key information field to help characterise and baseline the local authority. 2) to act as a key information field to support strategic zoning and generation of initial delivery areas.



	<p>3) if suitable, to act as a key information field to measure progress against Targets over the duration of the LHEES - set out in the LHEES Delivery Plan.</p> <p>For some Considerations, one Indicator may be sufficient, but for others a range may be appropriate.</p>
Intermediate Zone	<p>Intermediate zones are a statistical geography that are designed to meet constraints on population thresholds (2,500 - 6,000 household residents), to nest within local authorities, and to be built up from aggregates of data zones.</p>
LHEES Considerations	<p>The LHEES Considerations are a list of technologies, building typologies and policy priorities used to identify and target interventions. They include:</p> <ul style="list-style-type: none"> <li>- Heat networks</li> <li>- Off-gas grid buildings</li> <li>- On-gas grid buildings</li> <li>- Poor building energy efficiency</li> <li>- Poor building energy efficiency as a driver for fuel poverty</li> <li>- Mixed-tenure, mixed-use and historic buildings</li> </ul>
LHEES Delivery Plan	<p>An LHEES Delivery Plan is a document setting out how a local authority proposes to support implementation of its local heat and energy efficiency strategy.</p>
LHEES Guidance	<p>The LHEES Guidance sets out the production and content requirements for a local authority to prepare a Local Heat and Energy Efficiency Strategy and Delivery Plan. Its purpose is to ensure that a Local Heat and Energy Efficiency Strategy and Delivery Plan contain outcomes and actions that are backed up by robust data and analysis, supported by stakeholder engagement, and that are linked to national and local priorities, plans and targets.</p>
LHEES Methodology	<p>The LHEES Methodology is a more detailed, step by step approach, which includes models, tools and templates, and represents best practice in how to produce an LHEES in accordance with the requirements set out in the LHEES Order and Guidance.</p>
LHEES Stages	<p>There are 8 LHEES Stages proposed in this methodology. The purpose of the LHEES Methodology is to enable the local authority to complete LHEES Stages 1 to 6. The completion of these Stages will provide the local authority with the data analysis and evidence base to enable them to complete their LHEES Strategy and Delivery Plan documentation. There are two LHEES reporting templates included alongside this methodology– LHEES Strategy example template and LHEES Delivery Plan example template. The completion of these two templates will satisfy the completion of LHEES Stages 7 and 8. The 8 LHEES Stages proposed in this methodology are:</p> <ol style="list-style-type: none"> <li>1 - Policy and strategy review</li> <li>2 - Data and tools library</li> <li>3 - Strategic zoning and pathways</li> <li>4 - Generation of initial delivery areas</li> <li>5 - Building-level pathway assessment</li> <li>6 - Finalisation of delivery areas</li> <li>7 - LHEES Strategy</li> <li>8 - LHEES Delivery Plan</li> </ol>
LHEES Strategy	<p>An LHEES Strategy is a long-term strategic framework for:</p> <ul style="list-style-type: none"> <li>- the improvement of the energy efficiency of buildings in the local authority's area, and</li> <li>- the reduction of greenhouse gas emissions resulting from the heating of such buildings</li> </ul>
Mixed-tenure, mixed-use and historic buildings	<p>Mixed-tenure and mixed-use buildings could include a mixture of owner occupied, private rented and social housing, and non-domestic uses, or simply multiple</p>

	ownership within the same tenure. Historic buildings include the buildings that are within conservation areas or those that are listed buildings. These categories may require established alternative approaches and regulation for the installation of low carbon heat and energy efficiency solutions and where specific advice and support might be available relating to the installation of these solutions.
Potential Zones	The analysis carried out for strategic zoning and pathways for the heat networks Consideration is to identify potential zones rather than the otherwise used naming convention of Delivery Areas. The potential zones identified are to be included in the LHEES Strategy and should inform actions around further investigation / progression within the LHEES Delivery Plan. The heat networks Consideration analysis and activity carried out within LHEES is also anticipated to support activity related to formal zone designation as required by the Heat Networks (Scotland) Act 2021.
Raster	A matrix of squares, or grid, used as a method of data analysis in GIS. Each cell in the grid contains a value representing information on the cell's contents.
Strategic Zone	Strategic Zones present a visualisation of the potential pathways to decarbonise the building stock at a local authority level. These could, for example, be split out by intermediate zone or data zone. 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.
Targets	Targets are the measurable aspect of the Consideration and are likely to be taken directly from national and/or local policy documentation, for example net-zero by 2045, or EPC C by 2040. Targets are likely to comprise of end-point targets and milestone targets and would sit along a timeline within (and beyond) the LHEES. This timeline would help to prioritise the types of projects undertaken within the LHEES over its duration.
Weighting	For some Considerations, one Target and Indicator may be sufficient, but for others a range of Indicators may be appropriate to contextualise and characterise performance against a Target and/or progress towards a Consideration. If multiple Indicators are used in strategic zoning or the identification of delivery areas, a Weighting can be applied based on the importance of each. The LHEES methodology sets out a core set of default Weightings for instances where multiple Indicators are suggested as a default setting. There is flexibility to update and augment these to support local needs or for more focused analysis linked to specific actions and project identification within the Delivery Plan.