



**Local Heat and Energy
Efficiency Strategy
Delivery Plan**
September 2024

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Glossary

Abbreviations

EES	Energy Efficient Scotland
EESSH	Energy Efficiency Standard for Social Housing
EPC	Energy Performance Certificate
EST	Energy Saving Trust
GIS	Geographic Information System
HEES:ABS	Heat and Energy Efficient 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
PEAT	Portfolio Energy Analysis Tool
SAP	Standard Assessment Procedure
ToC	Table of Contents
UPRN	Unique Property Reference Number

Terms

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

	<p>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.</p>
Data - Alternative	<p>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).</p>
Data - Core	<p>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.</p>
Data - Supplementary	<p>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 constraint’s appraisal as part of a heat network analysis.</p>
Data Zone	<p>Data zones are groups output areas which have populations of around 500 to 1,000 residents.</p>
Delivery Area	<p>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, regulation and actions that are within the competence of the Scottish Government, local authorities and wider partners</p>

	(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. 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. For some Considerations, one Indicator may be sufficient, but for others a range may be appropriate.
Intermediate Zone	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.
LHEES Considerations	The LHEES Considerations are a list of technologies, building typologies and policy priorities used to identify and target interventions. They include: - Heat networks - Off-gas grid buildings - On-gas grid buildings - Poor building energy efficiency - Poor building energy efficiency as a driver for fuel poverty - Mixed-tenure, mixed-use and historic buildings
LHEES Delivery Plan	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.
LHEES Guidance	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.
LHEES Methodology	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.
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"> 1 - Policy and strategy review 2 - Data and tools library 3 - Strategic zoning and pathways 4 - Generation of initial delivery areas 5 - Building-level pathway assessment 6 - Finalisation of delivery areas 7 - LHEES Strategy 8 - LHEES Delivery Plan
LHEES Strategy	<p>An LHEES Strategy is a long-term strategic framework for:</p> <ul style="list-style-type: none"> - the improvement of the energy efficiency of buildings in the local authority's area, and - the reduction of greenhouse gas emissions resulting from the heating of such buildings
Mixed-tenure, mixed-use and historic buildings	Mixed-tenure and mixed-use buildings could include a mixture of owner

	<p>occupied, private rented and social housing, and non-domestic uses, or simply multiple 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.</p>
Potential Zones	<p>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.</p>
Raster	<p>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.</p>
Strategic Zone	<p>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.</p>
Targets	<p>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</p>

	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.

Executive Summary

Purpose of the Delivery Plan

Local Heat and Energy Efficiency Strategies (LHEES) are at the heart of a place based, locally-led, and tailored approach to the energy transition. 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 are primarily driven by Scotland's statutory targets for greenhouse gas emissions reduction and fuel poverty:

- 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 Orkney Islands Council's LHEES Strategy. The Delivery Plan explains how the Council will support implementation of the LHEES. It identifies areas for targeted intervention through early, low-regrets measures to improve energy efficiency and 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 Sections 5-8:

- **Priority A:** Making Orkney's homes energy efficient
- **Priority B:** Alleviating fuel poverty
- **Priority C:** Improving carbon efficiency in non-domestic Council buildings
- **Priority D:** Exploring heat networks for Council buildings

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 achieve building level decarbonisation across the county. Furthermore, the Delivery Plan examines levels of energy efficiency across all property tenures in Orkney. 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 at least annually.

Delivery Plan layout

The actions and delivery areas in this Delivery Plan are split into the following sections:

- Heat networks
- Energy efficiency in homes
- Non-domestic Council buildings
- Electrification of heat in homes

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

- **Immediate:** actions already in progress
- **Short-term:** to be implemented in the next two years.
- **Medium-term:** to be implemented in the next three to five years.

Action	Priority	Description	Responsibility	Key stakeholders	Measure of success
Action required to implement the LHEES	Immediate / Medium-term / Long-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

Delivery Plan scope and limitations

The LHEES is being developed in the context of changing national policies, targets and funding. Multiple relevant national policies and their specific targets are under review, such as the Heat in Buildings Bill and the Net Zero Standard for Social Housing (SHNZS). Equally, established targets have been pulled, such as the Scottish Government’s interim target to reduce greenhouse gas emissions by 75% by 2030. Many actions described in the Delivery Plan are subject to Scottish Government funding for local authorities, such as Home Energy Efficiency Programmes for Scotland: Area Based Schemes.

LHEES is also a new type of policy for local authorities. Many of the actions set out in this document pull together existing actions from other policies. Others focus on laying the groundwork for collaboration between Council teams and other organisations to achieve the goals set out in LHEES. As the Strategy and Delivery Plan are reviewed in future years and as work progresses, the Council intends to use LHEES to develop new heating and energy efficiency projects.

Orkney Islands Council’s LHEES

LHEES Priorities

Orkney Islands 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 building stock in Orkney Islands Council. The Council has identified four priorities for the first LHEES.

Summary of Priority A: Making Orkney’s homes energy efficient

Improving the energy efficiency of homes decreases the demand for energy, reduces fuel poverty, and addresses climate change. Orkney Islands Council has made significant improvements to the energy efficiency of domestic properties. However, a significant number of privately rented and owner-occupied properties require improved insulation.

Summary of Priority B: Alleviating fuel poverty

The LHEES presents an opportunity to address the high levels of fuel poverty within Orkney. The Council has worked through a range of programmes to target support to fuel poor households. The Council has made the removal of energy efficiency as a driver of fuel poverty a priority within the LHEES strategy.

Summary of Priority C: Improving carbon efficiency in non-domestic Council buildings

The Council operates and leases a number of non-domestic buildings across Orkney. As the owner of these buildings, it is the Council’s responsibility to ensure these buildings become net zero by 2045. Replacing heating systems with zero direct emissions heating will be essential to this. Improving the energy efficiency of these buildings will help reduce the cost of running them.

Overview of Priority D: Exploring heat networks for Council buildings

Heat networks can provide reliable and decarbonised heating to Council buildings. Developing heat networks in Orkney is a challenge because buildings are not densely located and there are issues with the geology of the area. However, there are some Council buildings that will need to replace their heating systems to a decarbonised heating source. Heat networks may provide a viable option for these buildings to meet Scottish Government decarbonised heating requirements.

Implementation and governance

The implementation of the LHEES will be driven by Orkney Islands Council. The LHEES requires a collaborative cross-sectoral approach, engaging with partners and stakeholders to achieving the goals set out.

The LHEES will be integrated into existing steering groups and governance structure for sustainable development and climate change this will ensure the strategy can develop as priorities develop and legislative requirements dictate.

Action	Priority	Description	Responsibility	Key stakeholders	Measures of success
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Identify leads and champions for the actions arising from the Delivery Plan	Immediate	These will be appointed at Executive Director or Head of Service level.	Orkney Islands Council	Executive directors and heads of services	Each action in delivery plan has confirmed champion. Meetings scheduled to support champions to deliver actions.
LHEES governance arrangements put in place	Immediate	LHEES to be integrated into existing Steering Group and governance structure for Sustainable Development and Climate Change (SDCC)	Orkney Islands Council	Steering Groups	Orkney Islands Council to meet with all steering groups to ensure 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 Orkney Islands Council	Changeworks and Orkney Islands Council	Changeworks complete framework. Orkney Islands Council review framework and create system to ensure it is reviewed on ongoing basis.
Annual review of Delivery Plan and review of the Strategy every five years	Immediate	Update and amend both documents in light of regulatory changes. Identify local targets.	Orkney Islands Council	Orkney Islands Council and partner organisations	Orkney Islands Council to set up system to prepare and deliver workshop with key stakeholders to review LHEES plans on an annual basis

Engagement Approach

The LHEES Strategy and Delivery Plan have been developed in consultation with stakeholders across Orkney, and through the public engagement strategy. 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 network operators
- Local businesses
- Advice organisations

Priority stakeholders	Specific outcomes of engagement	Stakeholder priorities	Existing methods of engagement	Action
OHAL	Develop closer working between OIC and OHAL on Energy Efficiency programmes	Improve energy efficiency of social housing stock	<i>Scheduled regular meeting</i>	<i>OIC to initiate</i>
Warmworks Managing Agent	Delivery of HEES:ABS Programme	Improve energy efficiency of private housing stock	<i>Progress meetings</i>	<i>Underway</i>
ICNZ	Work with ICNZ on the sharing of data and development of data processing opportunities	Progress towards Net Zero targets	<i>Scheduled regular meeting</i>	<i>OIC to initiate</i>

THAW	Develop existing referral system	Alleviation of Fuel Poverty	<i>Scheduled regular meeting</i>	<i>OIC to initiate</i>
SSEN	Development of LENZA scenarios for future energy	Delivery of electrical network to meet Net Zero targets	<i>Upload anticipated future loads</i>	<i>OIC Action</i>

Heat network delivery areas

Section 47 of the Heat Networks (Scotland) Act¹ states that each local authority is required to carry out a review to consider whether one or more regions in its area are likely to be particularly suitable for the construction and operation of a heat network. This should be done within the Local Heat & Energy Efficiency Strategy. 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.

Approach to selecting heat network delivery areas

As part of the LHEES 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 and semi-public buildings.

The Council and Changeworks delivered a workshop to share the findings with key stakeholders in LHEES Stage 6. This included Orkney Housing Association Limited (OHAL), Warmworks, Aquatera, and members of relevant local authority departments. This allowed a collaborative sense checking process to take place and allowed us to see if the outputs reflected the local knowledge and knowledge of those involved. Changeworks highlighted the limitations of non-domestic datasets, and the need for data to be collected in potential areas through a process such as Building Assessment Reports (BARs), to assess the suitability of a non-domestic property for connecting to a heat network. The primary use of BARs information is to inform decisions on the suitability of areas for the construction and operation of a heat network, and subsequently to inform designation decisions should these areas be progressed for consideration for designation. Following further communication with the council, Changeworks updated several anchor load data addressing any heat load inaccuracies and missing anchor loads.

The outputs of the LHEES data analysis are provided in Section 5.1. Following a review of the outputs, the Council have identified the key heat networks they are interested in exploring further which is discussed in Section 5.2.

¹ [Heat Networks \(Scotland\) Act 2021, Scottish Government.](#)

Heat network analysis based on LHEES methodology

Limitations

The LHEES methodology for heat network analysis identifies potential high heat load areas suitable for heat network development for the Council to explore. These only account for non-domestic semi-public or public buildings where heat supply is not needed 24 hours a day. Any commercial, privately owned buildings that often come with large heat demands are not accounted for in this analysis. Buildings like this may be suitable for heat network developments.

Additionally, the Scotland Heat Map data that is used as the basis of this analysis may not capture the most up-to-date heat demands of buildings.

Lastly, the recommended practice for zoning heat networks is to apply a linear heat density of 4,000 kWh/yr/m for more rural local authority areas. However, when applied to Orkney, the outputs indicates that there are likely to be no heat network opportunities suitable for economic development. The linear heat density was therefore reduced to 3,000 kWh/yr/m to explore more potential heat network opportunities.

Because of these limitations, the Council has made the decision to not designate heat network zones at this time but have narrowed down specific areas in which potential heat networks may be a solution to meet net zero ambitions, based on knowledge of the area and data outputs. These are explored in the next section.

