SCOTTISH BORDERS

LOCAL HEAT AND ENERGY EFFICIENCY DELIVERY PLAN 2024-2028

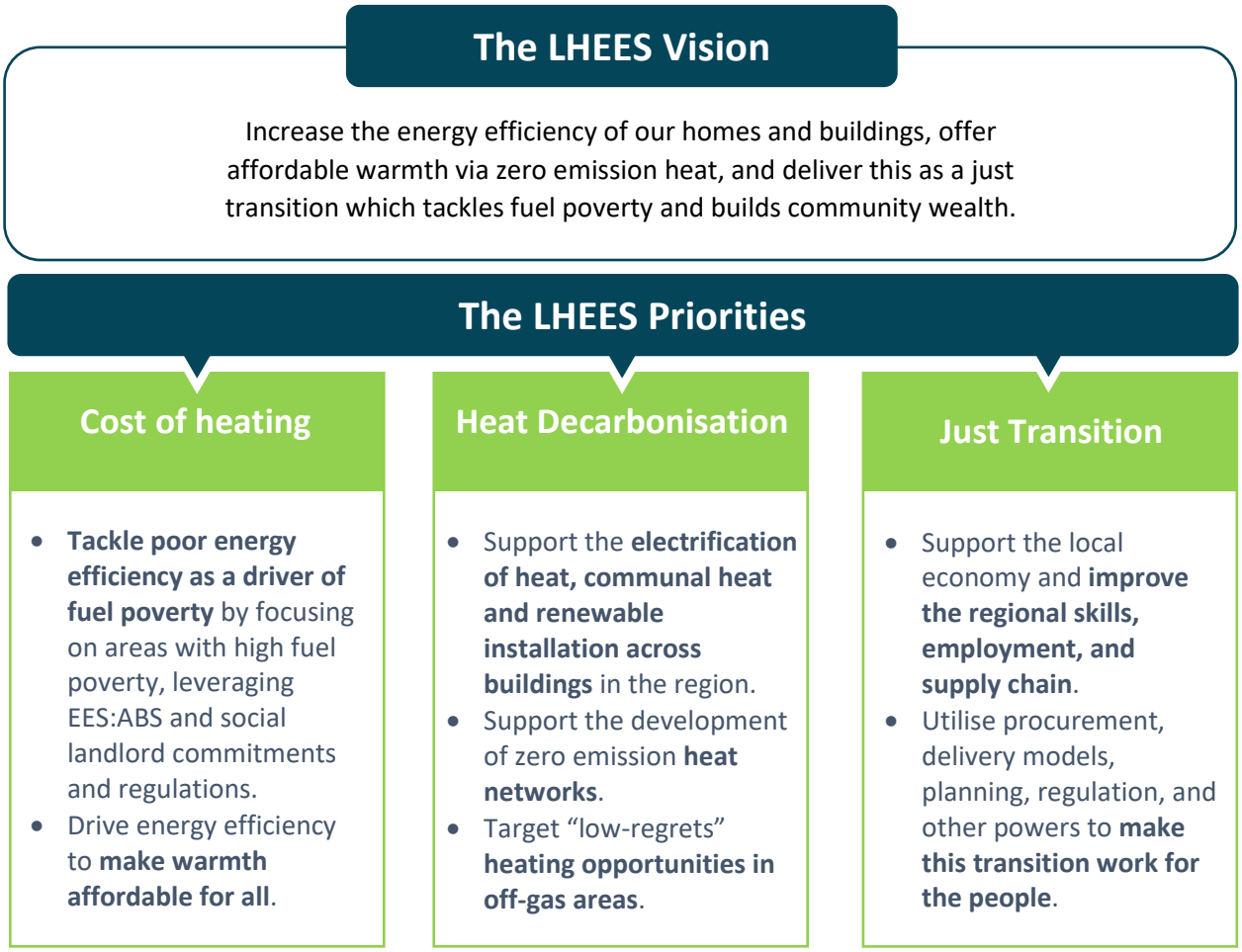
Scottish Borders COUNCIL

Contents

1 Executive Summary

This Local Heat and Energy Efficiency Delivery Plan (or Delivery Plan) details how the Scottish Borders Council will itself deliver as well as support other property owners and occupiers to deliver the vision of the Local Heat and Energy Efficiency Strategy (LHEES). The Delivery Plan covers a timeframe of five years from 1 January 2024 to 31 December 2028.

Figure 1: The Scottish Borders LHEES Vision



The council has developed a vision for the LHEES with three key priorities which underpin this vision (Figure 1). This Delivery Plan sets out the system through which the council will deliver this vision. The delivery model will be based on an LHEES Programme, led by the council and with participation from other stakeholders, where appropriate. The purpose of the LHEES Programme is to provide the necessary tools and support functions to facilitate the delivery of area-wide energy efficiency, heat decarbonisation and heat network projects. The overall purpose of the LHEES Programme will be to support the delivery of projects in two types of areas identified in this Delivery Plan:

1. **Potential Delivery Areas:** the LHEES strategic zoning identified two types of properties, 'heat pump-ready' ('Category 1') and 'energy efficiency' ('Category 2', those which require insulation)

in, both, on-gas grid and off-gas grid areas (see LHEES for details). Potential Delivery Areas in this Delivery Plan were developed based on granular locations where these properties are in their greatest numbers and coincide with high levels of fuel poverty. This Delivery Plan also provides a detailed understanding of the properties in these hotspots, along with an indication of the building level or communal heating work these will require to reach a reasonable level of energy efficiency and decarbonise their heat. Twenty Potential Delivery Areas have been identified across the Scottish Borders, and these range from urban centres to rural areas.

2. **Potential Heat Network Zones:** the LHEES provided an overview of the focus on heat networks as the priority decarbonisation solution where it is viable. The Delivery Plan provides specifics of the potential zones, the clusters and tiers they form as well as potential heat demand which could be met by these opportunities.

These areas are currently considered as "Potential" as they are subject to further stakeholder engagement, field data collection and analysis as well as resource made available by the Scottish Government to progress work at this scale. The areas will be finalised once these limitations are overcome.

The LHEES Programme will serve as the practical vehicle to achieve the LHEES Vision by providing the blueprint for how action will be driven in the above areas and catalysing this action. The LHEES Programme will, first, provide the programme management function for delivering projects in the above areas. This will entail project management support for council staff and stakeholders including data, insights, tools and (where there is a more involved role for the council) project execution capacity and support. In addition to programme management, the LHEES Programme will also entail several sub-programmes which will aid the delivery of projects in these areas:

- **Leadership by Example:** the council will demonstrate and lead the retrofit by developing its net zero programme in alignment with national targets. The council will carefully consider its stock in relation to the above areas to unlock opportunities as well as encourage and inspire broader action by others in the area.
- **Supply Chain Programme:** the Scottish Borders faces dual challenges of lack of labour supply to carry out retrofit and heat network delivery (leading to delays and increased costs) as well as lack of green skills green economic growth in the area. The council will develop a supply chain programme to support the delivery of LHEES at pace and scale while achieving regional green economic growth and skilled employment. This will be a key aspect of ensuring the transition to net zero is a just one for the people of the Scottish Borders.
- **Funding:** recognising that the success of the LHEES Vision is impingent upon investment, the council will work to ensure that it is maximising the funding available for projects across the Scottish Borders.
- **Heat Network Delivery Plan:** the council will seek support from the Heat Network Support Unit to develop a Heat Network Delivery Plan covering the main factors, decisions and barriers which need to be addressed such as: delivery models, investment opportunities, and building a business case.
- **Communication and Stakeholder Engagement:** the council will undertake consistent and ongoing stakeholder engagement across the Potential Delivery Areas and Potential Heat Network Zones. The council will also drive communication to inspire, support, advise and signpost people toward action, focusing on these locations and growing this activity across the region as far as practical.

The council will dedicate whatever resources it currently has for delivering LHEES to develop and deliver the LHEES Programme, with the understanding that the full set-up and delivery of the programme is contingent on further Scottish Government support and funding.

2 Glossary

Terms	Description
Anchor Load	A building requiring a consistent, enduring need for heat, which can have a reliable demand for a heat network, thereby contributing to the economic viability of the network.
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 the PEAT modelling tool. It provides the likely energy efficiency retrofit technologies, as well as the low carbon heating system (where applicable) to support building level decarbonisation.
Coolth	Cold as a tradable asset (Cf. heat / warmth).
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, locally based 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 groups 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, regulation 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.
Electric boiler	A boiler utilising the method of heating water through passage across an element, with emissions correlated to the electricity grid's emissions factor.
Energy Centre	A building where heat is produced.
Energy services company	A company offering energy-related services.
Fuel Poverty	As defined by the Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019, situations where a household allocates more than 10% of their post-housing-cost net income towards fuel expenses, and their remaining income falls below 90% of the UK Minimum Income Standard.
Heat network	As defined in the Heat Networks (Scotland) Act 2021, a (district) heat network is "a network by which thermal energy is distributed from one or more sources of production to more than one building".
Heat pump	A heating system that harnesses thermal energy from sources like air, ground, or bodies of water (such as rivers, seas, or sewers). Through a refrigeration cycle, it transforms this energy to provide

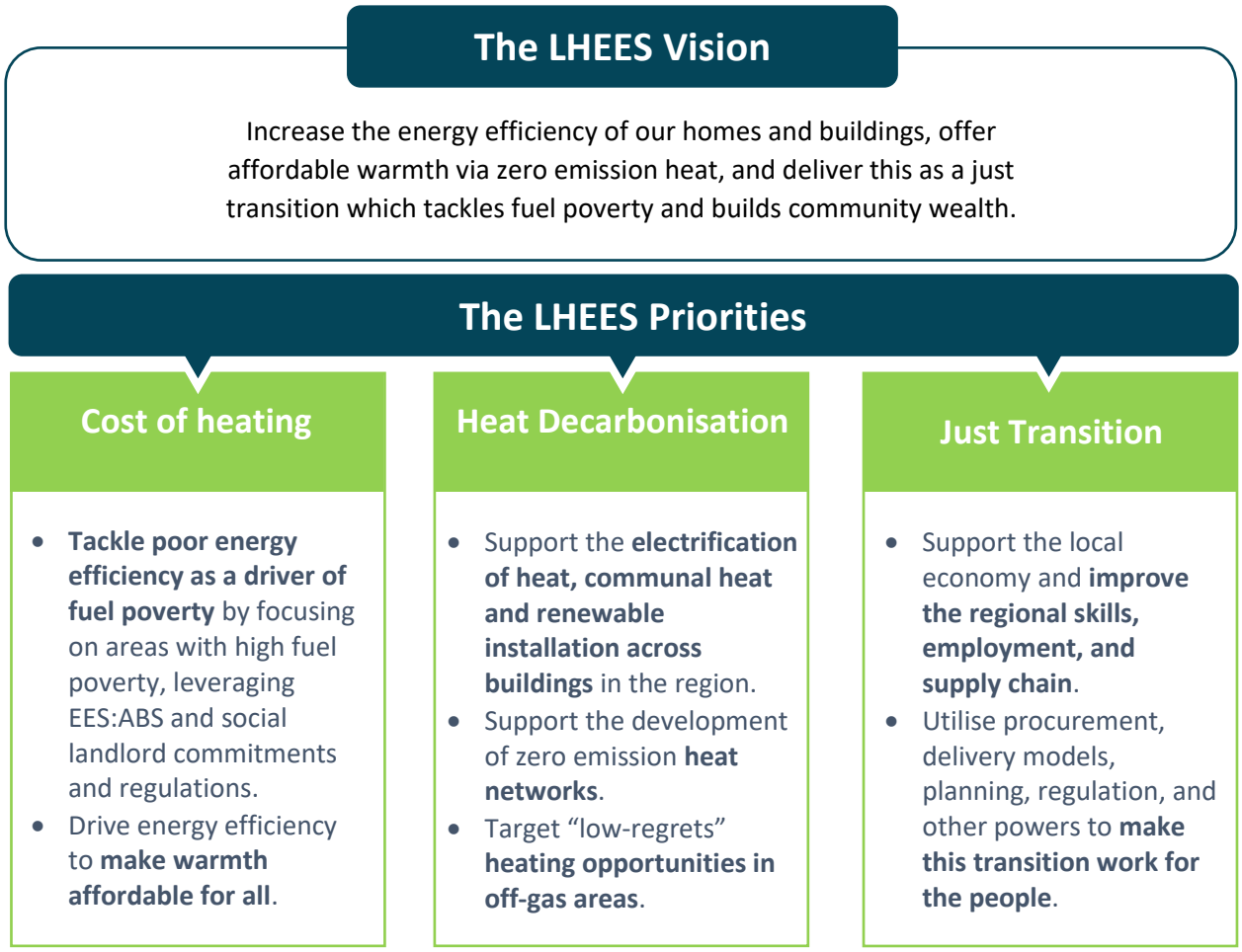
	heat to the end user. The carbon emissions of a heat pump are contingent on the grid emissions factor.
Indicator	For a given Consideration, the purpose of an Indicator is: 1) to act as a key information field to help characterise and baseline the local authority. 2) to act as a key information field 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	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: 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	An LHEES Strategy is a long-term strategic framework for— - 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 occupied, private rented and social housing, and also 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.
Net Zero Carbon	A situation where any carbon emissions are offset by an equivalent amount of carbon being removed from the atmosphere, resulting in no net change in carbon levels.
Passivhaus	A construction standard where buildings attain elevated levels of energy efficiency and user comfort.
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.
Solar photovoltaic	Technology that transforms sunlight into electrical energy.
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.

3 Introduction to the Delivery Plan

This document is the Local Heat and Energy Efficiency Delivery Plan ('Delivery Plan') for the Scottish Borders and accompanies the Local Heat and Energy Efficiency Strategy (LHEES). This Delivery Plan will help implement the LHEES Vision (Figure 2) over the next five years (1 January 2024 – 31 December 2028). It has been developed in line with guidance from the Scottish Government and provides details on how the LHEES will be delivered. It draws from, both, a data-led process which involved an analysis of regional needs and local building performance as well as a strategy-led process which informed the data analysis with the LHEES Vision and stakeholder engagement.

Figure 2: The Scottish Borders LHEES Vision



This Delivery Plan provides the prospective actions for the council, local communities, government, investors, developers and wider stakeholders, pinpointing areas for targeted intervention. The Delivery Plan covers actions and priorities for the next 5 years, with the next iteration expected to be developed before 31 December 2028, to be implemented from 1 January 2029. This is a "living document" which is expected to be updated based on new opportunities and challenges. The Council will continuously engage with the relevant stakeholders to inform emerging actions to be incorporated in the LHEES and this Delivery Plan.

Actions
1. The council will update the LHEES and develop a new Delivery Plan before the end of 2028, as per legal requirements.
2. An annual update to the documents will be carried out if the need for an update reaches the appropriate level of materiality for each given year.
3. The council will use the LHEES as the starting point for further data collection and analysis (e.g. on building stock and heat demand) to deepen its understanding of opportunities as well as to keep the work started for LHEES and Delivery Plan updated

The central approach proposed in this Delivery Plan is that of a structured and well-defined LHEES Programme dedicated to meet the LHEES Vision. This programmatic approach to delivery will be instrumental to facilitate the delivery of projects across the Scottish Borders area. This programme will provide the necessary capability and tools for property owners and occupiers to work collectively at scale. It will also incorporate all existing programmes delivered by the council, such as the Energy Efficient Scotland: Area Based Schemes (ABS) and other programmes described in the LHEES, into one coherent and streamlined delivery vehicle.

The council recognises the importance of LHEES and is committed its delivery. However, the council also realises there is a major resource gap to deliver on its vision for LHEES. As such, this is an aspirational Delivery Plan for which the council will aim to seek funding to deliver. Therefore, the actions set out in this document are proposals which the council will deliver insofar as possible, and beyond which it will seek resources from the Scottish Government and other partners.

Actions
4. The council will seek further funding, including from the Scottish Government, to enable delivery at scale. The council will use this funding to build capacity and develop an LHEES Programme to deliver on the LHEES Vision.
5. The council will integrate its existing programmes into the LHEES Programme to develop a single vehicle to support the delivery of energy efficiency, heat decarbonisation and heat network projects.

4 LHEES Programme

The council currently employs one full-time position, a Principal LHEES Officer recruited in autumn 2023, to lead the development and delivery of the LHEES and Delivery Plan. The LHEES Officer is also supported by the council's senior management to facilitate delivery and resource allocation, where available. Following the publication of this Delivery Plan, the role of the LHEES Officer will transition from development of the LHEES to delivery of the LHEES Programme. As a first step, the council will engage with the Scottish Government to discuss existing constraints and identify opportunities to fund the programme. However, in addition to seeking resource, the council will also set-up and deliver the LHEES Programme on a limited basis, insofar as reasonably practical. The priority and deliverable aspects of the programme will be prioritised. In the scenario sufficient resource is made available the council will scale these efforts into the full LHEES Programme.

Delivering retrofit, decarbonisation measures and heat networks can be a complex and multi-staged process. The LHEES Programme will include a function to oversee delivery area projects, heat network projects, and communal heat network projects where these have direct council asset involvement. These projects will be taken through robust project management tools and practices, including resource management, project planning, strategic alignment to LHEES Vision, quality assurance, performance evaluation and monitoring, and reporting.

Programme set-up will also include appropriate governance practices which define the roles and responsibilities of council staff with respect to each project as well as the overall programme. Delivering the LHEES will be the responsibility of the Director of Infrastructure & Environment, with reporting responsibilities into committee. The practical implementation of the LHEES will be led by the Principal LHEES Officer.

Actions

6. The council will begin delivery of the LHEES Programme to the extent allowed and within the limited resources it currently has. The council will engage with the Scottish Government and other partners to discuss resource constrains as well as opportunities to grow the LHEES Programme.
7. The council will develop and implement programme management tools to deliver the appropriate projects where it has direct involvement.
8. The council will allocate responsibility of delivering the LHEES and this Delivery Plan to appropriate members of staff.

The LHEES Programme will be shaped by a series of sub-programmes which are described in the following sections.

1.1 Leadership by Example

The LHEES is a plan for every domestic and non-domestic property in the Scottish Borders area to reach net zero, including those owned by public sector, private sector, charitable bodies, other organisations, private landlords, social landlords, and owner-occupiers. Therefore, parties responsible for their property will be expected and encouraged to carry out appropriate works, with funding support and advice provided through various avenues. The council will have an enablement role through the LHEES Programme, which it will use to support stakeholders. However, it will not be able to retrofit properties

which are not its own (except in limited cases such as when works are funded by a council-led fuel poverty scheme, e.g. ABS).

However, the council is responsible and committed to decarbonising its own estate, and it will do so in line with national targets. This is a major opportunity, not just because it will decarbonise the most significant estate in the region, but also because it could support the delivery of other stakeholders in a major way:

- The council will ensure its decarbonisation plans are in line with action across the Potential Delivery Areas and Potential Heat Network Zones. This will maximise opportunities to collaborate with stakeholders and unlock opportunities such as heat network viability.
- The council will use its procurement power to drive the growth of local supply chains and green jobs in the region. This will contribute to the Just Transition priority and also make skills available for other stakeholders, feeding the economic cycle.
- The council will investigate the potential for aggregating demand across stakeholders to provide everyone in the area with access to lower cost and higher quality services.
- The council will use its own estate as an opportunity to learn and transfer lessons, showcase examples, and encourage domestic and non-domestic property owners in the area to embark on their own retrofit journeys.

The council has engaged with several public bodies with favourable outcomes and discussions on net zero plans, including NHS Borders, Police Scotland, Scottish Fire and Rescue. It will continue to engage with public sector organisations in the Scottish Borders to understand their approach and timelines to net zero. Where feasible, the council will support or collaborate with other public sector organisations to realise mutual benefits. The impact of LHEES will be compounded with each public sector organisation aligning to the LHEES Vision and its timelines.

Actions
9. The council will establish a dedicated net zero programme to decarbonise its estate in line with national targets.
10. The council will use the decarbonisation of its estate to maximise any value that can be contributed to the success of the LHEES.

1.2 Supply Chain Programme

One of the major delivery barriers faced by people across the Scottish Borders is the lack of a robust and cost-effective supply of labour to deliver retrofit works. This leads to increased prices, reduced quality, long lead times and greater project complexity for domestic and non-domestic property owners. Furthermore, the Scottish Borders has a low wage economy with limited opportunities for people. There is a significant gap in the number of people in the Scottish Borders going into skilled green jobs including jobs where traditional skills are required. Growth of a local supply chain programme could be a major opportunity to address these dual challenges: provide well-paying and skilled jobs which boost regional economy while also enabling the delivery of the LHEES Vision at scale.

The council has already taken steps in this area, including collaboration with local colleges and the development of a Construction Forum to work with local businesses. The supply chain programme will use this work as the basis to further support the growth of local employment and economy in parallel with the increasing demand by property owners. The first step of the programme will entail the development of a supply chain programme plan comprising of detailed explanation of initiatives, such as:

- Collaborating with South of Scotland Enterprise (SOSE) to develop support for encouraging new businesses servicing this industry. This will include a strong focus on understanding how local businesses can win local work to get started, build strong long-term foundations, and remain attracted to stay and work in the local area. It will also address how local businesses can best position for and win public contracts.
- Collaboration with public sector procurement teams, including the council's own procurement team, to understand the barriers and opportunities for local businesses to access work. This may include exploring ways in which tenders can be simplified and made more accessible. Procurement work will also place a strong focus on using social value requirements to help the growth and employment of a local workforce, regardless of the location of businesses.
- Collaboration with colleges to understand how to attract young talent to the appropriate courses and develop a route which leads into well-paying local employment. The council will also work with colleges, associations, and other organisations to understand the potential for expanding programmes to retrain the existing workforce. These will aim to address barriers and provide incentives to encourage uptake of retraining and increase likelihood of generating business activity following retraining.
- The council will assess the feasibility of a potential demand aggregation pilot which will involve the development of a vehicle to gather multiple customers into a larger group of buyers, securing an affordable service for them and providing businesses with confidence of reliable work.
- The council will consult with appropriate bodies to understand the potential role for alternative delivery vehicles, including cooperatives, a public energy company and other models which could provide energy efficiency, heat decarbonisation, renewable energy, heat network or communal heating works.

To unlock delivery of this programme across the Potential Delivery Areas and Potential Heat Network Zones, the council will seek support from the Scottish Government in the first instance, followed by regional partners SOSE and others.

The supply chain programme will be one of the most important ways in which the council will deliver the LHEES as part of a Just Transition. It will encourage the training of young talent of working age to combat the decline of the working age population in the area. It will also promote reskilling and the development of a regional green economy by supporting people to start-up new businesses and grow existing businesses.