Priority heat networks

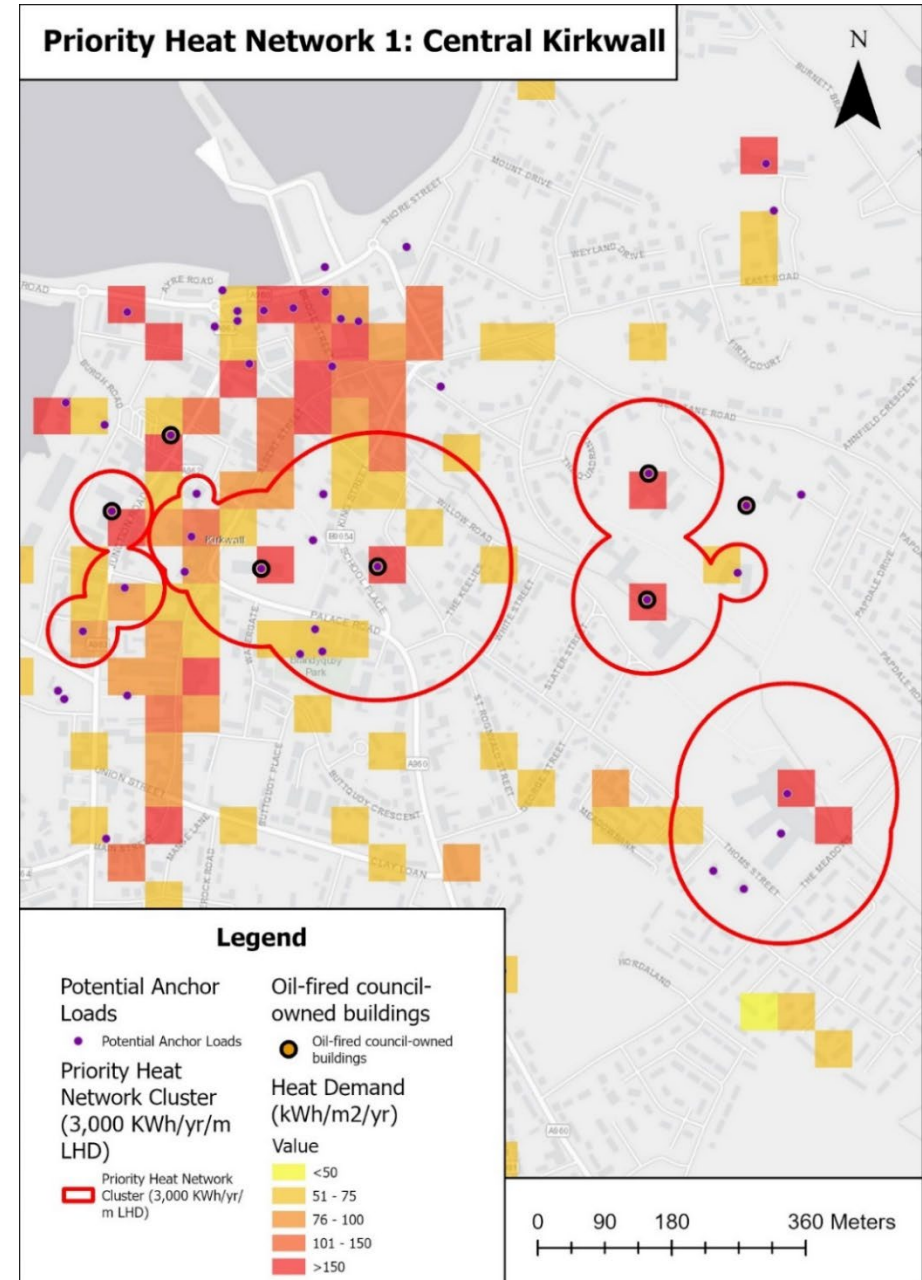
The LHEES analysis has identified two indicative heat network zones in Orkney that are the priority for further investigation and development. Despite inherent challenges in the shortlisting process due to sparse heating demand, priority heat networks were identified based on the possibility of replacing oil fired Council buildings with heat networks. The proximity of non-domestic public buildings such as leisure centres and schools also contribute to efforts in making the networks as efficient as possible, while offering potential connection to upcoming new housing developments.

For a detailed insight into the methodology for heat network identification, refer to the Appendices of the Strategy Document.

Heat Network Zone 1: Central Kirkwall

The Central Kirkwall indicative heat network zone is represented at four separate heat networks, with a total combined area of 24 hectares, however the Council are exploring these in tandem as one larger heat network. Within the outlined zone there are 21 non-domestic public buildings registering a total estimated annual heat demand of 5,911 MWh/yr. The cluster is marked by a few pockets of very high heat demand (above 150 kWh/m²/yr) while moderate heat demand (51-75 kWh/m²/yr) underpins the majority of the zone. The two key anchor loads underpinning this area are the Council Offices (1,206 MWh/yr) and the Papdale Primary School (981 MWh/yr). The Council Offices and Papdale Primary School are currently heated using heating oil. The Council will need to change this heating system in coming years to meet net zero targets. The Council will also explore opportunities to connect the Kirkwall Grammar School (heated with LPG), special needs new build near Papdale Primary School, and Papdale Halls (heated with LPG).

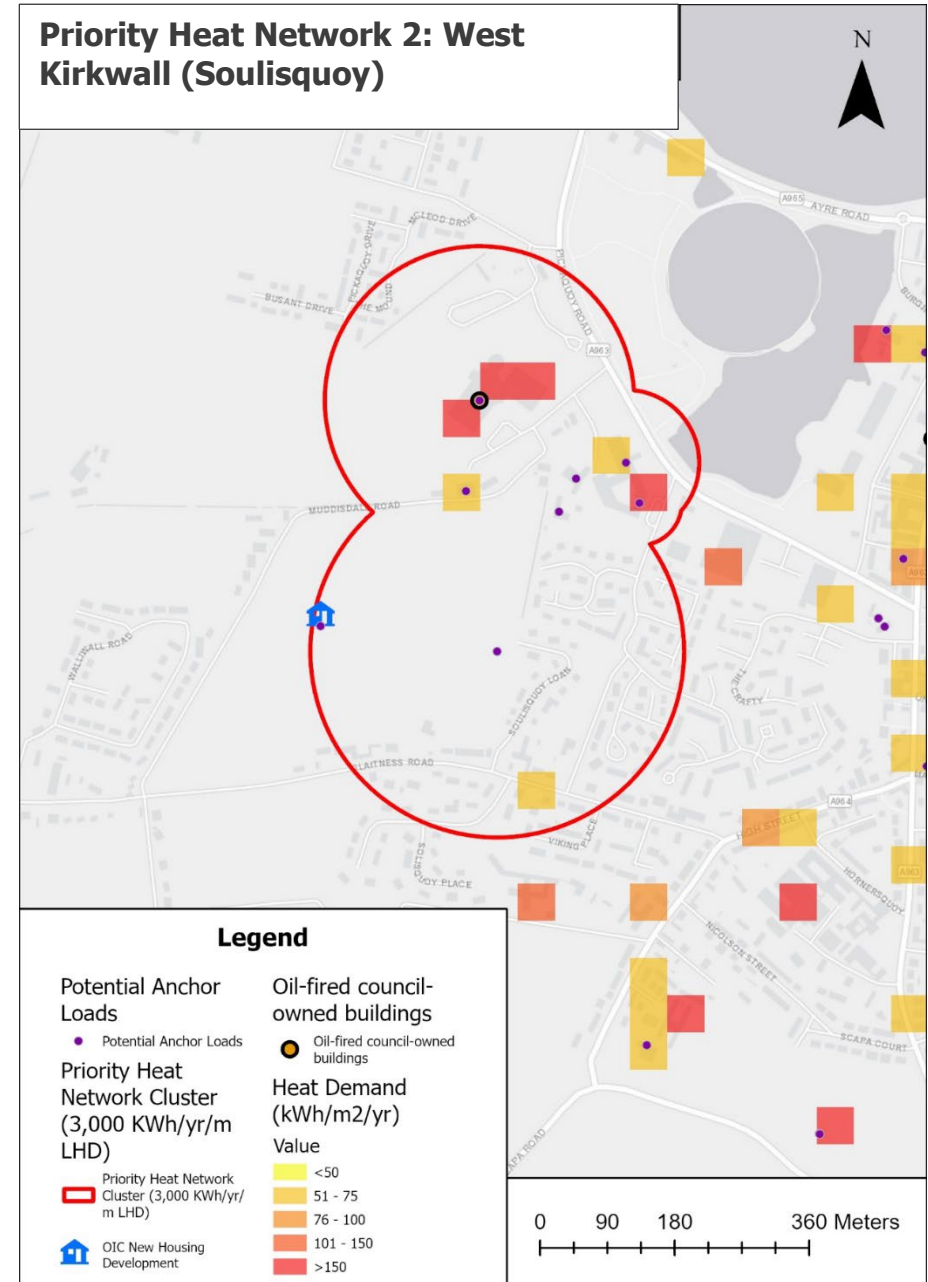
Zone Name	Central Kirkwall
Zone Area (ha)	23.8
Count of Anchor Loads	21
Estimated Zone Heat Demand (MWh/yr)	5,911



Heat Network Zone 2: West Kirkwall

The West Kirkwall (Soulisquoy) indicative heat network zone has an area of 32.2 hectares. Within the outlined zone there are 7 non-domestic public buildings registering a total estimated annual heat demand of 4,809 MWh/yr. The cluster is marked by a few pockets of very high heat demand (above 150 kWh/m²/yr). The two key anchor loads underpinning this area include the new care home (805 MWh/yr) and Pickaquoy Centre (2,976 MWh/yr). The Pickaquoy Centre is currently heated with heating oil, and the Council will need to change this heating system in coming years to meet net zero targets. The Council will also explore options to connect the new housing development to this potential heat network.

Zone Name	West Kirkwall
Zone Area (ha)	32.2
Count of Anchor Loads	7
Estimated Zone Heat Demand (MWh/yr)	4,809



Further heat network opportunities

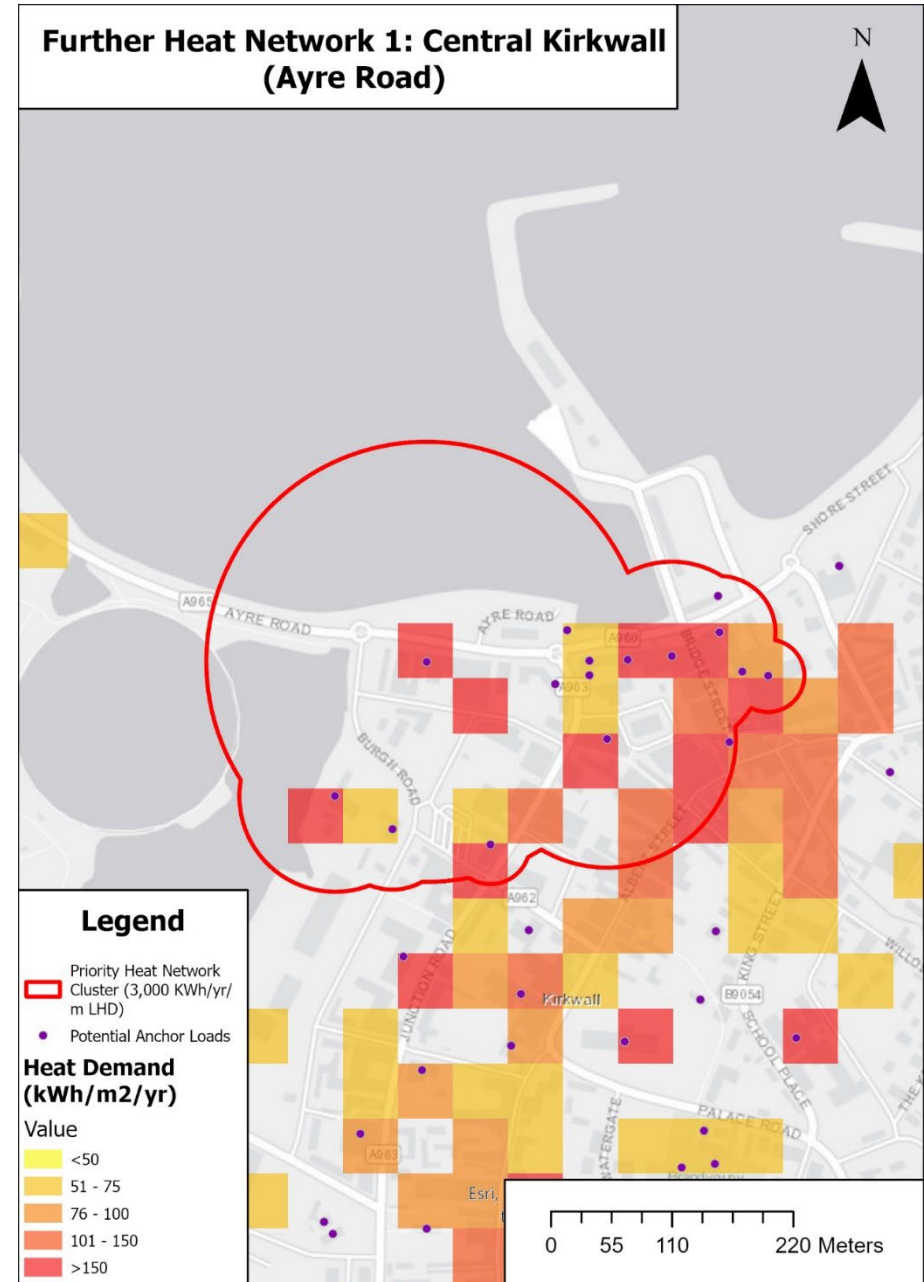
The following three indicative heat network zones have lower heat demands than the priority two clusters shown above and should be considered as additional opportunities. Further exploration will be required to assess viability of these opportunities. This is likely to include:

- Determining existing system capacity
- Site inspections
- 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)
- Techno-economic analysis
- Funding options and commercial delivery mechanism analysis

Further Heat Network Zone 1: Central Kirkwall (North Harbour – Ayre Road)

This indicative heat network zone has a high density of heat demand as indicated by the large presence of connecting red rasters in the map below. The area is underpinned by 16 non-domestic anchor loads including the Kirkwall Police Station, Fire Station and travel centres. The next step for the Council is to explore the viability of this development in line with commercial activity in the area. The heat network also neighbours the Central Kirkwall heat network and more longer-term action could be to explore the possibility for connection between these two.

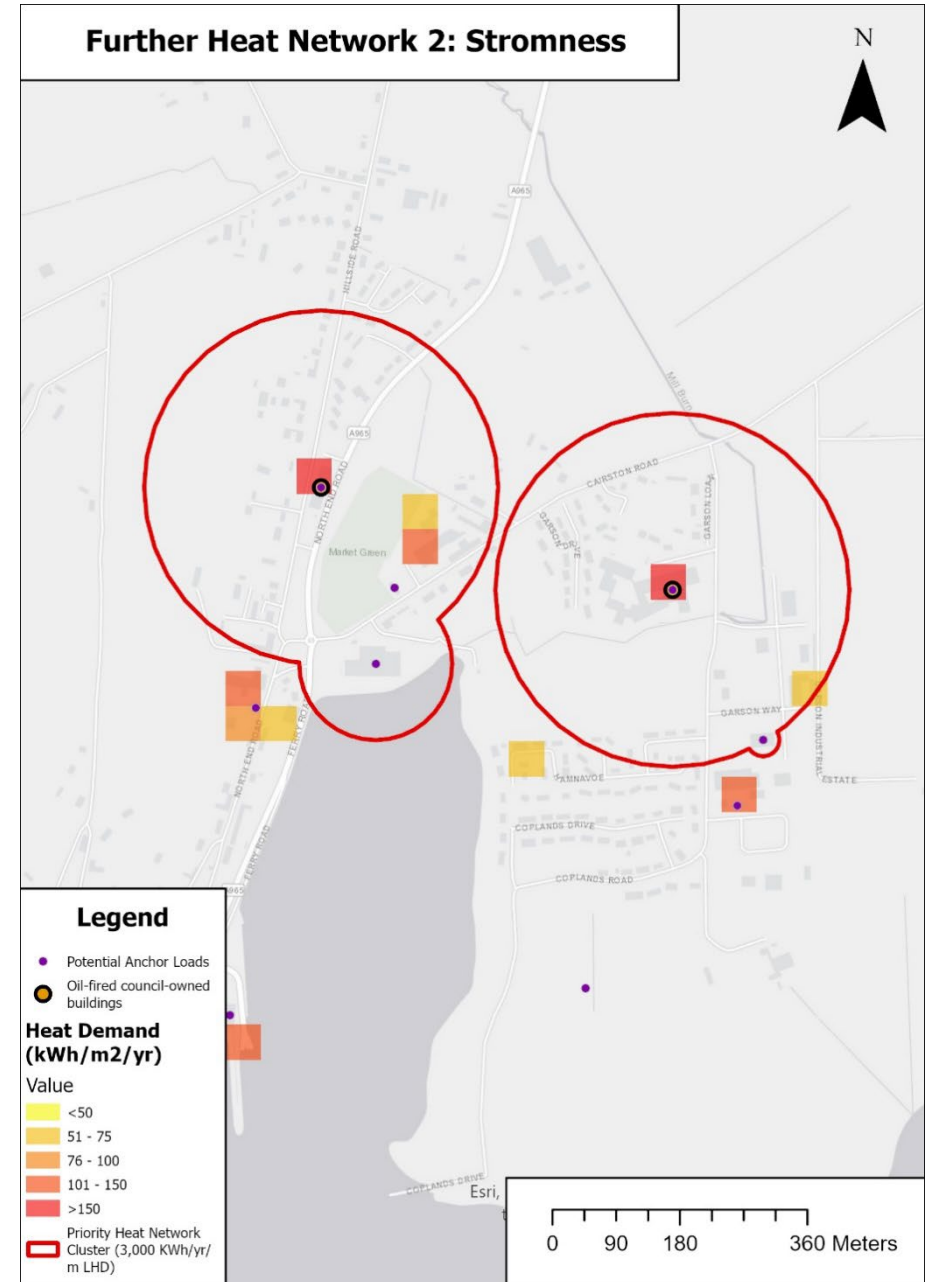
Zone Name	Central Kirkwall (Soulisquoy)
Zone Area (ha)	16.1
Count of Anchor Loads	16
Estimated Zone Heat Demand (MWh/yr)	2,277



Further Heat Network Zone 2: Stromness

The Stromness indicative heat network zone is indicated by two individual heat networks, but the Council are exploring whether these can be looked at in tandem as one bigger zone. Currently, the clusters are marked by a sparse distribution of high heat demand as indicated by individual red cells in the map below. The area is underpinned by five non-domestic anchor loads including the Stromness Primary School, Stromness Academy and Stromness Swimming Pool. The latter two buildings are currently heated with heating oil. The Council will need to change these heating systems in coming years to meet net zero targets. Stromness Primary School is also nearby, and the Council will explore options to connect this building, which is currently heated with LPG. Further exploration of the viability of development in this indicative zone is required.

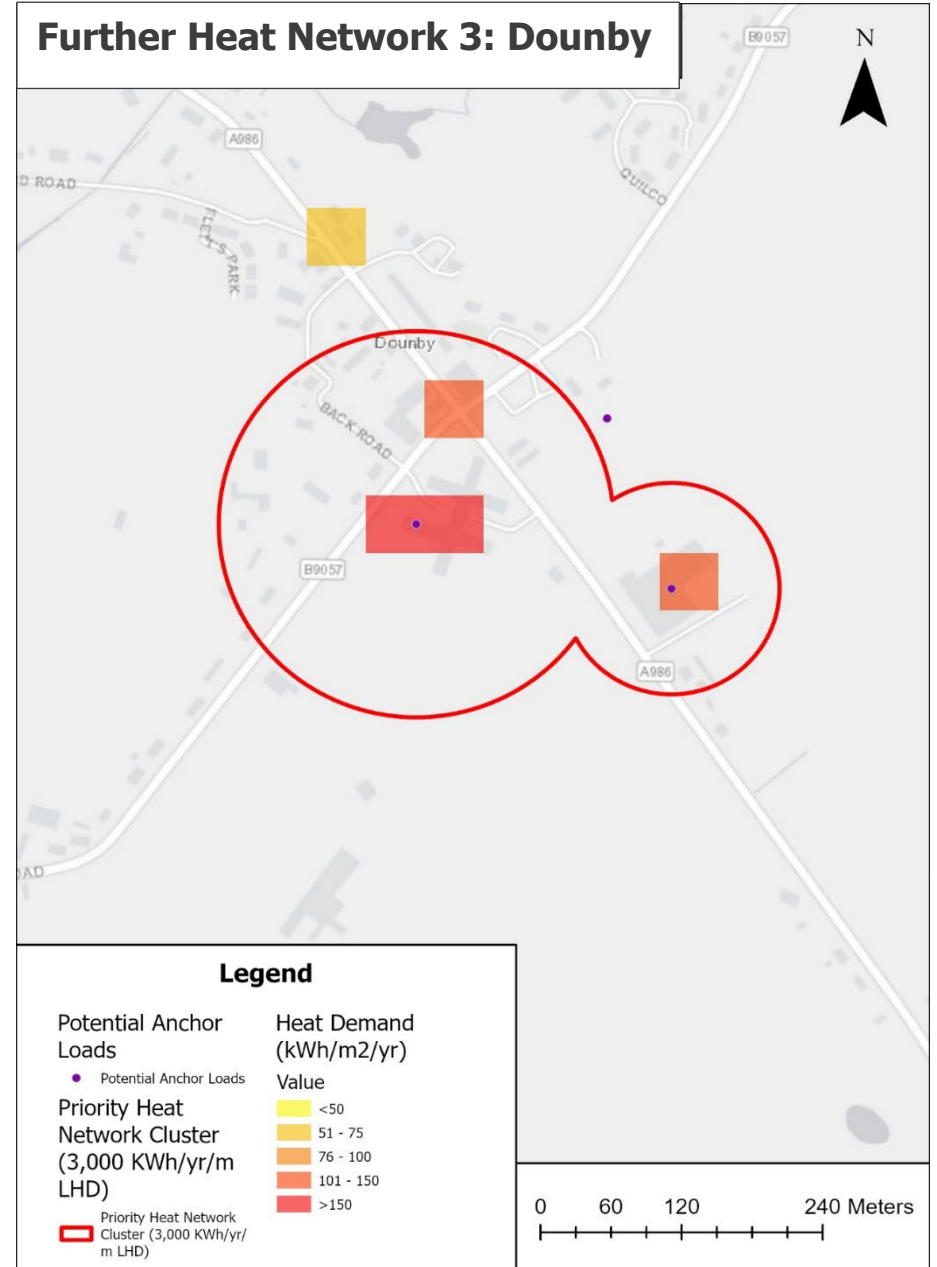
Zone Name	Stromness
Zone Area (ha)	41.4
Count of Anchor Loads	5
Estimated Zone Heat Demand (MWh/yr)	3,021



Further Heat Network Zone 3: Dounby

The Dounby indicative heat network zone is marked by a sparse distribution of high heat demand as indicated by individual red cells in the map below. The area is underpinned by two non-domestic anchor loads consisting of Dounby Surgery and Dounby Primary School. Dounby Primary School is currently heated using a boiler plant. The Council will need to change the heating system in coming years to meet net zero targets. There is also a care home in Dounby that the Council may explore connecting to. Further exploration of the viability of development in this indicative zone is required.

Zone Name	Dounby
Zone Area (ha)	11.2
Count of Anchor Loads	2
Estimated Zone Heat Demand (MWh/yr)	782



Heat networks of interest for Orkney Islands Council

Due to the limitations of the heat network data analysis, the Council has narrowed down the list of heat networks to focus on in the near term. These two heat networks of interest are in central and western Kirkwall.

Central Kirkwall

The Council is interested in exploring a heat network in Central Kirkwall similar to the one identified in the LHEES analysis. However, they have amended the list of potential anchor loads:

- Council Offices KW15 1NY
- St Magnus Cathedral KW15 1DH
- Papdale Halls of Residence KW15 1JR
- Old PHOR (special needs school) KW15 1NA
- Papdale Primary School KW15 1PJ
- Kirkwall Grammar School KW15 1QN
- Papdale House KW15 1LJ

West Kirkwall

The Council is interested in exploring the heat network identified in the LHEES analysis. The potential anchor loads are:

- Pickaquoy Centre KW15 1LR
- St Colms Centre KW15 1RP
- Glaitness Primary KW15 1RP
- Keelylang KW15 1RP
- New Care Home
- New Housing Development

Actions for heat networks

Action	Priority	Description	Responsibility	Key stakeholders	Measure of success
Consider Central Kirkwall heat network zone	Immediate	The Council is having internal discussions about the Central Kirkwall potential heat network zone.	The Council		
Engineering assessment	Immediate	The Council is undertaking an engineering assessment for a heat network to service OIC schools and the Council Office in Kirkwall.	The Council		Complete engineering assessment
Feasibility studies for housing developments	Medium-term	Commission a feasibility study on using ambient heat networks to supply heat pumps as an alternative to bore hole schemes.	The Council		Commission feasibility studies
Feasibility study in Hoy for wind to heat network	Medium-term	Carry out a feasibility study on wind to heat network scheme covering North Walls School and surrounding properties in Hoy.	The Council		Commission feasibility study
Finstown waste heat opportunity	Medium-term	Investigate Finstown Transmission sub-station as a waste heat opportunity for a heat network.	The Council		
Communal heating for Council social housing clusters	Medium-term	Investigate viability of small-scale communal heating for clusters of Council social housing. For example, communal heat pump system for a small group of neighbouring Council homes.	The Council		Identify viable clusters for further investigation
Central Kirkwall heat network	Long-term	Development of Kirkwall Town Centre heat network, subject to positive feasibility study and business case.	The Council	Heat network operator	Completion of heat network in Central Kirkwall

Feasibility study in Stromness	Long-term	Commission a feasibility study to explore the Stromness heat network (Further heat network 2 above.)	The Council	Commission a feasibility study
Feasibility study in Dounby	Long-term	Commission a feasibility study to explore the Dounby heat network (Further heat network 3 above.)	The Council	Commission a feasibility study
Explore heat network options for Pierowall	Long-term	Investigate a sea water source heat network at the care home and Westray Junior High School in Pierowall.	The Council	Commission a feasibility study
Explore heat networks for domestic properties	Long-term	Investigate heat network options that would connect to domestic properties in Orkney.	The Council	Identification of possible feasibility study options

Funding for 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. 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 the 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 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. The unit is still accepting applications for advisory-only support and discussions on potential future applications.