Key Challenges:

- Lack of a robust and cost-effective supply of labour to deliver retrofit works.
- Significant gap currently in the number of people in the Scottish Borders going into skilled green jobs.
- Incorporate the support and development of traditional skills within the supply chain.

Actions
11. The council will develop a supply chain programme to address the dual challenges of (1) lack of skilled workers to deliver projects and (2) regional green economic growth and skilled employment. This will begin with a supply chain programme plan, which will be used to implement the programme.

1.3 Funding

The Scottish Government estimated that over £33bn will be required to realise the ambitions of the Heat in Buildings Strategy. If the viewed through the lens of 61,000 homes in the Scottish Borders as a proportion of the 2.5m homes in Scotland, this equates over £800m investment in our homes, buildings and heating infrastructure. This is a significant amount of financing, which people in the Scottish Borders will need to access through affordable means which make investment into the LHEES Vision attractive. Thus, through the LHEES Programme, the council will find ways in which the LHEES Vision can become an attractive investment for home and building owners as well as infrastructure developers.

The council has an active role in delivering some funds and schemes, of which ABS is the most important and prominent programme. ABS will be incorporated into the LHEES Programme and continue to serve as the primary means by which the council tackles poor energy efficiency as a driver for fuel poverty. Where the council has a direct or partial role in other funds (such as those for heat network development or social housing retrofit) it will commit to maximising the level of investment it can draw to the Scottish Borders. This will entail making funding applications, attracting investment, collaborating with others on attracting funding, participating in appropriate investment opportunities through its own capital, supporting development projects as a customer and other means. For example, the council will make funding applications to the Scottish Government's Heat Network Support Unit (HNSU) for feasibility studies on Potential Heat Network Zones as well as work to attract private investment into heat network opportunities. Another example is the exploration of the Borderlands and City Region Deal initiatives to understand the potential for energy efficiency, renewable energy and heat network projects these could enable in locations highlighted by this Delivery Plan.

Where the council does not have a direct role in funding projects, it will signpost and support people to access funding where it is available. The council will keep abreast of appropriate funds, including the list of Scottish Government funds provided in the LHEES, and subsequently communicate and signpost these to the relevant people. For example, the Green Heat Finance Taskforce has made recommendations in its first report; the council will examine these outputs to ensure it is disseminating the most recent and accurate information across Delivery Areas.

Key Challenges:

- Securing the significant financing in order to aid the implementation of the LHEES.

Actions
12. Recognising that the success of the LHEES Vision is impingent upon investment, the council will work to ensure that it is maximising the funding available for projects across the Scottish Borders.

1.4 Heat Network Delivery Plan

Through the Local Development Plan as well as this LHEES and Delivery Plan, the council is committed to expanding the role of heat networks as a scalable method for decarbonising heat and making it affordable across the Scottish Borders. To realise this aspect of the LHEES Vision, the council will develop and implement a Heat Network Delivery Plan, for which it approached the HNSU for funding but was unsuccessful. The council will continue to work with the HNSU to understand how it can refine the plans and better align them the Scottish Government funding criteria. The Heat Network Delivery Plan will provide a route map for how the council will approach and roll out heat networks across the areas identified in section 2.2.

It will help the council oversee the development of heat network opportunities identified by the LHEES by conducting a strategic assessment of the potential of each area identified, establishing the delivery models best suited to delivering heat networks, understanding the investment scale against financial feasibility of the projects to prioritise these, and attract investment into projects by packaging them into attractive opportunities.

The council will cover three strategic areas in this plan: **delivery models**, **investment opportunities**, and building a **business case**. The intention of this strategic development work is to create a plan which provides the council with full clarity, including a clear and actionable pathway as well as to provide decision-making and implementation support through the course of the project. This will prepare the council for execution of the plan.

- Appraisal will involve financial analysis of different **delivery models**, building on the information collected during the Tweedbank heat network feasibility study and LHEES development. This will help inform the council which route to market to take to support the initial Tweedbank development as well as a future expansion into a wider zone-level heat network, and the 28 total potential heat network zones identified in section 2.2. Appraising delivery model options will aid the council's decision-making process and provide the preferred delivery model(s) the council can proceed with by answering these questions:
    - What delivery models are suitable for the larger scale networks in the identified Potential Heat Network Zones?
    -
    - What are the delivery models that the council is willing to utilise, based on the risk appetite, investment implications, other private and public interest?
    - What are the regional and other delivery model approaches, such as the implications of the delivery model study by the Scottish Futures Trust?
- Analysis of **investment opportunities** will involve the assessment of the heat network opportunities across the council to understand their potential scale and furthest extent. This will also include route mapping for the large-scale networks to include the initial key anchor loads and

heat sources as well as the expansion phases. The investment analysis will typically compare heat networks with individual heat pumps as the decarbonisation solution. A key part of understanding investment opportunities is to ensure they are reflective of market appetite and interest. This will include significantly increasing the scope of market engagement which has already started for Tweedbank heat network to test the attractiveness of larger and multiple opportunities for investors as well as to identify potential funding options. This engagement will be important to understand delivery partners' criteria for investment. The objective is to have a clear understanding of the capital investment required, funding opportunities, market appetite and criteria for capital delivery, with the intention to prepare a Heat Network Delivery Plan aligned to these preferences. In summary, this will be achieved once these questions are answered:

  - What is the size of the heat network investment opportunities across the Scottish Borders area from a capital investment perspective?
  - How are the investment opportunities impacted by future energy scenarios considering energy efficiency measures proposed by the LHEES?
  - What are the criteria from potential delivery partners to deliver heat networks across the Borders?

- The business case for heat networks across the Scottish Borders region will use the HM Treasury 5 case model to ensure that the council is able to take a robust and standardised approach to delivering district heating schemes. It will focus on the management case as the initial priority but will also incorporate other aspects of the 5-case model if they are relevant and funding is made available. The management case will define the recommended structure, resources, skills, responsibilities and role of the heat network delivery plan, including timescales for implementation. It will entail detailed internal and external engagement to inform recommendations for bridging the skills gaps, and develop capacity based on a maturity assessment. A review will provide the appropriate governance structures and the preferred approach to ensure relevant stakeholders are involved throughout. A critical aspect of developing this case will be agreeing customer charter aligned with existing council policies and the LHEES Vision. The customer charter will outline a set of best practice principles that any customer in the Scottish Borders area connected to a heat network should be able to expect (including heat tariffs, connection and disconnection etc.) as it will be used as a template for future heads of terms and supply agreements. The management case will follow HM Treasury's Business Case model. It will provide the council with a plan for building up the required internal capacity to progress with the Heat Network Delivery Plan by answering these questions:
  - What are the resources and skills required to progress with the Heat Network Delivery Plan?
  - What roles and responsibilities need to be defined to progress with the Heat Network Delivery Plan?
  - How is the council going to build up the internal capacity required?
  - What is the appropriate governance structure for heat networks with respect to zonal-level heat networks as well as all heat networks in the Borders?
  - What are the standards that the council is willing to provide to all potential customers?

As with all other aspects of the LHEES and Delivery Plan, stakeholder engagement is critical to furthering progress and developing shared agendas. The council will continue stakeholder engagement with local stakeholders to better understand the potential of a large-scale heat network across the

Galashiels/Tweedbank area and the role each local stakeholder will play in a heat network of that size. The council will also begin identifying and carrying out early engagement with key local stakeholders with respect to the 28 Potential Heat Network Zones identified. Where appropriate, the council will begin gathering real-world consumption data via engagement with heat off-takers and anchor load operators such as through Building Assessment Reports and other means. The council will begin with two major stakeholder groups, social landlords and other public bodies, as they will play an important role in the development of heat networks.

Alongside external engagement, the council will also conduct internal engagement with relevant officers to understand:

- Potential opportunities for council buildings to improve the potential for a heat network.
- Potential changes in heat demand from upcoming development plans to expand and 'futureproof' the potential heat network zones.
- The potential of solar PV and battery storage in the council's operational buildings, schools, waste recycling centres, land, parking lots, commercial enterprises, agricultural buildings/sites and other relevant sites with the intention of this energy to be used to power heat pumps and heat networks for greater savings.
- Exploring with the planning team the council's approach to mandate connection to a heat network, whether this is through the planning process for new developments or for existing public buildings, as explored below.

The Scottish Government introduced a Proposal for a Heat in Buildings Bill: Consultation which opened on 28th November 2023 and closed on 8th March 2024. This bill proposes renewed powers to local authorities regarding heat networks:

- Provide local authorities with powers to require buildings within a Heat Network Zone to end their use of polluting heating systems (by a certain date, and with a minimum notice period). This in practice would produce a commercially viable option for these building to connect to a heat network.
- Provides local authorities powers that would require developers to connect new buildings that are within Heat Network Zones to a heat network.
- A requirement of occupiers of non-domestic buildings to provide information about their unused heat on the premises and potentially then require these buildings with unused heat to provide this to a local heat network where this is commercially viable.

The Proposal for the Heat in Buildings Bill is backed by the National Planning Framework 4 and these three key aspects will further the decarbonisation of heat through commercially viable options for buildings.

Key Challenges:

- Securing HNSU financing to facilitate the Heat Network Delivery Plan.
- Ensuring the customer charter is aligned with the LHEES vision and Scottish Borders Council's policies.
- Bridging skills gaps to aid the implementation of the Heat Network Delivery Plan.

Actions
13. If the council is successful in its next funding application to the HNSU, it will utilise that resource to develop a Heat Network Delivery Plan covering the three main strategic areas of delivery models, investment opportunities, and building a business case.

1.5 Communication and Stakeholder Engagement

The LHEES was developed with key considerations from stakeholders, and its ongoing success is dependent on continuing this engagement. Further, retrofit and decarbonisation are not currently common projects which a significant proportion of property owners have undertaken. This area is complex and new to most people. Therefore, property owners and occupiers require clear and consistent messaging about why and how to retrofit, the attractive funding opportunities available to retrofit, what the benefits of retrofit are, and the standards which may require them to act.

In addition to funding, the council also has an important function as a public body with regulatory functions. There are multiple existing standards to ensure our homes and buildings meet an appropriate level of energy efficiency and decarbonise their heat. There are also several new standards being proposed by the Scottish Government (in the Heat in Buildings Bill and Social Housing Net Zero Standard consultations). The council will seek to understand, communicate and guide people. The council will focus efforts on delivery areas, but also provide an avenue for anyone in the Scottish Borders to access this information.

Furthermore, the council will ensure that there is robust stakeholder engagement before and during projects which are undertaken for each Delivery Area. This will secure buy-in from relevant parties, prepare people in advance and unlock opportunities for wider participation in collaborative initiatives.

Key Challenges:

- Providing property owners with clear and consistent messaging regarding retrofit.

Actions
14. The council will undertake consistent and ongoing stakeholder engagement across the Delivery Areas and Heat Network Zone opportunities. The council will also drive communication to inspire, support, advise and signpost people toward action, focusing these locations and growing this activity across the region as far as practical.

2 Delivery Areas and Heat Network zones

The council has identified a set of Potential Delivery Areas and Potential Heat Network Zones based on the LHEES Methodology and the Scottish Borders LHEES Vision. The council selected these locations as they have the highest potential to contribute to the achievement of the LHEES Vision and they align with progress made by existing local schemes. This resulted in 20 Potential Delivery Areas and 28 Potential Heat Network Zones

While the selection of areas is based on rigorous data analysis, they are only 'starting points' with boundaries that are indicative rather than definitive. LHEES will continue to develop and evolve in the future with the aim of capturing more communities in delivery areas and heat network zones. This is because the data available for analysing building performance is not always up-to-date or precise. To mitigate the impact of any major inaccuracies, the council will aim, when feasible, to update this data for further analysis as required. The limitations on data have also highlighted the importance of local engagement and planning. Therefore, these areas have all been identified as "potential" areas which will need to be qualified based on investigation and further local engagement.

Potential Delivery Areas are detailed in section 2.1 along with a summary based on the changes that each building is expected to undergo for it to meet reasonable energy efficiency standards and have zero direct emission heat.

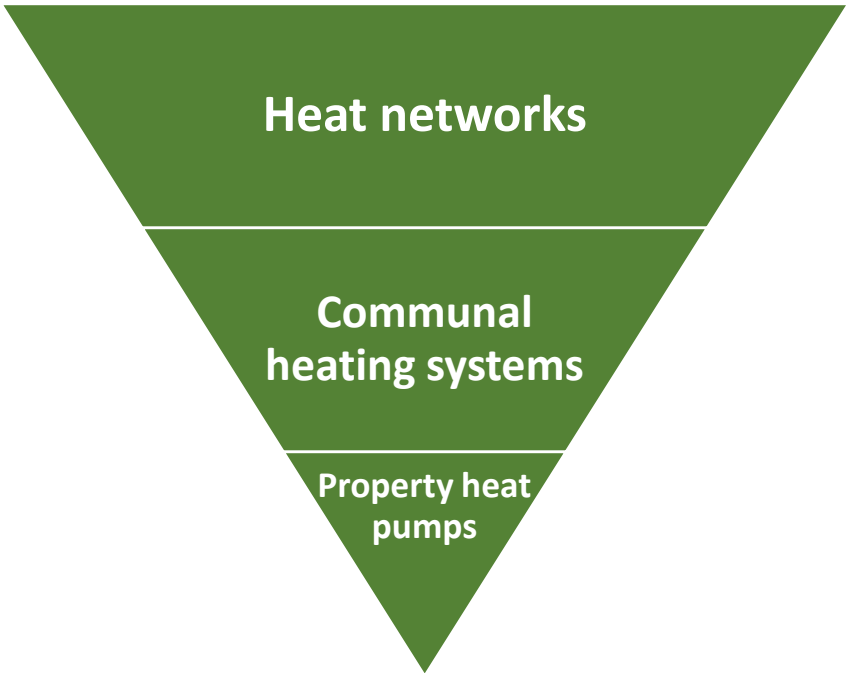
Potential Heat Network Zones are detailed in section 2.2.

2.1 Potential Delivery Areas

The council has prioritised Delivery Areas with the largest numbers of heat pump ready and energy efficiency properties and defined them in terms of whether they are on-gas or off-gas, as per the LHEES Methodology.

- Heat pump ready properties (also known as Category 1) are well insulated or mostly well insulated, requiring minimal or no building fabric measures before they can be installed with a heat pump or connected to a communal heating system. These properties are usually the most straightforward to decarbonise and the council has ensured they are all outside of heat network zones. This is because for any properties which fall within a heat network zone the priority decarbonisation pathway should be connection to the network.
- Energy efficiency properties (also known as Category 2) often require some form of fabric upgrade, such as wall insulation, before they are ready for decarbonisation, whether a heat pump or communal heating installation, or connection to a heat network. These types of properties have been identified irrespective of whether they are in a Potential Heat Network Zone or not. This is because all properties should be considered for energy efficiency upgrades and thereafter decarbonise according to the appropriate pathway (Figure 3).

Figure 3: The council's preferred heat decarbonisation hierarchy follows priorities of the LHEES Vision, namely the cost of heating.



The Potential Delivery Areas are summarised in Table 1. These areas are only indicative of what *could* be achieved; decisive plans have not yet been drawn up and this indicative cost analysis has only been undertaken to help guide the next practical steps of implementing the Delivery Plan.

Table 1: List of Potential Delivery Areas within Scottish Borders

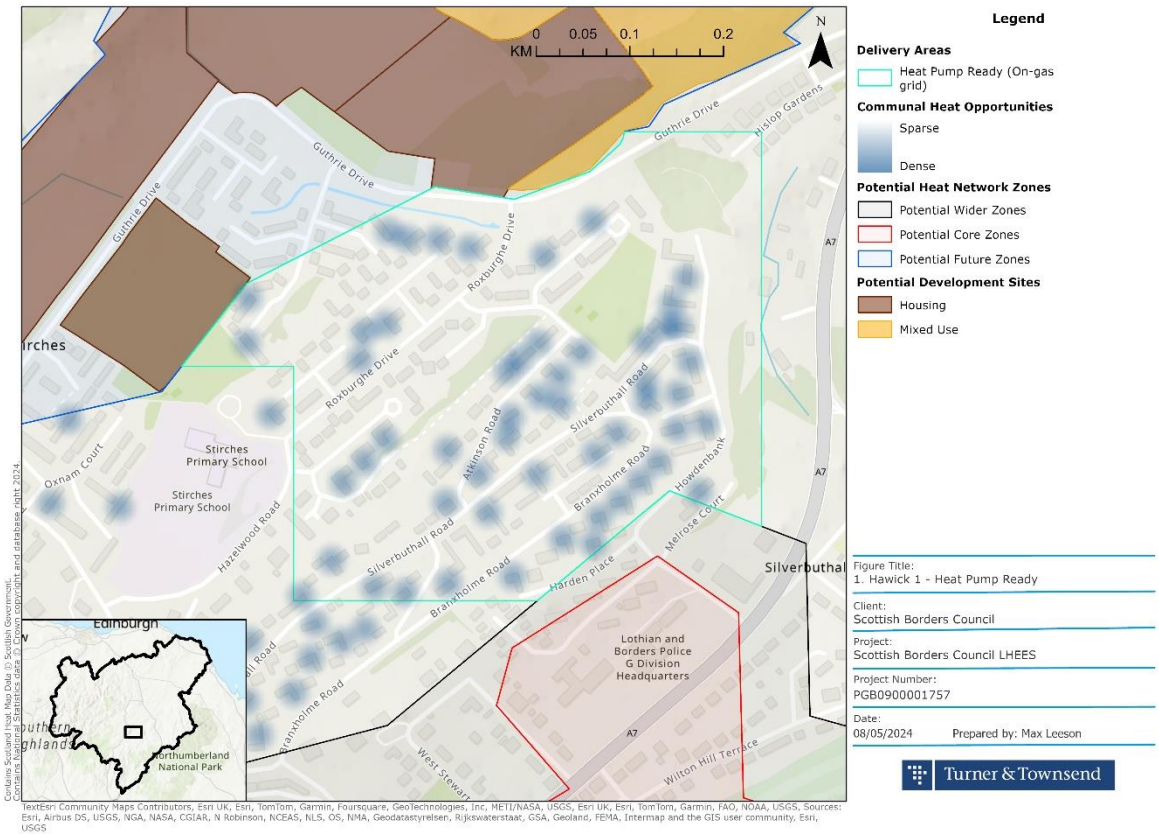
Potential Delivery Area Name	Type of Delivery Area	Properties	Average CO_2 Savings (kg/y)	Average Bill Savings	Average Retrofit Cost
1 Hawick 1 – Heat Pump Ready	On Gas	458	1,500	£ 278.46	£ 14,210
2: Hawick 2 – Heat Pump Ready	On Gas	560	2,310	£ 357.08	£ 22,250
3: Kelso 1 – Heat Pump Ready	On Gas	858	2,400	£ 376.43	£ 21,210
4: Peebles 1 – Heat Pump Ready	On Gas	361	1,220	£ 265.60	£ 11,930
5: Eyemouth 1 – Heat Pump Ready	On Gas	481	1,830	£ 318.48	£ 17,820
6: Duns 1 – Energy Efficiency	On Gas	71	1,460	£ 293.34	£ 13,170
7: Jedburgh 1 – Energy Efficiency	On Gas	99	1,010	£ 236.53	£ 10,280
8: Kelso 1 – Energy Efficiency	On Gas	280	916.98	£ 193.01	£ 9,020
9: Coldstream 1 – Energy Efficiency	On Gas	132	940.84	£ 173.87	£ 9,300
10: Peebles 1 – Energy Efficiency	On Gas	229	1,890	£ 306.60	£ 15,730
11: Galashiels 1 – Heat Pump Ready	Off Gas	138	1,510	£ 1,140.00	£ 16,160
12: Chirnside 1 – Heat Pump Ready	Off Gas	250	3,030	£ 1,220.00	£ 21,960
13: West Linton 1 – Heat Pump Ready	Off Gas	238	3,320	£ 899.31	£ 20,960
14: Cardrona 1 – Heat Pump Ready	Off Gas	211	1,640	£ 1,600.00	£ 19,050
15: Earlston 1 – Heat Pump Ready	Off Gas	192	3,020	£ 1,500.00	£ 22,910
16: Morebattle 1 – Energy Efficiency	Off Gas	28	2,030	£ 790.12	£ 14,590
17: Greenlaw 1 – Energy Efficiency	Off Gas	34	1,460	£ 582.97	£ 12,490
18: Newcastleton 1 – Energy Efficiency	Off Gas	56	4,520	£ 1,140.00	£ 25,830
19: Hawick 1 – Energy Efficiency	Off Gas	45	419.63	£ 369.87	£ 6,940
20: Hawick 2 – Energy Efficiency	Off Gas	60	285.50	£ 245.11	£ 5,270

The following sections show maps and table summaries of the decarbonisation pathways for individual Potential Delivery Areas. The maps display:

- A boundary of the Potential Delivery Area indicating a presence of properties belonging to that type of Delivery Area.
- A mapping of the potential communal heating opportunities in relevant areas.
- Potential Heat Network Zones that are proximate to the Delivery Area.
- Potential local development plan sites, displaying potential opportunities to align programmes with development activities as part of a holistic approach to regenerate and decarbonise the area.