Improving energy efficiency in homes

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

Overall, analysis of Energy Performance Certificate (EPC) data from Home Analytics shows that energy efficiency is worse on the islands than on the mainland. This section provides energy efficiency data by island for the Council and other stakeholders to plan energy efficiency projects on a geographic basis.

How criteria were chosen

As part of standard Stage 4 LHEES methodology published by the Scottish Government, the energy efficiency delivery area outputs demonstrate and advise the Council on small-scale areas of domestic properties where energy efficiency projects could be initiated and delivered. The energy efficiency delivery areas are marked based on an equal weighted combination taking into account wall insulation, loft insulation, and window glazing statuses. The Council further opted to explore this by property tenure type: social housing, owner-occupied and privately rented sectors. The output of the modelling work did not identify any geographically specific areas but simply showed a uniform level of energy efficiency over areas, resulting in no clear project opportunities.

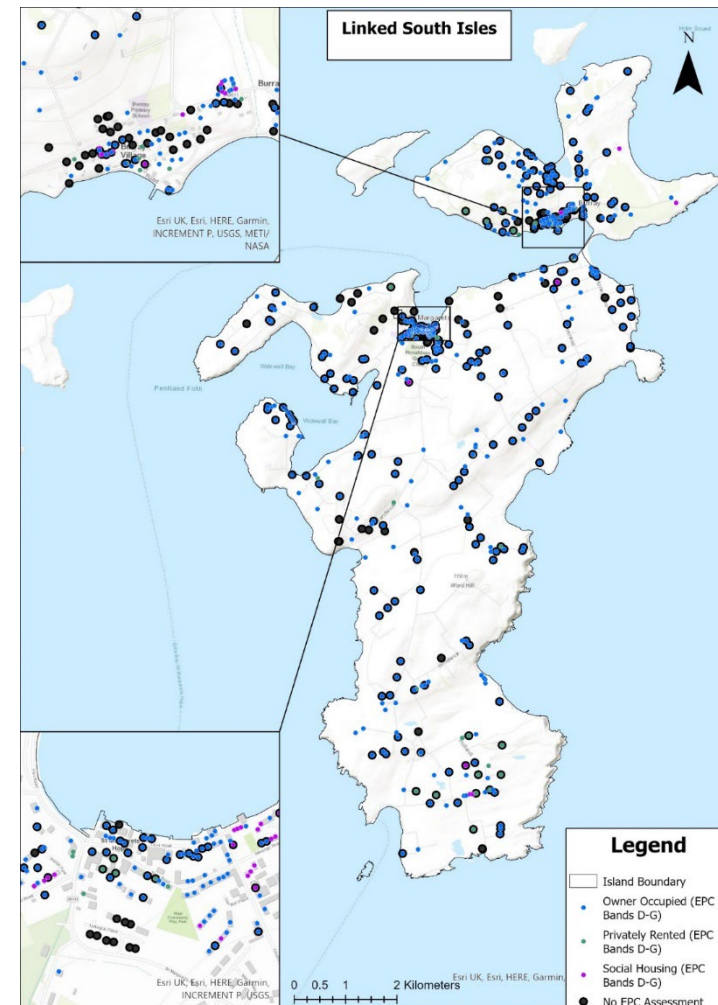
As an alternative, EPC data was used as a proxy for energy efficiency. Instead of delivery area maps, EPC maps were created. The maps display EPC bands D-G to identify the Council's poorest quality stock and are also further broken down into their respective property tenure. Another criteria included mapping domestic properties where EPC assessments had not been carried out. Both of these criteria were ultimately combined into one map output. The geographical focus for these maps remain in the 11 outer islands in Orkney as historically, domestic properties here have faced greater levels of fuel poverty. The Council hopes to utilise these maps to identify and provide comparison between the islands where opportunities for immediate EPC assessments could be carried out, and to determine who to approach for matched incentive to install heat pumps.

Energy efficiency delivery areas

Linked South Isles

The majority of the Linked South Isles is made up of owner-occupied domestic properties. Only 51% of properties have had an EPC assessment. Owner occupied EPC Band E properties comprise the greatest group that do not have EPC assessments. More work should be encouraged to increase EPC assessment uptake in this tenure.

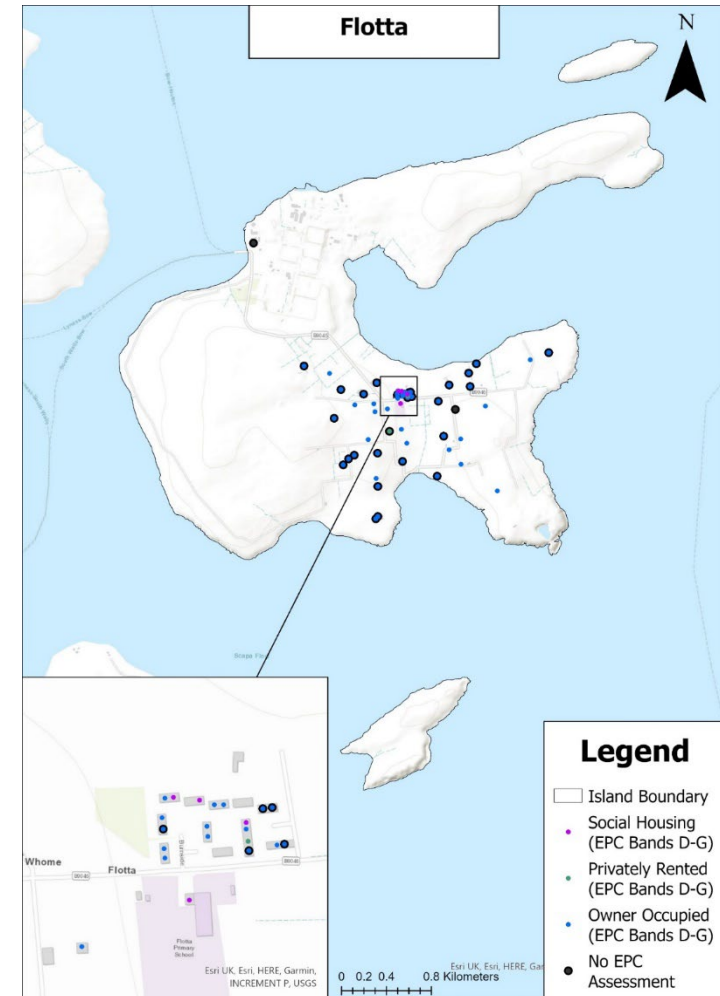
Linked South Isles				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	279	D	Owner Occupied	68
			Privately Rented	7
			Social Housing	27
		E	Owner Occupied	86
			Privately Rented	9
			Social Housing	1
		F-G	Owner Occupied	69
			Privately Rented	7
			Social Housing	5
No	266	D	Owner Occupied	59
			Privately Rented	1
			Social Housing	4
		D	Owner Occupied	130
			Privately Rented	11
			Social Housing	4
		F-G	Owner Occupied	46
			Privately Rented	8
			Social Housing	3



Flotta

Owner occupied properties make up the majority of domestic properties in Flotta, followed by social housing, privately rented properties have the least presence. Only 57% of properties have had an EPC assessment. EPC Band E owner occupied housing has the greatest number of properties that do not have EPC assessments, and work could be done to ensure assessments are carried out.

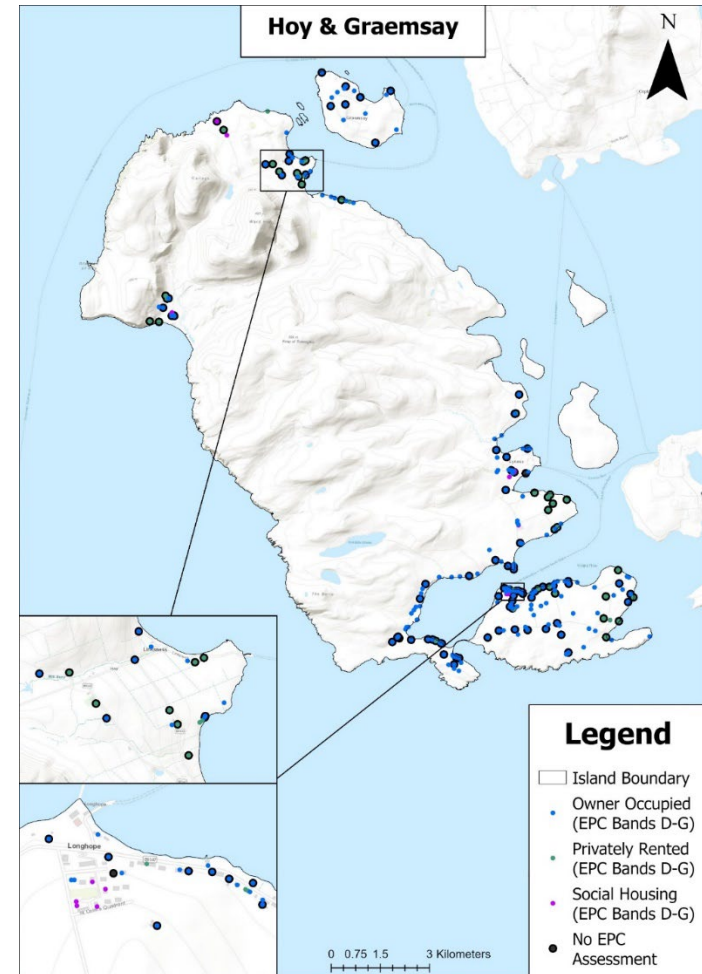
Flotta				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	30	D	Owner Occupied	12
			Privately Rented	1
			Social Housing	3
		E	Owner Occupied	10
			Privately Rented	0
			Social Housing	1
		F-G	Owner Occupied	3
			Privately Rented	0
			Social Housing	0
No	27	D	Owner Occupied	2
			Privately Rented	0
			Social Housing	0
		E	Owner Occupied	24
			Privately Rented	1
			Social Housing	0
		F-G	Owner Occupied	0
			Privately Rented	0
			Social Housing	0



Hoy and Graemsay

Owner occupied properties make up the majority of domestic properties in Hoy and Graemsay. 43% of properties have not had EPC assessments due to long-term tenancies. EPC Bands E and F-G owner occupied properties make up the largest proportion of these unassessed properties.