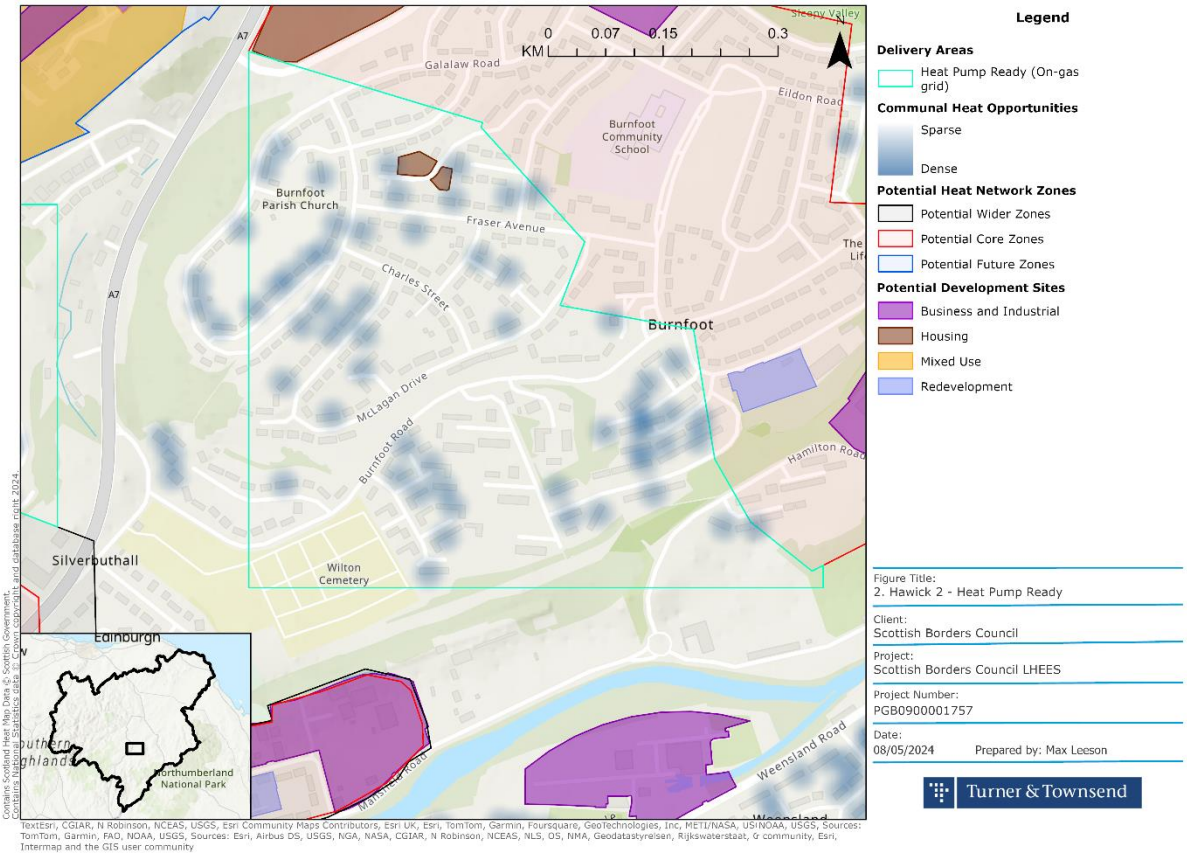
Alongside the map, a table identifies the summary outputs of the PEAT-OR tool, which provides building-level pathways for improving the energy efficiency and decarbonising homes. This data includes the number of properties belonging to the type of Delivery Area within the boundary, the average emission savings if the recommended measures were installed for each property, the estimated average annual cost savings, estimated average installation costs, and the total number of listed properties as well as the number of properties that are located within conservation areas.

Potential Delivery Area 1: Hawick 1 – Heat Pump Ready



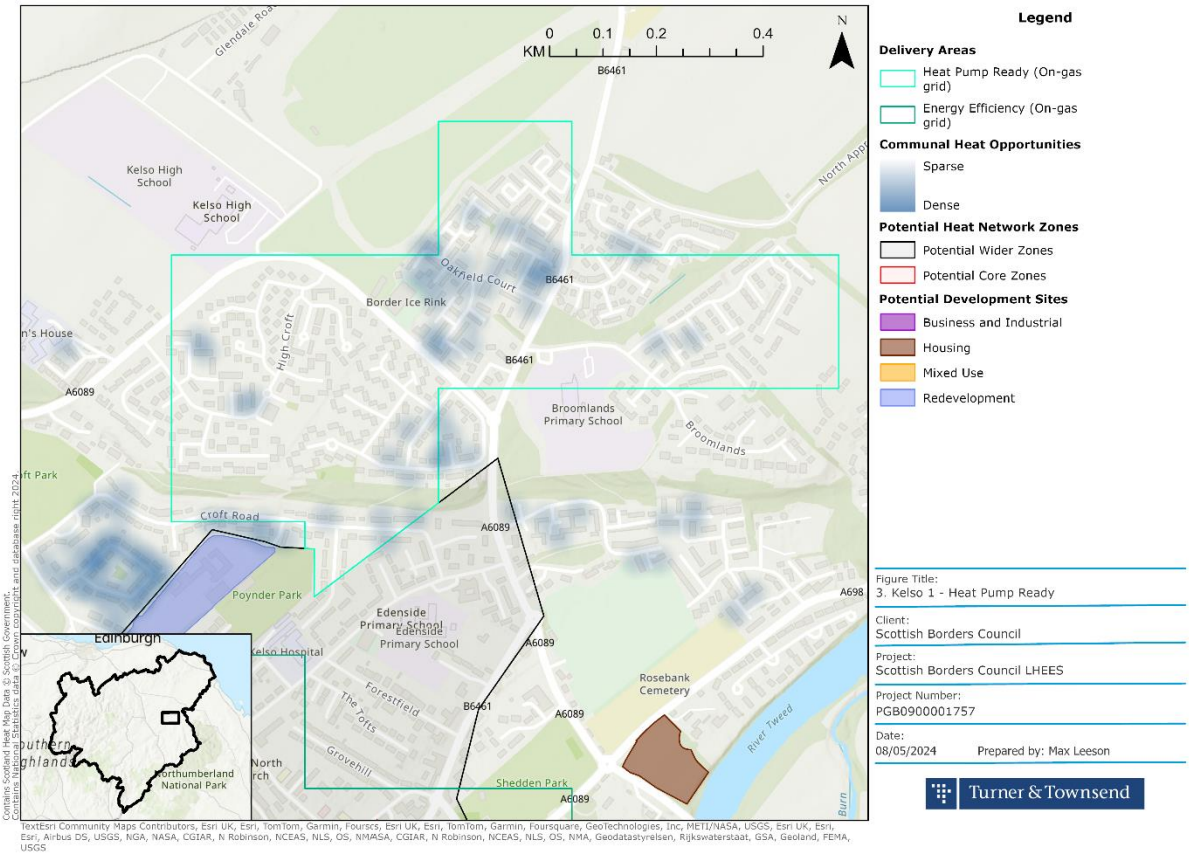
Potential Delivery Area	Hawick 1 – Heat Pump Ready
Property Count	458
Estimated Average CO_2 Savings (kg/yr)	1,500
Estimated Average Annual Energy Bill Savings	£278.46
Estimated Average of Total Intervention Cost	£ 14,210
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 2: Hawick 2 – Heat Pump Ready



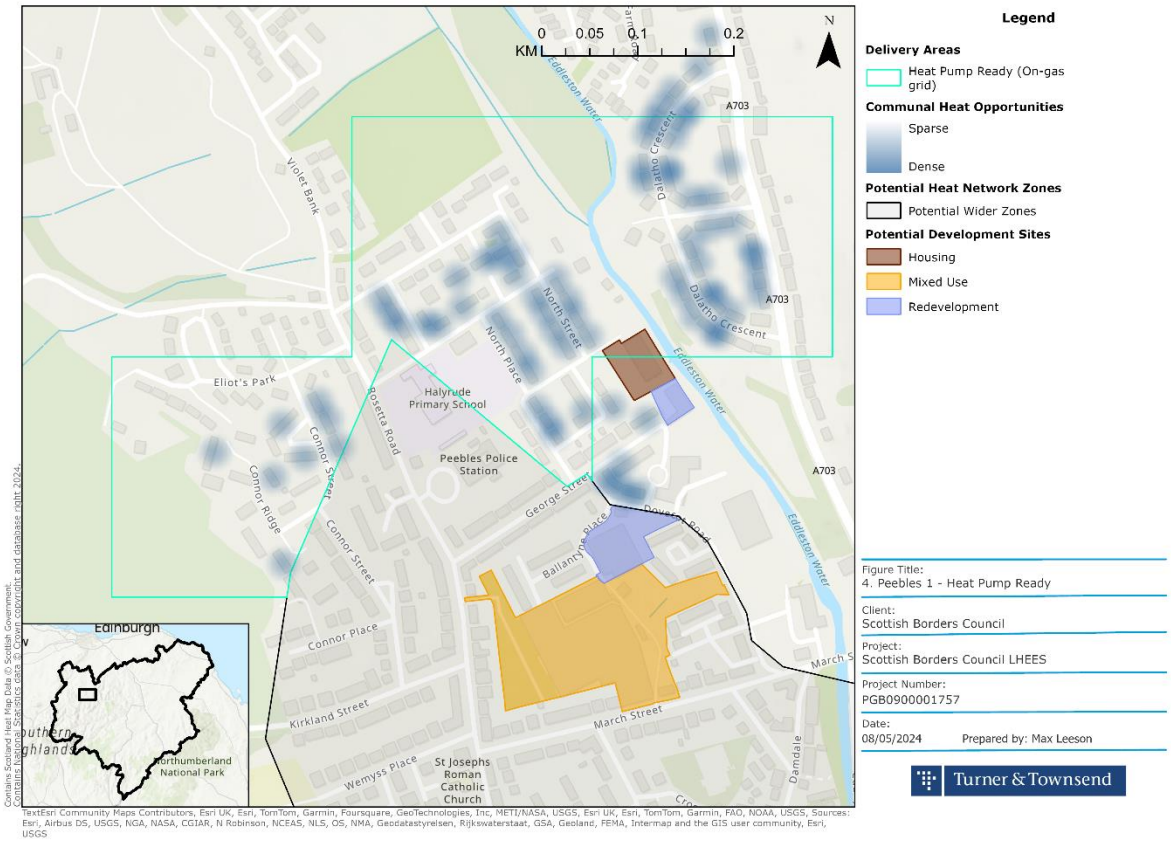
Potential Delivery Area	Hawick 2 – Heat Pump Ready
Property Count	560
Estimated Average CO_2 Savings (kg/yr)	2,310
Estimated Average Annual Energy Bill Savings	£357.08
Estimated Average of Total Intervention Cost	£ 22,250
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 3: Kelso 1 – Heat Pump Ready



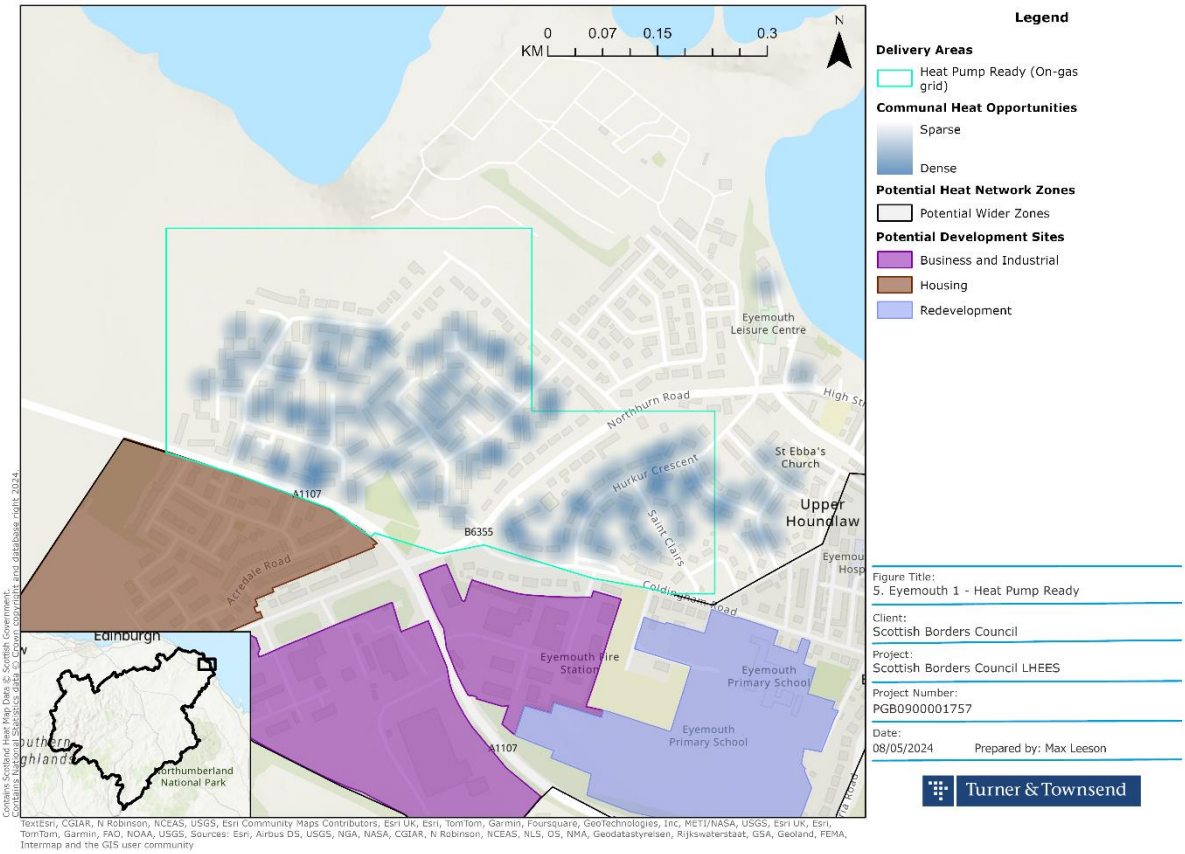
Potential Delivery Area	Kelso 1 – Heat Pump Ready
Property Count	858
Estimated Average CO_2 Savings (kg/yr)	2,400
Estimated Average Annual Energy Bill Savings	£376.43
Estimated Average of Total Intervention Cost	£ 21,210
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 4: Peebles 1 – Heat Pump Ready