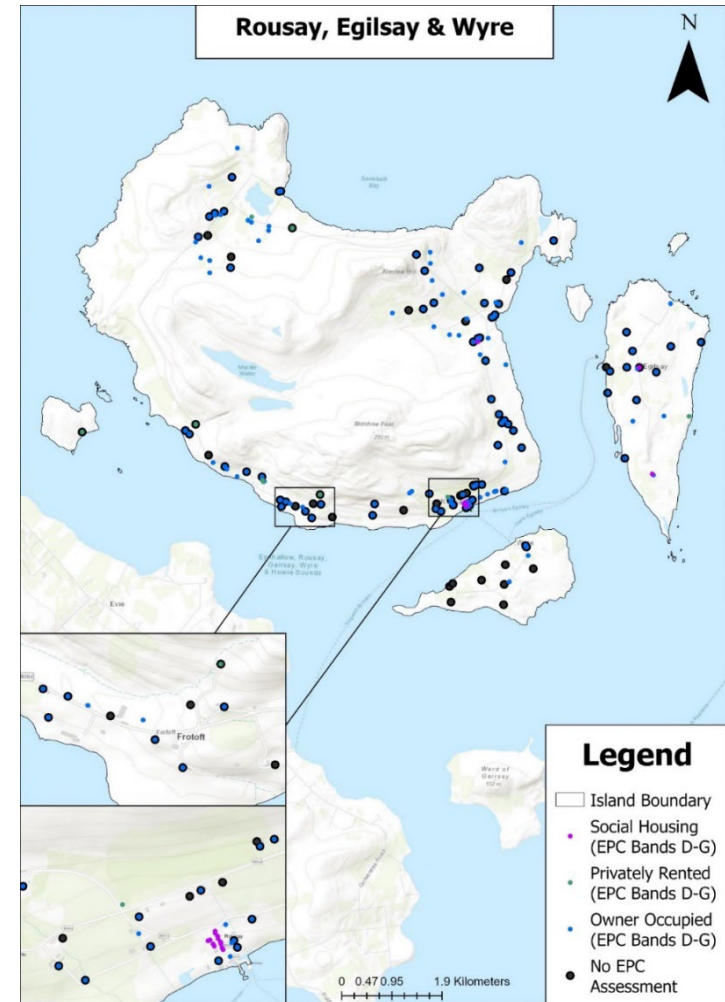
Hoy and Graemsay				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	146	D	Owner Occupied	40
			Privately Rented	8
			Social Housing	7
		E	Owner Occupied	35
			Privately Rented	4
			Social Housing	7
		F-G	Owner Occupied	42
			Privately Rented	1
			Social Housing	2
No	112	D	Owner Occupied	9
			Privately Rented	2
			Social Housing	2
		E	Owner Occupied	44
			Privately Rented	13
			Social Housing	0
		F-G	Owner Occupied	22
			Privately Rented	20
			Social Housing	0



Rousay, Egilsay and Wyre

Only 33% of domestic properties in Rousay, Egilsay and Wyre do not have EPC assessments. EPC Bands E and F-G owner occupied properties make up the largest proportion of these unassessed properties.

Rousay, Egilsay and Wyre				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	73	D	Owner Occupied	12
			Privately Rented	1
			Social Housing	12
		E	Owner Occupied	19
			Privately Rented	1
			Social Housing	2
		F-G	Owner Occupied	23
			Privately Rented	3
			Social Housing	0
No	36	D	Owner Occupied	0
			Privately Rented	1
			Social Housing	0
		E	Owner Occupied	9
			Privately Rented	2
			Social Housing	0
		F-G	Owner Occupied	22
			Privately Rented	1
			Social Housing	1



Sanday

Domestic properties that do not have EPC assessments are in the minority (40%). EPC Band E owner occupied properties make up the largest proportion of these unassessed properties, followed by EPC Band D and F-G owner occupied properties.

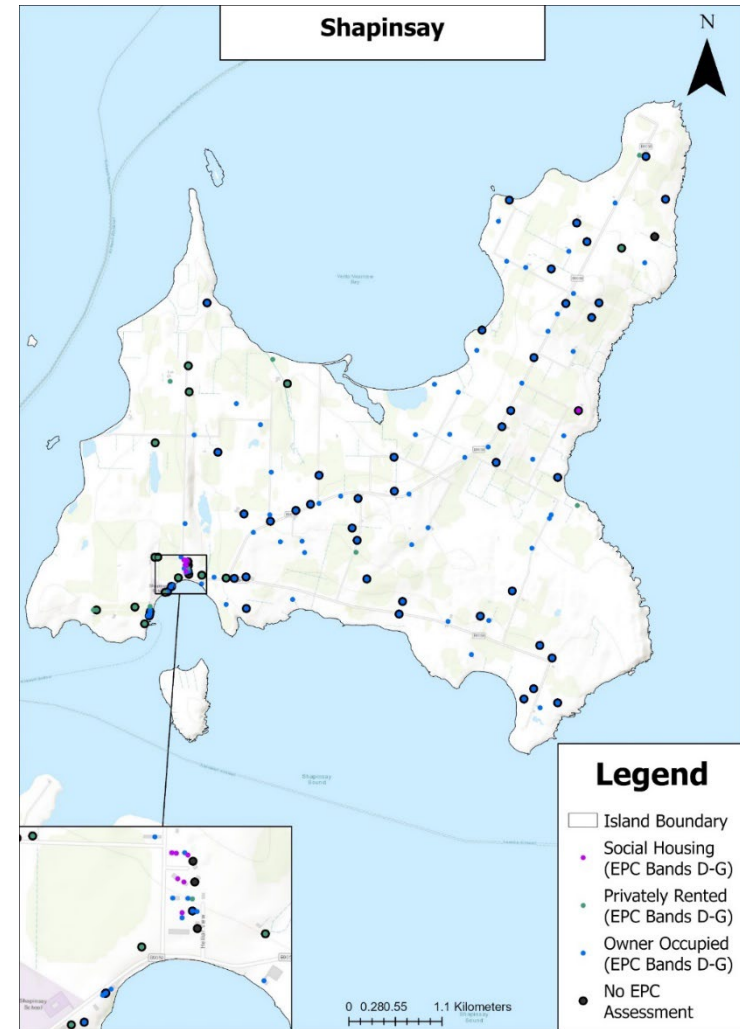
Sanday				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	150	D	Owner Occupied	45
			Privately Rented	1
			Social Housing	2
		E	Owner Occupied	51
			Privately Rented	3
			Social Housing	0
		F-G	Owner Occupied	45
			Privately Rented	3
			Social Housing	0
No	98	D	Owner Occupied	16
			Privately Rented	0
			Social Housing	0
		E	Owner Occupied	63
			Privately Rented	5
			Social Housing	2
		F-G	Owner Occupied	10
			Privately Rented	2
			Social Housing	0



Shapinsay

In Shapinsay, 78% of properties are owner occupied properties and 44% have EPC assessments. Of the 44% of domestic properties without EPC assessments, 31% fall in the EPC Band E owner occupied category.

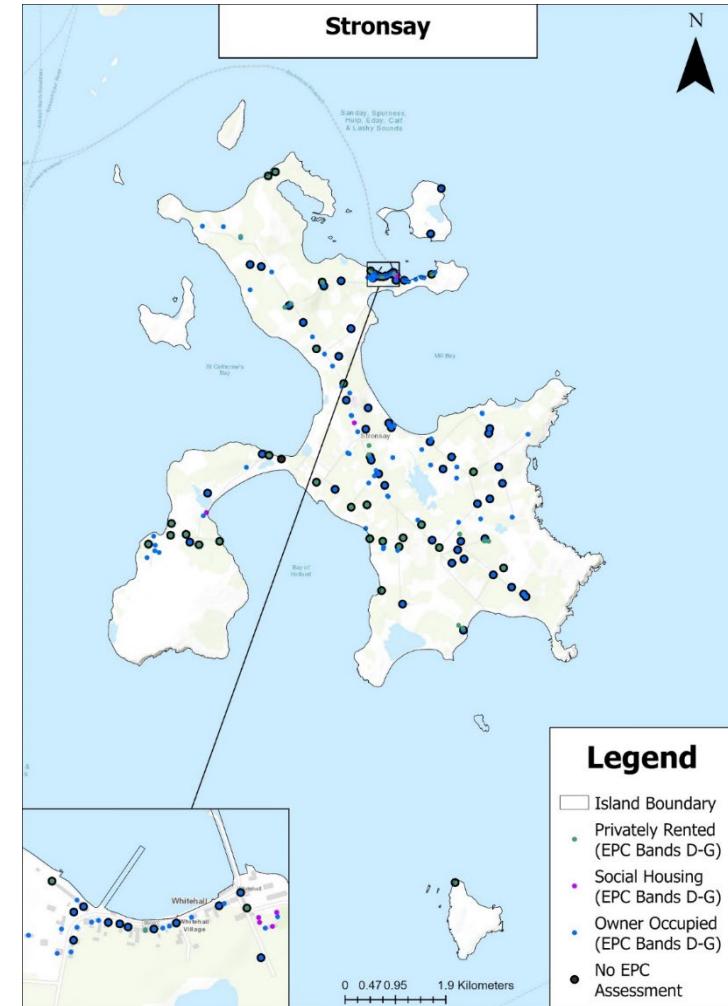
Shapinsay				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	76	D	Owner Occupied	15
			Privately Rented	5
			Social Housing	4
		E	Owner Occupied	31
			Privately Rented	3
			Social Housing	3
		F-G	Owner Occupied	14
			Privately Rented	1
			Social Housing	0
No	60	D	Owner Occupied	3
			Privately Rented	1
			Social Housing	0
		E	Owner Occupied	42
			Privately Rented	12
			Social Housing	0
		F-G	Owner Occupied	1
			Privately Rented	1
			Social Housing	0



Stronsay

74% of properties are owner occupied in Stronsay, of which 41% have an EPC. Just under half of all properties in the island do not have EPC assessments. Most of these are EPC Band E and F-G owner occupied properties. There is also a relatively high count of EPC Band E privately rented properties with unconfirmed assessments.

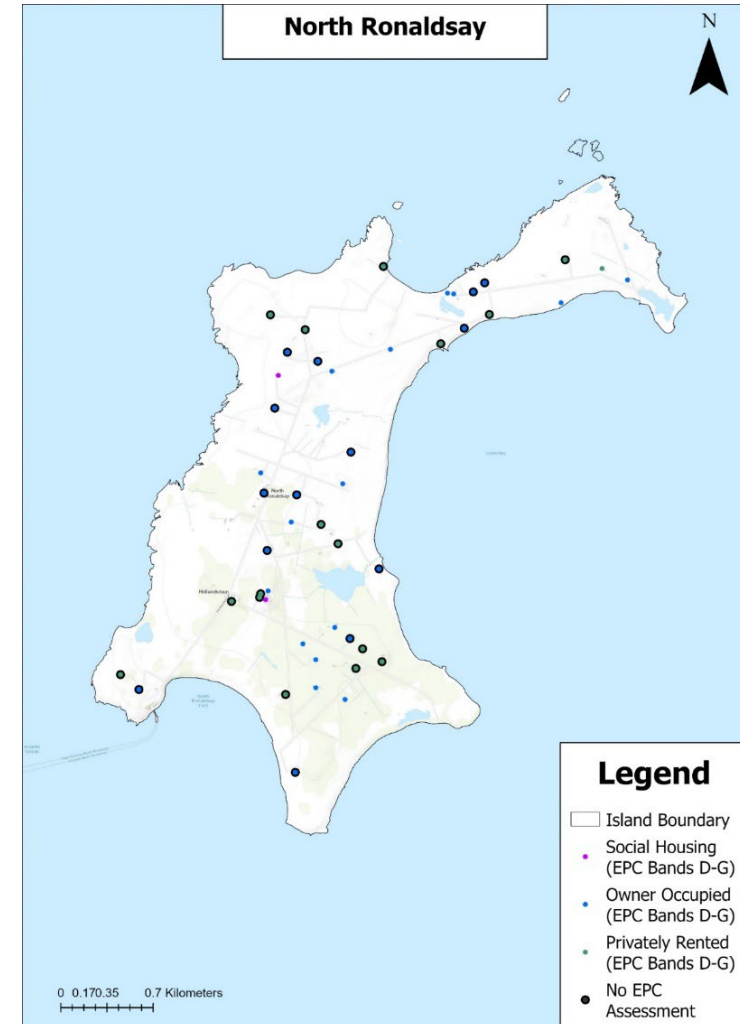
Stronsay				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	90	D	Owner Occupied	9
			Privately Rented	1
			Social Housing	4
		E	Owner Occupied	33
			Privately Rented	5
			Social Housing	0
		F-G	Owner Occupied	30
			Privately Rented	6
			Social Housing	2
No	85	D	Owner Occupied	1
			Privately Rented	0
			Social Housing	0
		E	Owner Occupied	29
			Privately Rented	24
			Social Housing	0
		F-G	Owner Occupied	27
			Privately Rented	4
			Social Housing	0



North Ronaldsay

63% of domestic properties do not have EPC assessments. EPC Bands F-G owner occupied properties make up the largest proportion of these unassessed properties.

North Ronaldsay				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	18	D	Owner Occupied	2
			Privately Rented	0
			Social Housing	1
		E	Owner Occupied	4
			Privately Rented	1
			Social Housing	0
		F-G	Owner Occupied	9
			Privately Rented	0
			Social Housing	1
No	30	D	Owner Occupied	2
			Privately Rented	0
			Social Housing	0
		E	Owner Occupied	2
			Privately Rented	8
			Social Housing	0
		F-G	Owner Occupied	10
			Privately Rented	8
			Social Housing	0



Papa Westray

The majority of domestic properties are EPC Band E in Papa Westray. A third of properties do not have an EPC. Most of these are EPC Band E privately rented properties.