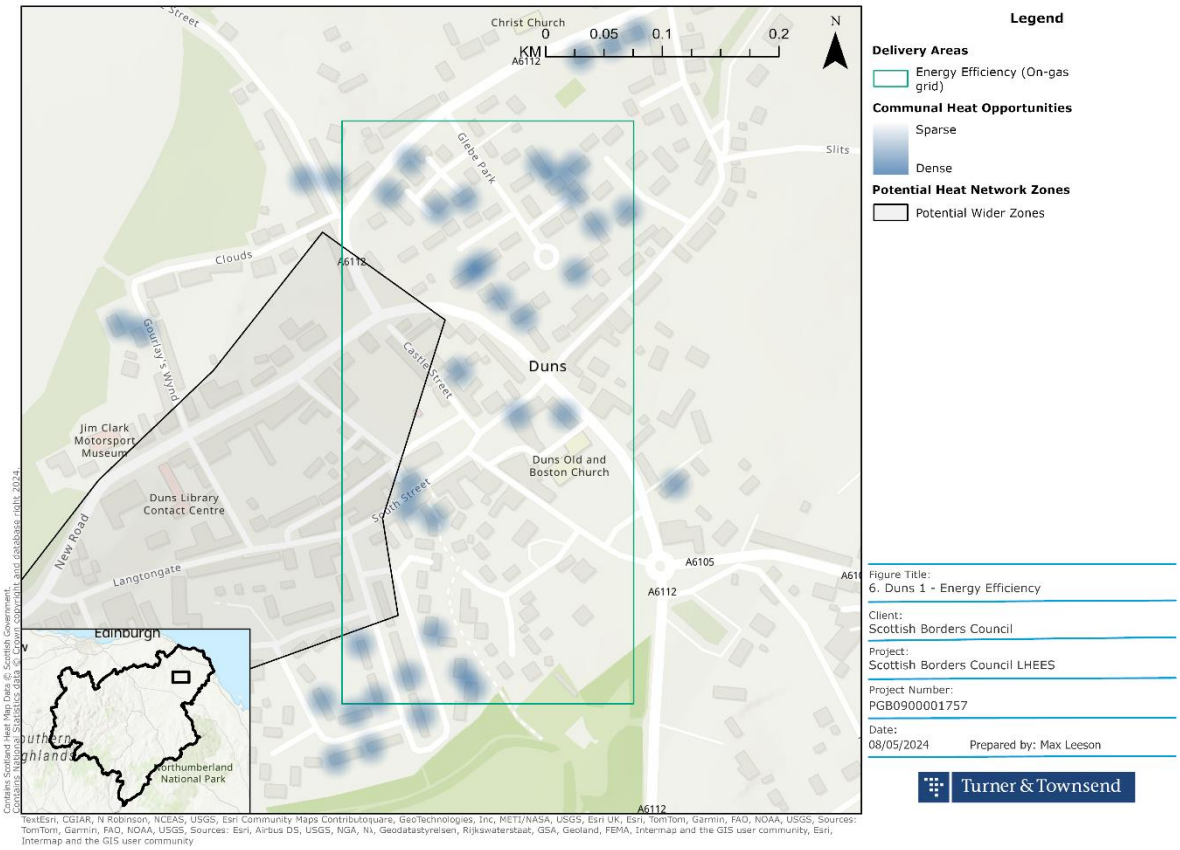
Potential Delivery Area	Peebles 1 – Heat Pump Ready
Property Count	361
Estimated Average CO_2 Savings (kg/yr)	1,220
Estimated Average Annual Energy Bill Savings	£265.60
Estimated Average of Total Intervention Cost	£ 11,930
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 5: Eyemouth 1 – Heat Pump Ready



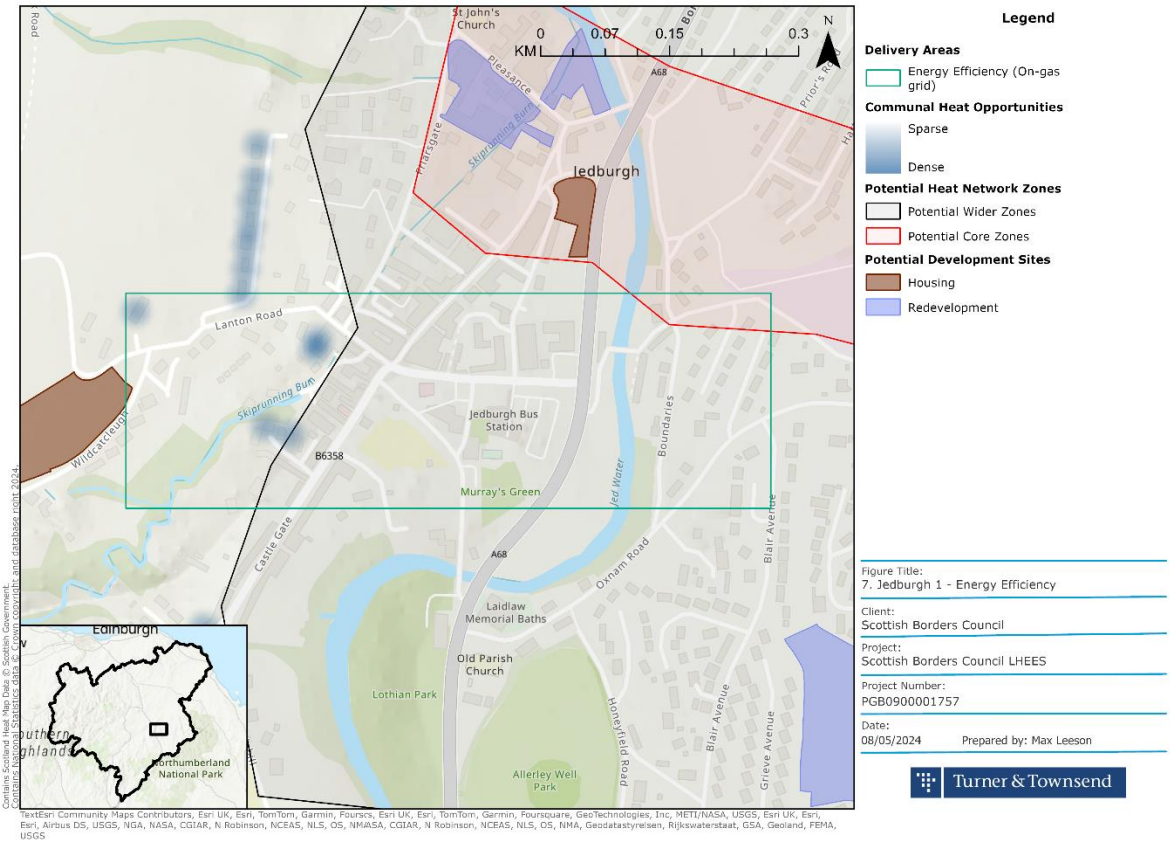
Potential Delivery Area	Eyemouth 1 – Heat Pump Ready
Property Count	481
Estimated Average CO_2 Savings (kg/yr)	1,830
Estimated Average Annual Energy Bill Savings	£318.48
Estimated Average of Total Intervention Cost	£ 17,820
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 6: Duns 1 – Energy Efficiency



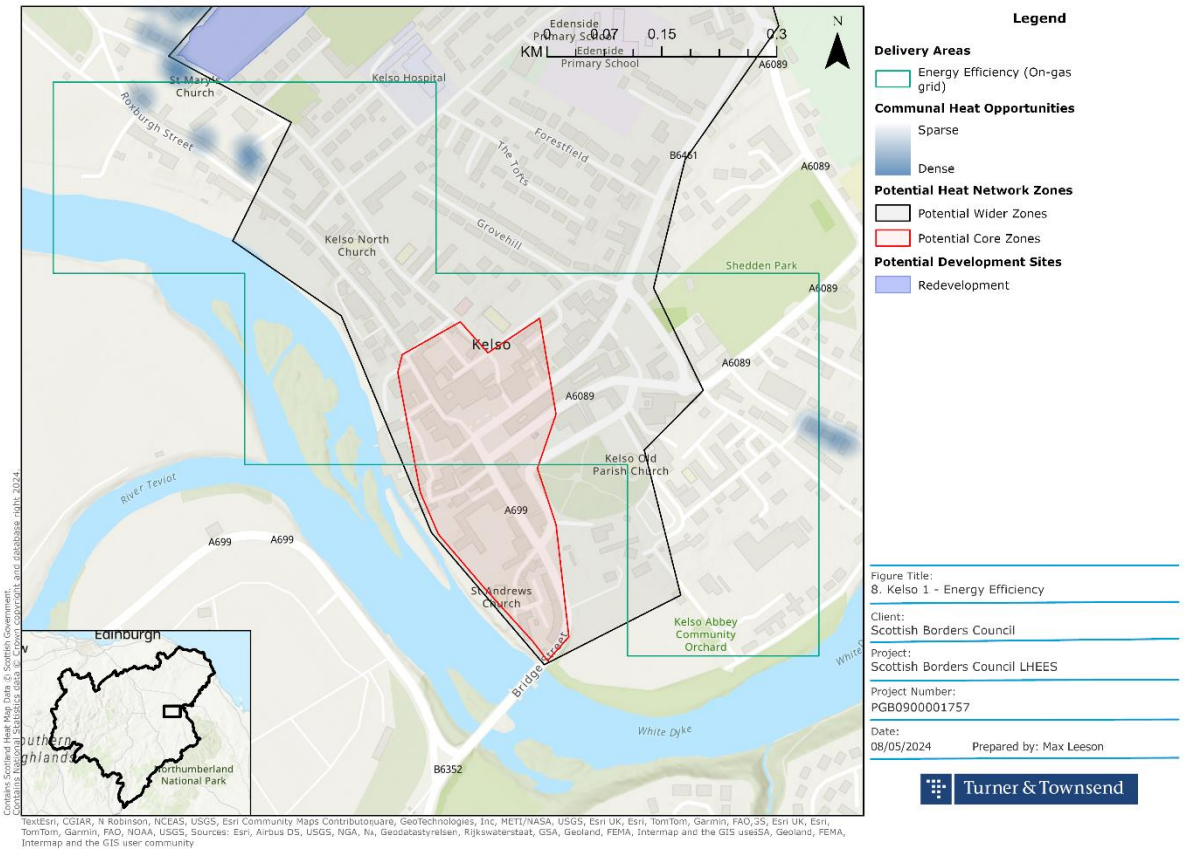
Potential Delivery Area	Duns 1 – Energy Efficiency
Property Count	71
Estimated Average CO_2 Savings (kg/yr)	1,460
Estimated Average Annual Energy Bill Savings	£293.34
Estimated Average of Total Intervention Cost	£ 13,170
Listed Buildings Count	7
Buildings in conservation areas	56