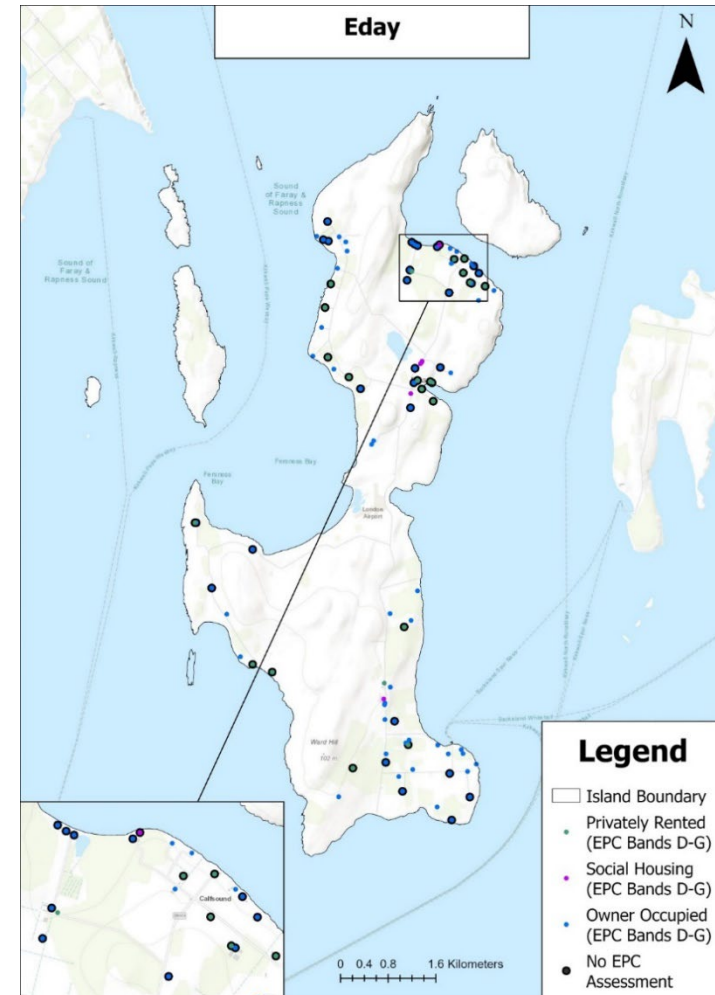
Papa Westray				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	34	D	Owner Occupied	8
			Privately Rented	4
			Social Housing	0
		E	Owner Occupied	13
			Privately Rented	0
			Social Housing	0
		F-G	Owner Occupied	8
			Privately Rented	1
			Social Housing	0
No	17	D	Owner Occupied	0
			Privately Rented	0
			Social Housing	0
		E	Owner Occupied	5
			Privately Rented	12
			Social Housing	0
		F-G	Owner Occupied	0
			Privately Rented	0
			Social Housing	0



Eday

65% of domestic properties do not an EPC assessment in Eday. Over half (54%) of the properties are EPC Band F-G, with owner occupied and privately rented properties having the highest number of unassessed EPCs in this category.

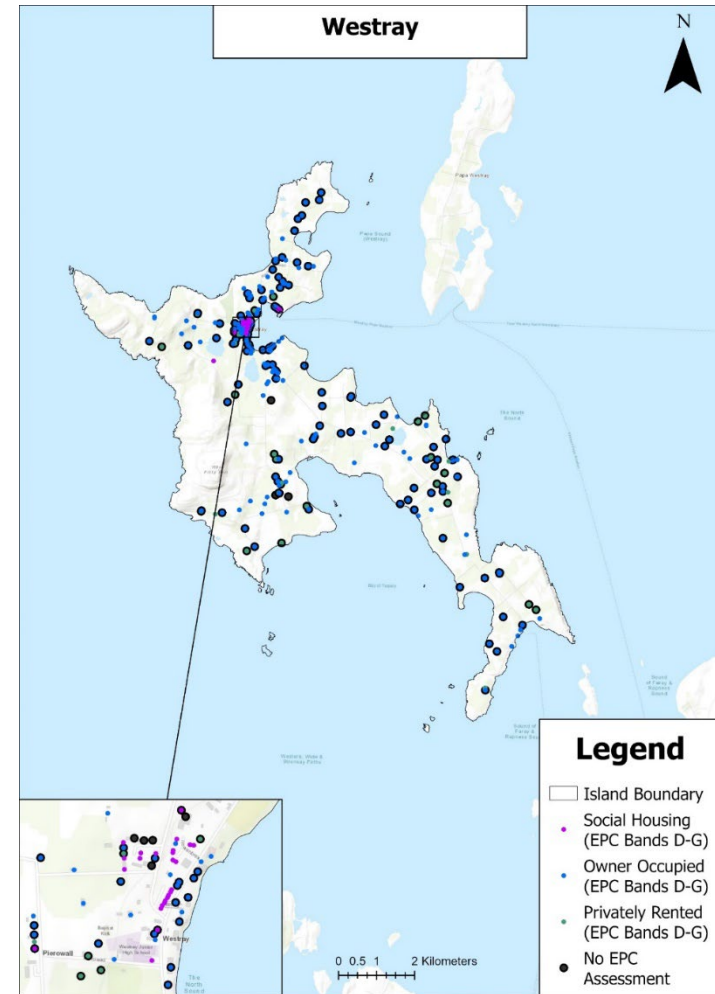
Eday				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	25	D	Owner Occupied	0
			Privately Rented	1
			Social Housing	4
		E	Owner Occupied	0
			Privately Rented	1
			Social Housing	0
		F-G	Owner Occupied	18
			Privately Rented	0
			Social Housing	1
No	54	D	Owner Occupied	0
			Privately Rented	2
			Social Housing	0
		E	Owner Occupied	9
			Privately Rented	0
			Social Housing	0
		F-G	Owner Occupied	23
			Privately Rented	19
			Social Housing	1



Westray

Just over half (55%) of domestic properties do not an EPC assessment in Westray. Over a third (35%) of these properties have EPC Band E.

Westray				
Valid EPC	Count	EPC Band	Tenure	Count
Yes	127	D	Owner Occupied	31
			Privately Rented	2
			Social Housing	23
		E	Owner Occupied	35
			Privately Rented	6
			Social Housing	1
		F-G	Owner Occupied	26
			Privately Rented	3
			Social Housing	0
No	158	D	Owner Occupied	26
			Privately Rented	13
			Social Housing	3
		E	Owner Occupied	80
			Privately Rented	18
			Social Housing	1
		F-G	Owner Occupied	15
			Privately Rented	2
			Social Housing	0



Actions for energy efficiency

Action	Priority	Description	Responsibility	Key stakeholders	Measure of success
Collaboration between OHAL and OIC	Immediate	The Council/OHAL will explore ways of collaborating on energy efficiency in social housing, including combined funding applications.	The Council and OHAL		Decision made on focus and frequency of meetings.
Develop data sharing agreement for energy efficiency data	Immediate	The Council will develop a data sharing agreement so the Council can share the data analysis from LHEES with relevant stakeholders.	The Council	Energy Saving Trust	Data sharing agreement signed.
Share energy efficiency data with Warmworks	Immediate	The Council will share energy efficiency data with the managing agent to support planning for the HEES:ABS scheme.	The Council	Warmworks/ Managing agent	Data shared.
Share energy efficiency data with Islands Centre for Net Zero	Immediate	The Council will share energy efficiency data with the Islands Centre for Net Zero to support their energy data hub for Orkney, the Western Isles, and Shetland.	The Council	Islands Centre for Net Zero	Data shared.
Addressing fuel poverty in social housing	Immediate	Planned maintenance activities for Council properties will address energy efficiency. The Council will focus on fabric insulation, air tightness, and efficiency of heating systems until the new Social Housing Net Zero Standard is announced.	The Council		Improved fabric insulation, air tightness, and efficiency of heating systems.
Training for retrofit assessors	Immediate	THAW is training retrofit assessors to offer more services to fuel poor households. More detailed assessments for homes in fuel poverty can help homes get more funding for retrofit projects.	THAW Orkney		Improved data on retrofit needs in Orkney.

Third sector retrofit projects	Immediate	THAW are starting retrofit projects for homes in fuel poverty. THAW focusses on projects that help households become eligible for other funding, such as HEES:ABS.	THAW Orkney	Increase in fuel poor households eligible and ready for energy efficiency schemes.
Collaboration for fuel poverty	Immediate	A number of organisations are part of the Orkney Money Matters initiative to coordinate fuel poverty working in Orkney.	Orkney Money Matters	The Council, The Orkney Partnership, Orkney Foodbank, NHS Orkney, Social Security Scotland, Orkney OHAL, The Trussell Trust
Walliwall housing development	Immediate	OHAL will continue working on Walliwall Stage 9 housing project.	OHAL	Increase in number of energy efficient, new build homes.
Improve OHAL energy efficiency data	Immediate	OHAL to digitise data on their housing stock, like housing condition surveys. This will help OHAL understand the energy efficiency of their stock better.	OHAL	Housing condition surveys will be fully digitised.
<i>From Local Housing Strategy:</i>				
Energy efficiency pilot projects on Council social housing	Immediate	The Council has been trialling approaches to meet the higher energy efficiency standard, undertaking an individual assessment when a property becomes void and taking a Fabric First approach, coupled with fitting mechanical heat recovery ventilation systems to help maintain air quality alongside ensuring the provision of an efficient heating system.	The Council	Identify viable approaches to energy efficiency retrofit in Council social housing properties.

Finalise decarbonisation of domestic Council social housing	Immediate	<i>From Council Delivery Plan:</i> The Council will finalise programme of decarbonisation for Council-owned housing stock.	The Council		Publish programme of decarbonisation.
Collect data on private rented sector interest in HEES:ABS	Immediate	The Council to collect data from Warmworks on number of private rented sector landlords who enquired about HEES:ABS funding but were not eligible. This could identify potential projects in the private rented sector.	The Council	Warmworks	Data obtained on private rented sector interest.
Collaboration on energy efficiency standards	Immediate	The Council to liaise with OHAL to understand similarities and differences between energy efficiency standards across Orkney's social housing.	The Council	OHAL	Clarify differences between Council and OHAL energy efficiency standards.
OHAL to submit SHNZHF bids	Medium-term	OHAL will continue submitting bids to the Social Housing Net Zero Heat Fund for retrofit projects. They will focus on fabric measures, heat pumps, and high retention storage heaters.	OHAL		Funding awarded for retrofit work.
Develop plan for social housing	Medium-term	The Council and OHAL will develop delivery plans in line with new Social Housing Net Zero Standard (yet to be published by Scottish Government).	The Council and OHAL		Delivery plans put in place to improve energy efficiency in social housing.
Energy efficiency data pilot project.	Medium-term	Owner occupied and private rented homes have lower levels of EPC data. The Council is interested in undertaking a surveying project on one of the Northern Isles to provide more information on how energy efficiency can be improved across an entire island.	The Council	Islands Centre for Net Zero, local community development trusts	Funding secured for a surveying project.

Whole house energy assessments	Medium-term	Reflex Orkney will introduce whole house energy assessments that provide a recommended list of measures for each building. People can use these recommendations to take advantage of funding when it becomes available.	Reflex Orkney		Whole house energy assessments available for domestic and commercial properties.
Increase HEES:ABS bid values	Medium-term	The Council/Warmworks will scale-up and submit higher value bids for HEES:ABS funding in coming years to cover more properties.	The Council and Warmworks		HEES:ABS funding awards increase.
HEES:ABS funding for heat pumps	Medium-term	Warmworks/Managing agent will explore offering heat pumps as part of the HEES:ABS scheme. Further work is needed to determine feasibility, including finding installers.	The Council and Warmworks		Heat pumps added to the HEES:ABS measurement, if feasible.
Advanced training for retrofit assessors	Medium-term	THAW is aiming to train employees in renewables and traditional building assessments.	THAW Orkney		Renewables and traditional building assessments available.
<i>From Council Delivery Plan:</i>					
Carbon Neutral Islands for Orkney	Medium-term	The Council will work with the Scottish Government and other stakeholders to ensure that the benefits of the Carbon Neutral Islands project are shared across all other Orkney islands (from Council Plan Delivery Plan.)	The Council	Scottish Government	
<i>From Council Delivery Plan:</i>					
Update Orkney Sustainable Energy Strategy		Update Orkney Sustainable Energy Strategy in line with Scottish Government 'Energy Strategy and Just Transition Plan.'	The Council	Scottish Government	Publish updated Orkney Sustainable Energy Strategy.
Energy efficiency data project	Long-term	If the energy efficiency pilot project is successful, the Council will replicate for more islands.	The Council	Islands Centre for Net Zero, local development trusts	Surveying projects for multiple islands.

Investigate Passivhaus standard	Long-term	The Council will investigate Passivhaus standards as an option for new build and refurbishment for Council social housing.	The Council	Decision made on Passivhaus standard.
Investigate EnerPHit standard	Long-term	The Council will investigate EnerPHit standard and other similar standards for existing stock retrofit schemes.	The Council	Decision made on standard for existing stock retrofit.

Funding for energy efficiency

The Council will draw on available funding from the Scottish Government and other providers to support energy efficiency upgrades of homes.

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 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 zero direct emissions heating elements and 50% of the fabric and energy efficiency measures.

Mixed tenure

Heat and Energy Efficient Scotland: Area Based Schemes (HEES: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 is intended for owner-occupiers and private landlords. HEES:ABS has historically focused on installing single insulation measures but is now expanding to a ‘whole house’ approach and includes other measures such as zero emissions heating systems. By working on an area-based delivery model, the programme enables mixed-tenure projects, bringing together homeowners, housing associations, 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 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. 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 takes 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 most often fully grant funded, and potential improvements include wall insulation, loft insulation, draught-proofing, central heating, and renewables. Households must meet the eligibility criteria² 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 grant/subsidy scheme which provides insulation and heating measures for low income, vulnerable owner occupiers. The measures and funding available are based on specific eligibility criteria and can include insulation, heat network 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 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.

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 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. Orkney Islands Council have previously incorporated ECO Flex funding to HEES:ABS projects. However, the funding requirements have changed, and this is no longer permitted. The Council will assess what resources are required to facilitate future ECO 4-only projects.

² Eligibility criteria detailed on the [Home Energy Scotland website](#)

Non-domestic Council buildings

The Council operates and leases many non-domestic buildings across Orkney. It is the Council's responsibility to do what is possible to make these buildings more energy efficient and replace their heating systems to zero direct emissions heating.

The Council will focus on improving the fabric and energy efficiency of buildings and transitioning to net zero heating systems for buildings currently using heating oil or LPG. The retrofit measures will be completed when it is most financially viable and alongside replacement of the building fabric and heating system. For example, roof insulation may be installed when the roof tiles are replaced.

Actions for non-domestic Council buildings

Action	Priority	Description	Responsibility	Key stakeholders	Measure of success
Hope Primary School retrofit	Immediate	The Council will install an air source heat pump (to replace oil heating), triple glazed windows, and improve air tightness.	The Council		Zero direct emissions heating installed, and energy efficiency improved.
Picky Campsite domestic hot water upgrade	Immediate	The Council will retrofit the domestic hot water system to be powered by a heat pump.	The Council		Zero direct emissions water heating installed.
<i>From Carbon Management Programme:</i>					
Evaluate Council carbon emissions data	Immediate	The Council will start an evaluation of baseline data relating to the Council's carbon emissions in order to provide an accurate and consistent approach to the reporting and management of total corporate emissions.	The Council		Baseline analysis of Council buildings complete.
EPC assessments for OIC operational buildings	Medium-term	The Council will conduct EPCs on the remaining properties that are required to have up to date EPCs (250m ² or greater floor area & open to the public).	The Council		All required operational buildings will have up to date EPCs.

Orkney Library and Archive air source heat pump	Medium-term	The Council will replace the oil heating system with an air source heat pump at Orkney Library and Archive.	The Council	Zero direct emissions heating installed.
Stromness Swimming Pool air source heat pump	Medium-term	The Council will replace the oil heating system with an air source heat pump at Stromness Swimming Pool.	The Council	Zero direct emissions heating installed.
Oil boiler replacement schemes	Medium-term	The Council will develop schemes for remaining oil boiler replacement in the Council's buildings.	The Council	Zero direct emissions heating installed.
Building Energy Reports for Kirkwall properties	Medium-term	The Council will conduct Building Energy Reports for OIC buildings in central Kirkwall.	The Council	Assessment complete for all OIC owned buildings in central Kirkwall.
Building Energy Reports for all Council buildings	Medium-term	The Council will conduct Building Energy Reports for all occupied and leased non-domestic OIC buildings to improve data.	The Council	100% of Council-owned buildings have BERs.
Building Energy Reports for non-Council owned buildings	Medium-term	The Council will conduct Building Energy Reports for all occupied and leased non-domestic and non-Council owned buildings to improve data.	The Council	100% of <i>all</i> non-domestic buildings have BERs.
EPC assessments for all leased OIC properties	Medium-term	The Council will conduct EPC assessments for every leased property, regardless of lease renewal date.	The Council	100% of leased Council buildings have valid EPC assessments.
Action plan for leased OIC properties	Medium-term	The Council will develop an action plan to improve leased properties. The Council will prioritise zero direct emissions heating and fabric improvements based on cost benefit.	The Council, building tenants	
Finalise decarbonisation programmes	Long-term	<i>From Council Delivery Plan:</i> The Council will finalise decarbonisation programmes for the school	The Council	Finalise decarbonisation programmes.

estate, infrastructure property, and ICT estate buildings.					
<i>From Council Delivery Plan:</i>					
Carbon Neutral Islands pilot project	Long-term	The Council will replicate Carbon Neutral Islands project on one or more islands.	The Council	Carbon Neutral Islands project	Finalise pilot project plan.
<i>From Carbon Management Programme:</i>					
Support commercial building owners	Long-term	The Council will develop mechanisms to support business uptake of renewable energy, smart energy and energy efficiency solutions.	The Council	Commercial building owners and tenants	

Electrification of heat in homes

Homes across Orkney will need to move from oil heating systems to electric heating systems by 2045 at the latest. This will require collaboration between the Council and a number of stakeholders.

The Council will work with SSEN (the Distribution Network Operator for Orkney) to develop the future energy scenario for Orkney. The LENZA tool will be used to identify increases in supply required to meet the additional load associated with heat pumps replacing oil heating systems. The installation of EV charging infrastructure will also be considered together with the opportunities for on-site renewable generation, likely solar PV.

The Islands Centre for Net Zero will also be working with the wider community and business sector to identify anticipated future demands.

Actions for electrification of heat in homes

Action	Priority	Description	Responsibility	Measure of success
Collaborate with SSEN to plan for electrification of heat	Immediate	The Council will collaborate with SSEN to identify and develop a plan for improving the electricity grid to support heat pumps and other electric heating systems.	The Council, SSEN	Published plan for grid upgrades.

Collaborate with the Islands Centre for Net Zero	Immediate	The Council will collaborate with the Islands Centre for Net Zero to identify future energy demands and share data on electrification of heat.	The Council, Islands Centre for Net Zero	
Air tightness testing for void OIC properties	Immediate	The Council will begin conducting air tightness tests for Council-owned buildings when they become void.	The Council	All void buildings will have air tightness tests.
Explore options for retraining oil heating engineers for heat pumps	Medium-term	The Council and UHI to explore opportunities for retraining oil heating engineers and others to install and maintain heat pumps.	The Council & University of Highlands and Islands	Training programmes developed and delivered

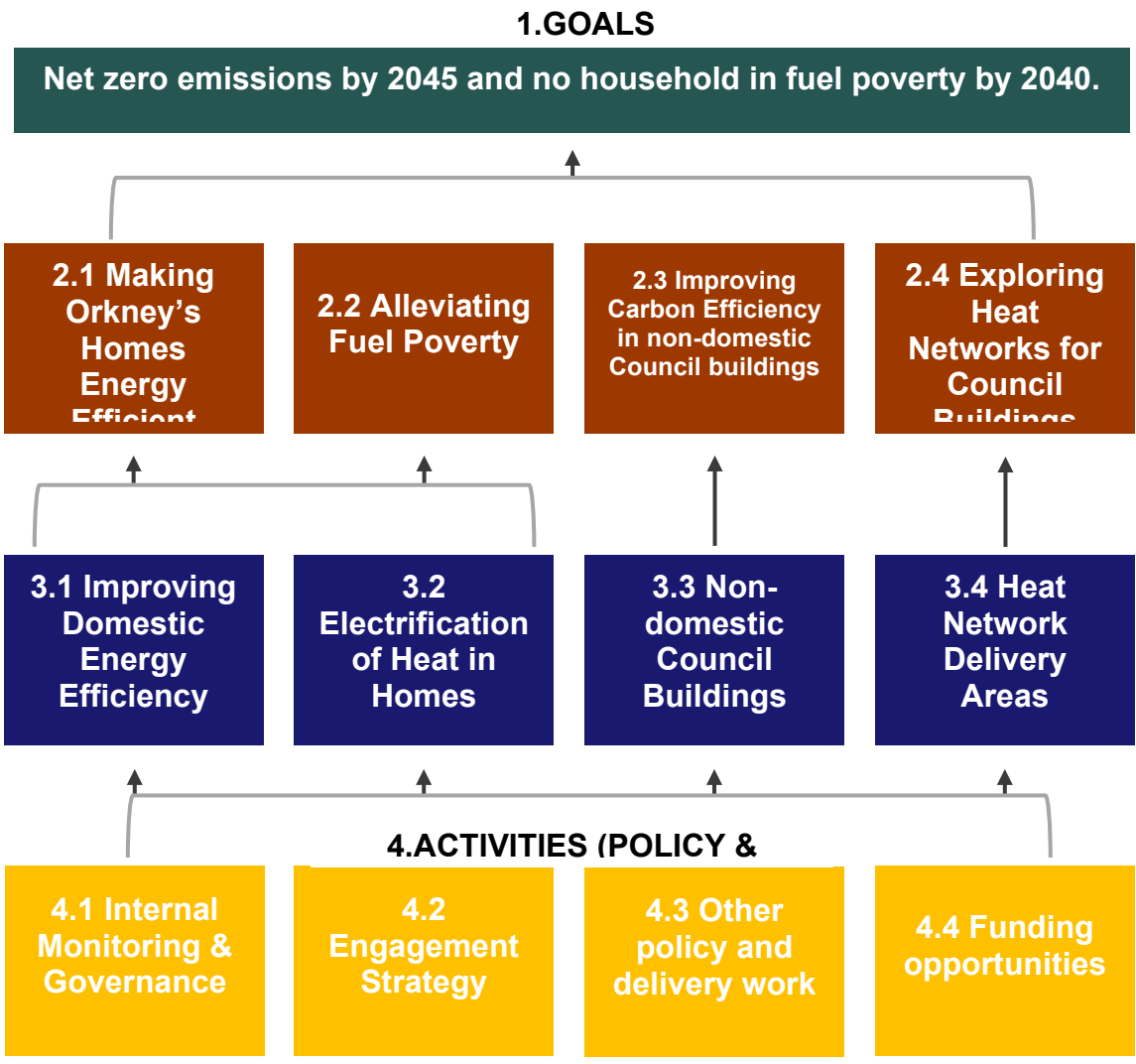
Monitoring and evaluation framework

The monitoring and evaluation frameworks should be used by the council to measure progress against LHEES considerations, local priorities and targets identified in the 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, and are to be completed and updated by Orkney Islands 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 of this document.

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

Figure 1: A Monitoring Map to show Orkney Islands Council’s pathway for decarbonising heat in buildings and improving energy efficiency



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 Orkney Islands 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 Delivery Plan will be monitored, updated and reported on annually, while the Strategy will 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.