Potential Delivery Area 7: Jedburgh 1 – Energy Efficiency



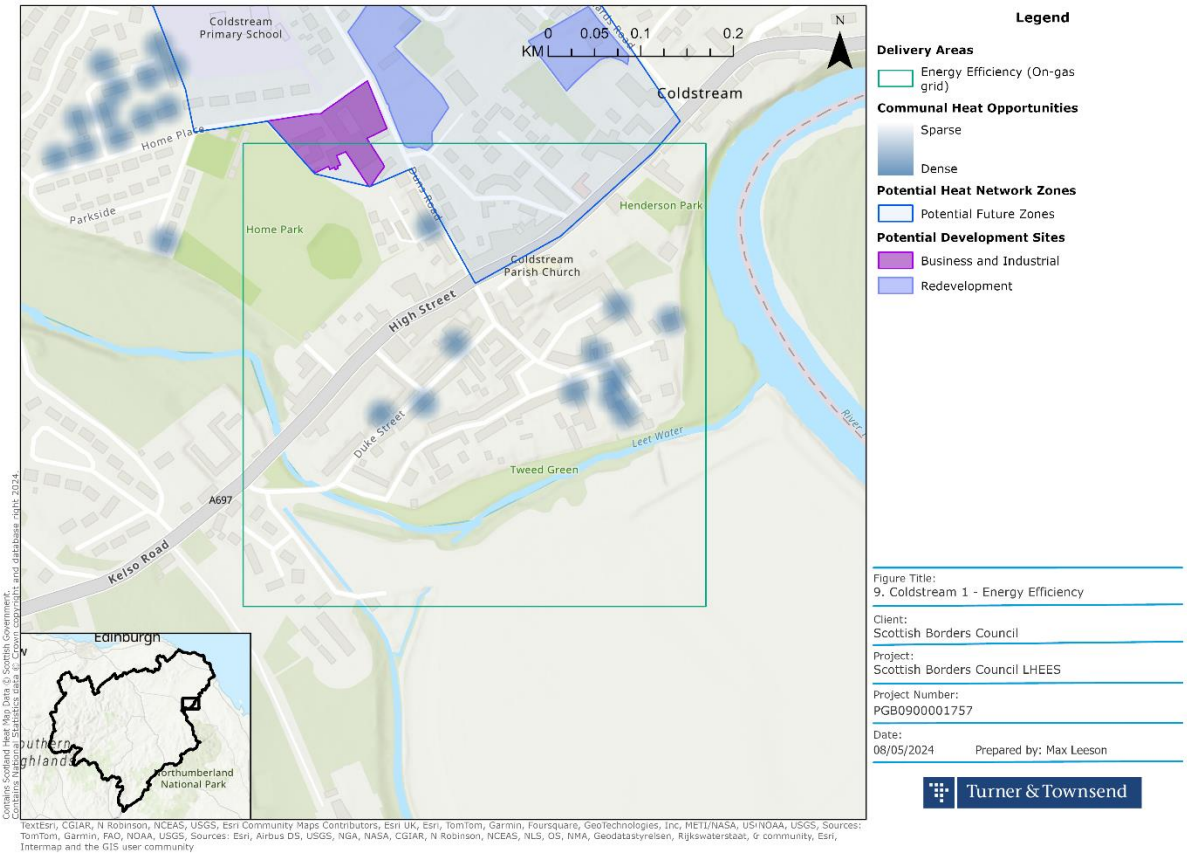
Potential Delivery Area	Jedburgh 1 – Energy Efficiency
Property Count	99
Estimated Average CO_2 Savings (kg/yr)	1,010
Estimated Average Annual Energy Bill Savings	£236.53
Estimated Average of Total Intervention Cost	£ 10,280
Listed Buildings Count	27
Buildings in conservation areas	94

Potential Delivery Area 8: Kelso 1 – Energy Efficiency



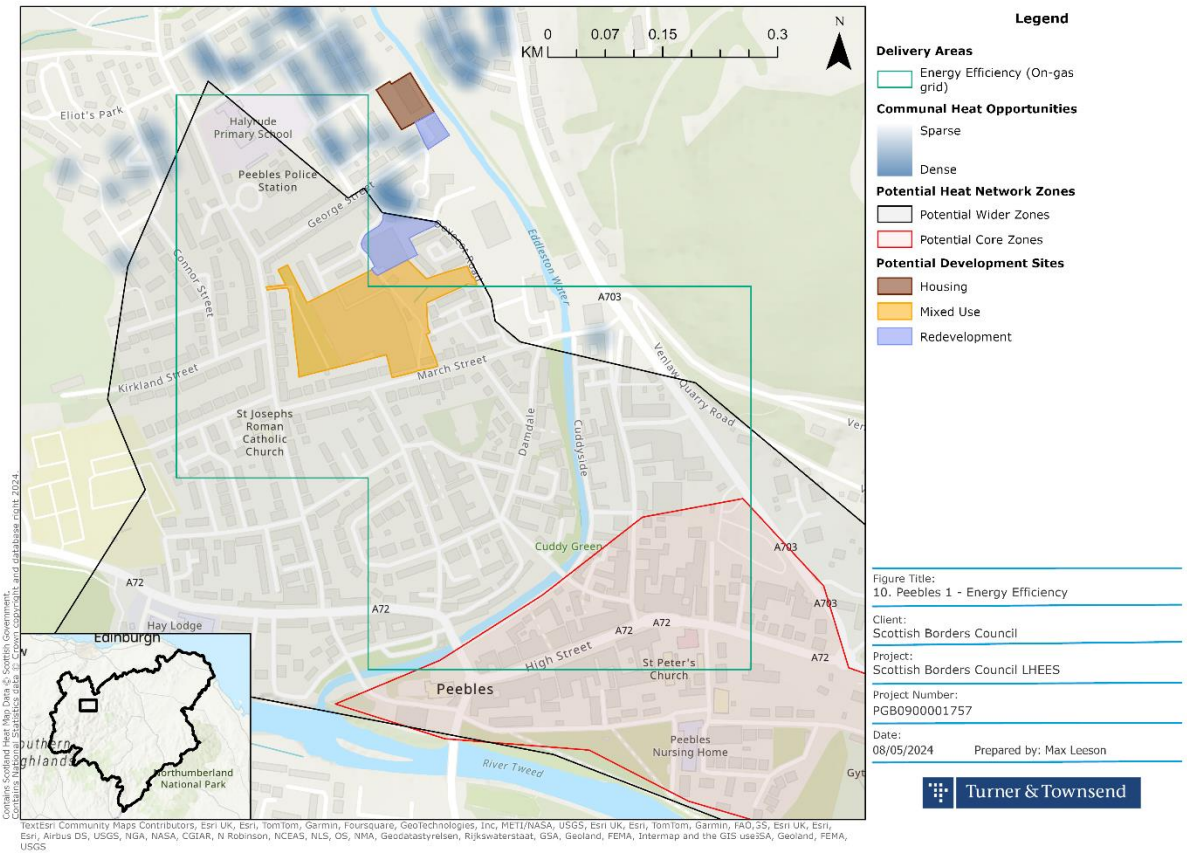
Potential Delivery Area	Kelso 1 – Energy Efficiency
Property Count	280
Estimated Average CO_2 Savings (kg/yr)	916.98
Estimated Average Annual Energy Bill Savings	£193.01
Estimated Average of Total Intervention Cost	£ 9,020
Listed Buildings Count	36
Buildings in conservation areas	274

Potential Delivery Area 9: Coldstream 1 – Energy Efficiency



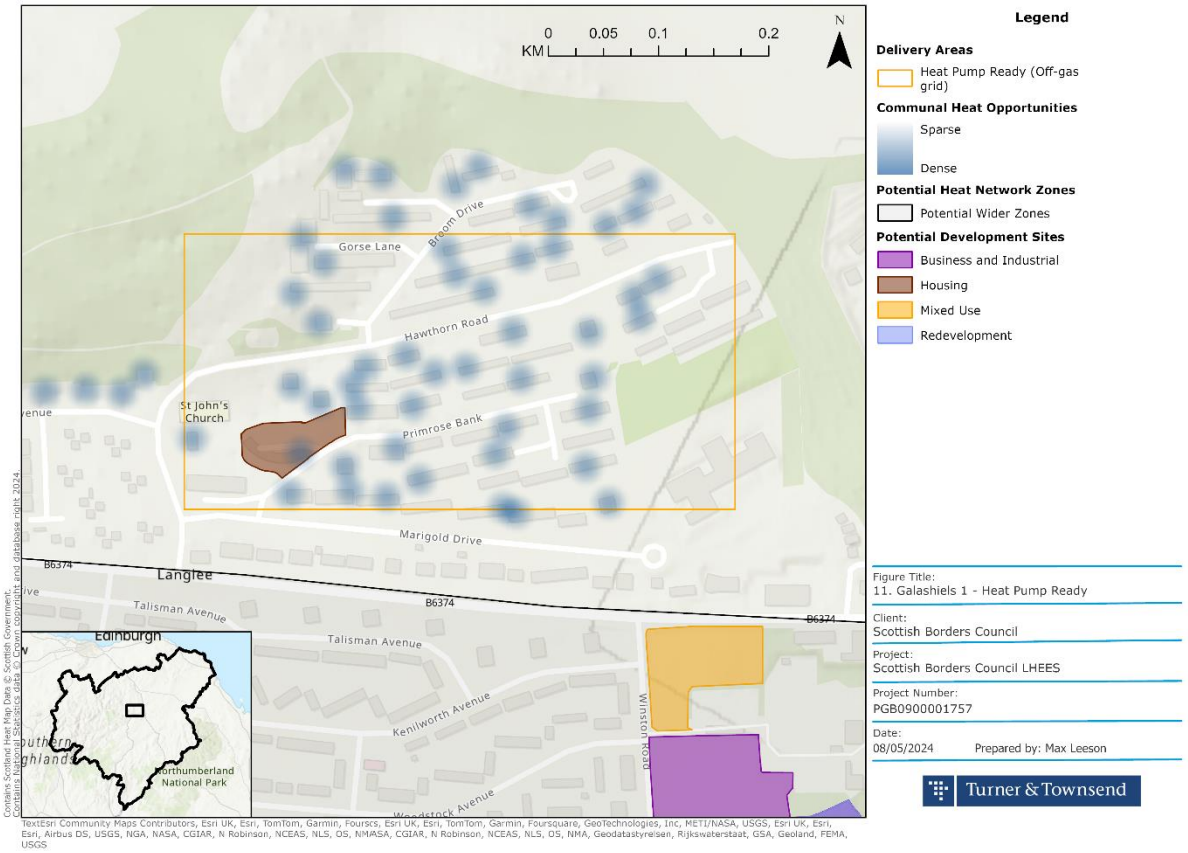
Potential Delivery Area	Coldstream 1 – Energy Efficiency
Property Count	132
Estimated Average CO_2 Savings (kg/yr)	940.84
Estimated Average Annual Energy Bill Savings	£173.87
Estimated Average of Total Intervention Cost	£ 9,300
Listed Buildings Count	21
Buildings in conservation areas	132