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 fuel poverty by 2040	Fuel poverty statistics				2040	Yellow

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

Priority	Target	Relevant indicators	Data type and source	Baseline (data)	Progress 2024-25	Timescale	Status
2.1 Making Orkney's homes energy efficient	Improving energy efficiency of homes to reduce heat demand.	EPC energy efficiency rating C or above					
		EPC energy efficiency rating D or below					
		Domestic wall insulation					
		Nondomestic wall insulation					
		Number of energy efficiency retrofits completed					

Priority	Target	Relevant indicators	Data type and source	Baseline (data)	Progress 2024-25	Timescale	Status
2.2 Alleviating Fuel Poverty	Improve energy efficiency of homes through fabric improvements to tackle fuel poverty.	Number of households in fuel poverty					
		Average household energy cost as a percentage of income					
2.3 Improving Carbon Efficiency in non-domestic Council buildings	Decarbonising heat across buildings in Orkney Islands will ensure the Council meets its net zero Targets. While the Council will connect buildings to heat networks where possible, non-domestic buildings that	Number of buildings replaced with zero direct emissions heating					

Priority	Target	Relevant indicators	Data type and source	Baseline (data)	Progress 2024-25	Timescale	Status
	are unable to join a network will be supported to install a zero direct emissions heating system.						
2.4 Exploring Heat Networks for Council Buildings	The Council is focused on exploring heat networks to connect Council buildings and heat sources.	Number of heat networks established				By October 2029	
		Carbon emissions from the built environment in OIC					
		% of building stock powered by renewable sources					

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

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
3.1 Improving Domestic Energy Efficiency	Collaboration between OHAL and OIC	Explore ways of collaborating on energy efficiency in social housing, including combined funding applications. All ideas will be written down and reviewed as part of LHEES governance arrangements.	Orkney Islands Council	-	OHAL	By 2026	
	Develop data sharing agreement for energy efficiency data	Develop a data sharing agreement so the Council can share the data analysis from LHEES with relevant stakeholders.	Orkney Islands Council	-	EST	By 2026	
	Share energy efficiency data with Warmworks	Share energy efficiency data with Warmworks to	Orkney Islands Council	-	Warmworks	By 2026	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		support planning for the HEES:ABS scheme.					
	Share energy efficiency data with Islands Centre for Net Zero	Share energy efficiency data with the Islands Centre for Net Zero to support their energy data hub for Orkney, the Western Isles, and Shetland.	Orkney Islands Council	-	Islands Centre for Net Zero	By 2026	
	Address fuel poverty in social housing through retrofit measures	Planned maintenance activities for OIC properties will address energy efficiency. They will focus on fabric insulation, air tightness, and efficiency of heating	Orkney Islands Council	-	-	By 2026	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		systems until the new Social Housing Net Zero Standard is announced. This will lead to improved fabric insulation, air tightness and energy efficiency of heating systems.					
	Collaboration for fuel poverty		Orkney Islands Council		The Council, The Orkney Partnership, Orkney Foodbank, NHS Orkney, Social Security Scotland, Orkney OHAL, The Trussell Trust	By 2026	
	Energy efficiency pilot projects on	Continue trialling approaches to meet the higher	Orkney Islands Council	-	-	By 2026	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
	Council social housing	energy efficiency standard, undertaking an individual assessment when a property becomes void and taking a Fabric First approach, coupled with fitting mechanical heat recovery ventilation systems to help maintain air quality alongside ensuring the provision of an efficient heating system.					
	Finalise decarbonisation of	Finalise programme of decarbonisation for Council-	Orkney Islands Council	-	-	By 2026	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
	domestic Council social housing	owned housing stock.					
	OHAL to submit SHNZHF bids	OHAL to continue submitting bids to the Social Housing Net Zero Heat Fund for retrofit projects. They will focus on fabric measures, heat pumps, and high retention storage heaters.	OHAL	-	-	By 2029	
	Develop plan for social housing	Develop delivery plans in line with new Social Housing Net Zero Standard (yet to be published by Scottish Government). Delivery plans	Orkney Islands Council	-	OHAL	By 2029	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		will then be rolled out to improve energy efficiency in social housing.					
	Energy efficiency data pilot project	Owner occupied and private rented homes have lower levels of EPC data. The Council is interested in undertaking a surveying project on one of the Northern Isles to provide more information on how energy efficiency can be improved across an entire island. The Council will work with relevant stakeholders to discuss project ideas and funding opportunities.	Orkney Islands Council	-	Islands Centre for Net Zero, local community development trusts	By 2029	
	Carbon Neutral Islands for Orkney	The Council will work with the Scottish Government	Orkney Islands Council	-	Scottish Government	By 2029	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		and other stakeholders to ensure that the benefits of the Carbon Neutral Islands project are shared across all other Orkney islands (from Council Plan Delivery Plan.)					
	Update Orkney Sustainable Energy Strategy	The Council will update the Orkney Sustainable Energy Strategy in line with Scottish Government 'Energy Strategy and Just Transition Plan.'	Orkney Islands Council	-	Scottish Government	By 2034	
	Energy efficiency data project	Using learnings from the Energy Efficiency Project, the Council will	Orkney Islands Council	-	Islands Centre for Net Zero; Local	By 2034	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		develop a plan to roll out similar projects in other islands.			development trusts		
	Investigate Passivhaus	Investigate Passivhaus standards as an option for new build and refurbishment for Council social housing	Orkney Islands Council	-	-	By 2034	
3.2 Electrification of heat in homes	Collaborate with SSEN to plan for electrification of heat	Collaboration between the Council and SSEN to identify a plan for improving the electricity grid to support heat pumps and other electric heating systems.	Orkney Islands Council	-	SSEN	By 2026	
	Collaborate with the Islands Centre for Net Zero	Identify future energy demands from the commercial sector and work to develop an Orkney wide assessment	Orkney Islands Council	-	Islands Centre for Net Zero and SSEN	By 2026	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		of future electrical needs.					
3.3 Non-domestic Council buildings	Hope Primary School retrofit	Air source heat pump (to replace oil heating), triple glazed windows, air tightness improvements.	Orkney Islands Council	-	-	By 2026	
	Picky Campsite domestic hot water upgrade	Retrofit the domestic hot water system to be powered by a heat pump.	Orkney Islands Council	-	-	By 2026	
	Air tightness testing for void OIC properties	The Council will begin conducting air tightness tests for Council-owned buildings when they become void.	Orkney Islands Council	-	-	By 2026	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
	Orkney Library and Archive air source heat pump	Replace the oil heating system with an air source heat pump at Orkney Library and Archive.	Orkney Islands Council	-	-	By 2029	
	Stromness Swimming Pool air source heat pump	Replace the oil heating system with an air source heat pump at Stromness Swimming Pool.	Orkney Islands Council	-	-	By 2029	
	Oil boiler replacement schemes	Develop of schemes for remaining oil boiler replacement in the Council's buildings.	Orkney Islands Council	-	-	By 2029	
	Building Energy Reports for Kirkwall properties	Conduct Building Energy Reports for OIC	Orkney Islands Council	-	-	By 2029	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		buildings in central Kirkwall.					
	Building Energy Reports for all Council buildings	Conduct Building Energy Reports for all occupied and leased non-domestic OIC buildings to improve data.	Orkney Islands Council	-	-	By 2029	
	Evaluate Council carbon emissions data	<i>From Carbon Management Programme</i> Start an evaluation of baseline data relating to the Council's carbon emissions in order to provide an accurate and consistent approach to the reporting and management of	Orkney Islands Council	-	-	By 2026	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		total corporate emissions.					
	EPC assessments for all leased OIC properties	The Council will conduct EPC assessments for every leased property, regardless of lease renewal date.	Orkney Islands Council	-	-	By 2029	
	Action plan for leased OIC properties	The Council will develop an action plan to improve leased properties. The Council will prioritise zero direct emissions heating and fabric improvements based on cost benefit.	Orkney Islands Council	-	-	By 2029	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
	Finalise decarbonisation programmes	<i>From Council Delivery Plan:</i> finalise decarbonisation programmes for the school estate, infrastructure property, and ICT estate buildings	Orkney Islands Council	-	-	By 2034	
	Carbon Neutral Islands pilot project	<i>From Council Delivery Plan:</i> replicate Carbon Neutral Islands project on one or more islands.	Orkney Islands Council	-	Carbon Neutral Islands project	By 2034	
	Support commercial building owners	<i>From Carbon Management Programme:</i> develop mechanisms to support business	Orkney Islands Council	-	Commercial building owners and tenants	By 2034	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		uptake of renewable energy, smart energy and energy efficiency solutions.					
3.4 Heat Network Delivery Areas	Consider Central Kirkwall heat network zone	The Council will have internal discussions about the Central Kirkwall potential heat network zone.	Orkney Islands Council	-		By 2026	
	Engineering assessment	The Council will undertake an engineering assessment for a heat network to service OIC schools and the Council Office in Kirkwall	Orkney Islands Council	-		By 2026	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
	Feasibility studies for housing developments	Commission a feasibility study on using ambient heat networks to supply heat pumps as an alternative to individual bore hole schemes.	Orkney Islands Council	-		By 2029	
	Feasibility study in Hoy for wind to heat network	Carry out feasibility study on wind to heat network scheme covering North Walls School and surrounding properties in Hoy.	Orkney Islands Council	-		By 2029	
	Finstown waste heat opportunity	Investigate Finstown Transmission sub-station as a waste heat	Orkney Islands Council	-		By 2029	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
		opportunity for a heat network.					
	Communal heating for Council social housing clusters	Investigate viability of small-scale communal heating for clusters of Council social housing. For example, communal heat pump system for a small group of neighbouring Council homes.	Orkney Islands Council	-		By 2029	
	Central Kirkwall heat network	Development of Kirkwall Town Centre heat network, subject to positive feasibility study and business case.	Orkney Islands Council	-		By 2034	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
	Feasibility study in Stromness	Commission a feasibility study to explore the Stromness heat network (further heat network 2 above.)	Orkney Islands Council	-		By 2034	
	Feasibility study Dounby	Commission a feasibility study to explore the Dounby heat network (further heat network 3 above.)	Orkney Islands Council	-		By 2034	
	Explore heat network options for Pierowall	Investigate a sea water source heat network at care home and Westray Junior High School in Pierowall.	Orkney Islands Council	-		By 2034	
	Explore heat network	Investigate heat network options that would connect to	Orkney Islands Council	-		By 2034	

Strategic actions	Actions	Target	Lead	Resource requirements	Partners	Timescale	Status
	opportunities for domestic properties	domestic properties in Orkney.					

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.	Orkney Islands 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 ongoing and planned projects.	Orkney Islands Council, Executive Director/ Head of Service Level	-	-	By 2026	
	Light touch annual review of both the strategy and delivery plan	Update and amend both documents in light of regulatory changes. Identify local targets.	Orkney Islands Council, Executive Director/ Head of Service Level	-	-	By 2029	

Strategic actions	Actions	Target	Lead	Resources required	Partners	Timescale	Status
	Full review of LHEES Strategy and Delivery Plan	Update and amend both documents in light of regulatory changes. Identify local targets.	Orkney Islands Council, Executive Director/ Head of Service Level	-	-	By 2029	
4.2 Engage with relevant stakeholders to support with LHEES delivery.	Stakeholder mapping exercise	Review stakeholder mapping annually to ensure relevance and accuracy.	Orkney Islands Council	-	Local community groups, housing associations, energy suppliers, Scottish Government, Orkney Renewable Energy Forum	By 2026	
	Community consultation workshops	Undertake community consultation at major reviews to ensure policy addresses all concerns and opportunities identified by the wider community.	Orkney Islands Council	-	Community Councils, housing associations, Orkney Islands Council	By 2026	
4.3 Other policy and delivery work							

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	Progress
4.4 Funding opportunities	Scotland's Heat Network Fund	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.	OIC to research eligibility, submit expression of interest	Application deadline ongoing. Successful projects must draw down funding in full by March 2026.			
	The Heat Network Support Unit	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	The unit is still accepting applications for advisory-only support and discussions on potential future applications.	No longer accepting applications for the 2024-25 financial year.			

	Funding source	Description	Action	Deadlines/ key dates	Lead	Partners	Progress
		strategy and well-defined business model.	OIC to research eligibility to determine if they will apply for the 2025-26 financial year funding, or for advisory support for existing projects.				
	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.	OIC to research eligibility and apply for funding if appropriate.	Funding available until 2026.			
	Heat and Energy Efficient Scotland: Area Based Schemes (HEES:ABS)	This funding is provided by Scottish Government. Schemes are targeted in areas in or at risk of fuel poverty and is intended for owner-occupiers and private landlords.	OIC to continue allocating funding for HEES:ABS projects.	Ongoing			

	Funding source	Description	Action	Deadlines/ key dates	Lead	Partners	Progress
	The HES grant and loan	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 to 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 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.	OIC to research eligibility and apply for funding if appropriate.	Ongoing			
	Warmer Homes	Offers funding and support to households struggling to stay warm and keep on top of energy bills. This	OIC to research eligibility and apply	Ongoing			

	Funding source	Description	Action	Deadlines/ key dates	Lead	Partners	Progress
	Scotland (WHS)	programme is available for homeowners and private sector tenants.	for funding if appropriate.				
	The Energy Company Obligation (ECO 4)	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 D, E, F, or G.	OIC 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.	OIC to identify eligible households for funding.	Ongoing.			