Potential Delivery Area 10: Peebles 1 – Energy Efficiency



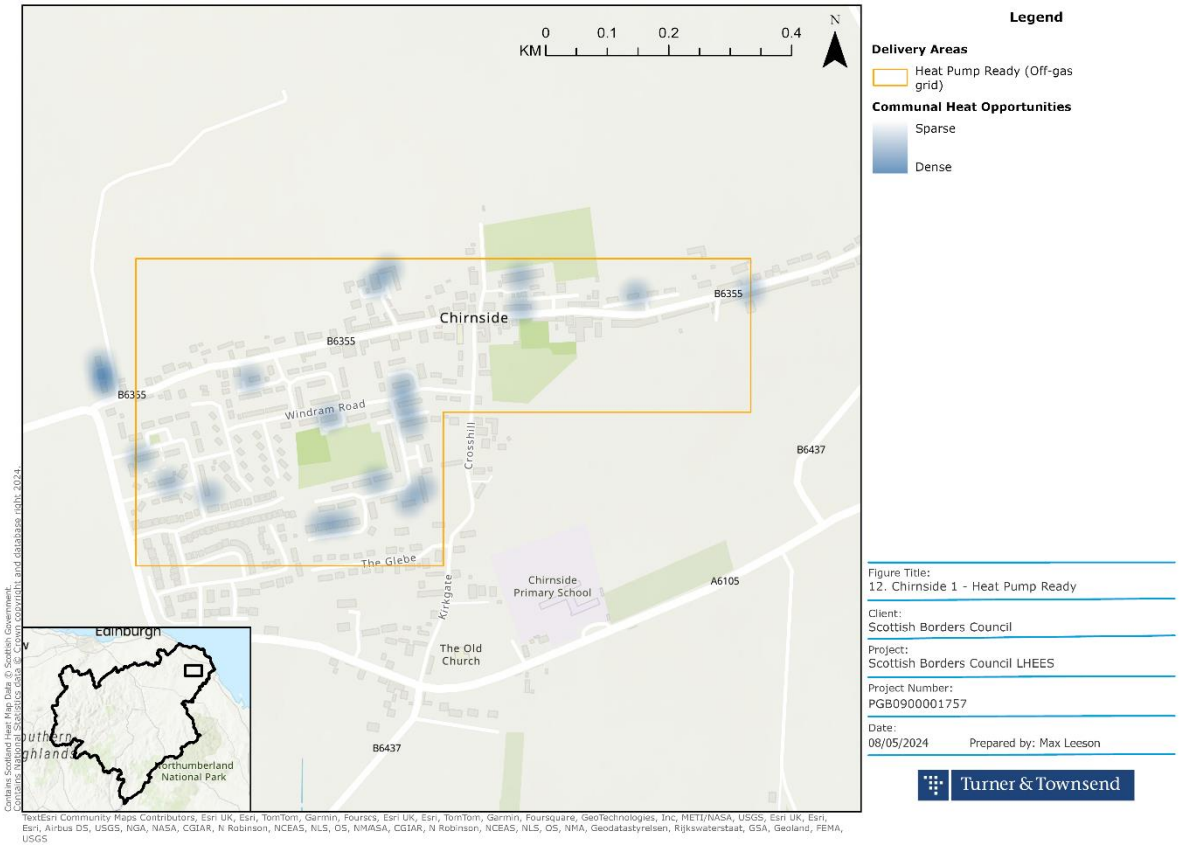
Potential Delivery Area	Peebles 1 – Energy Efficiency
Property Count	229
Estimated Average CO_2 Savings (kg/yr)	1,890
Estimated Average Annual Energy Bill Savings	£306.60
Estimated Average of Total Intervention Cost	£ 15,730
Listed Buildings Count	5
Buildings in conservation areas	223

Potential Delivery Area 11: Galashiels 1 – Heat Pump Ready



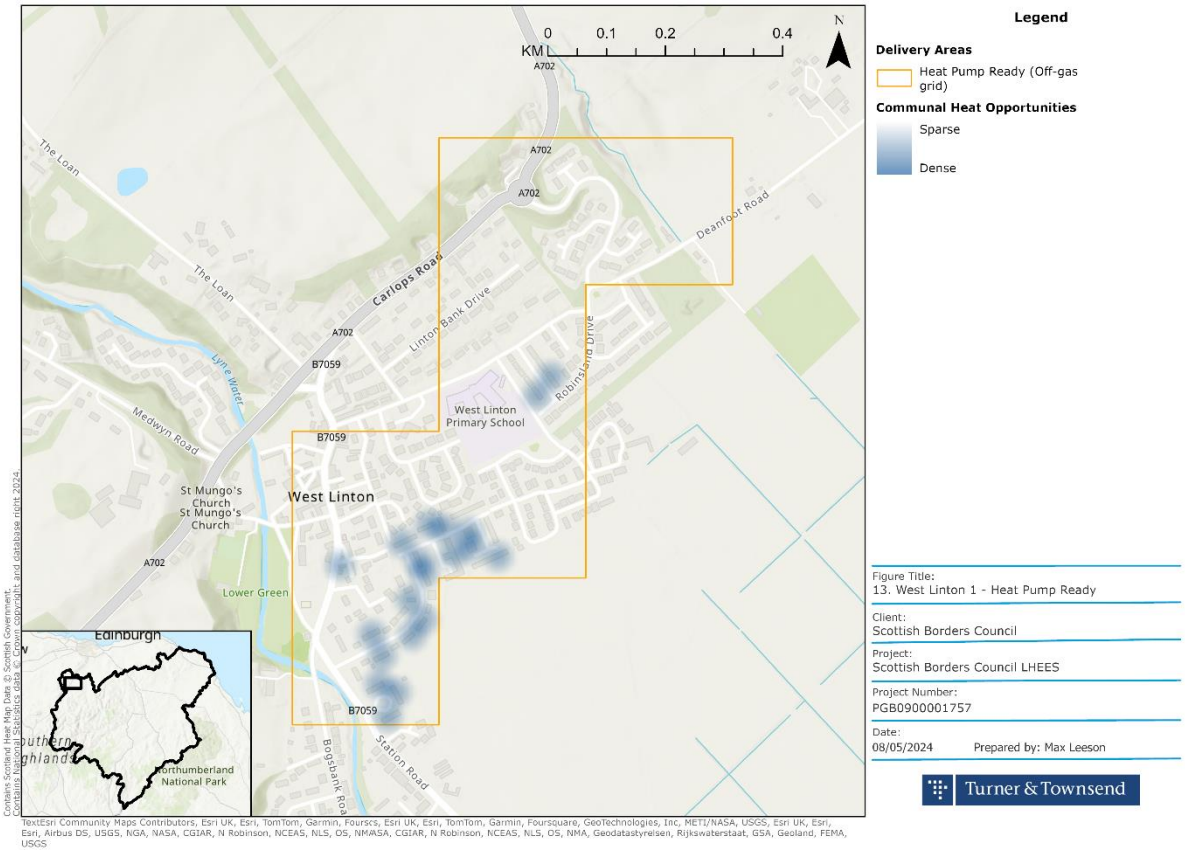
Potential Delivery Area	Galashiels 1 – Heat Pump Ready
Property Count	138
Estimated Average CO_2 Savings (kg/yr)	1,510
Estimated Average Annual Energy Bill Savings	£1,140
Estimated Average of Total Intervention Cost	£ 16,160
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 12: Chirnside 1 – Heat Pump Ready



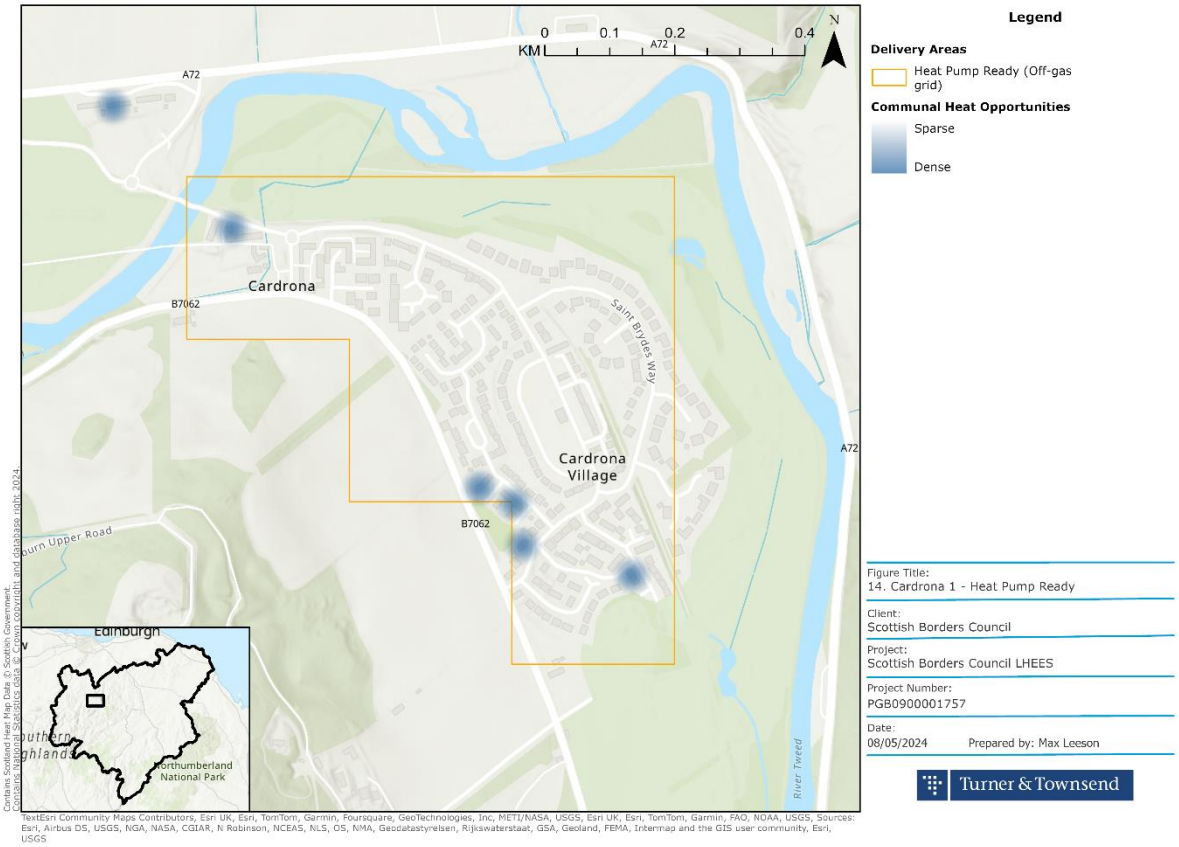
Potential Delivery Area	Chirnside 1 – Heat Pump Ready
Property Count	250
Estimated Average CO_2 Savings (kg/yr)	3,030
Estimated Average Annual Energy Bill Savings	£1,220.00
Estimated Average of Total Intervention Cost	£ 21,960
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 13: West Linton 1 – Heat Pump Ready



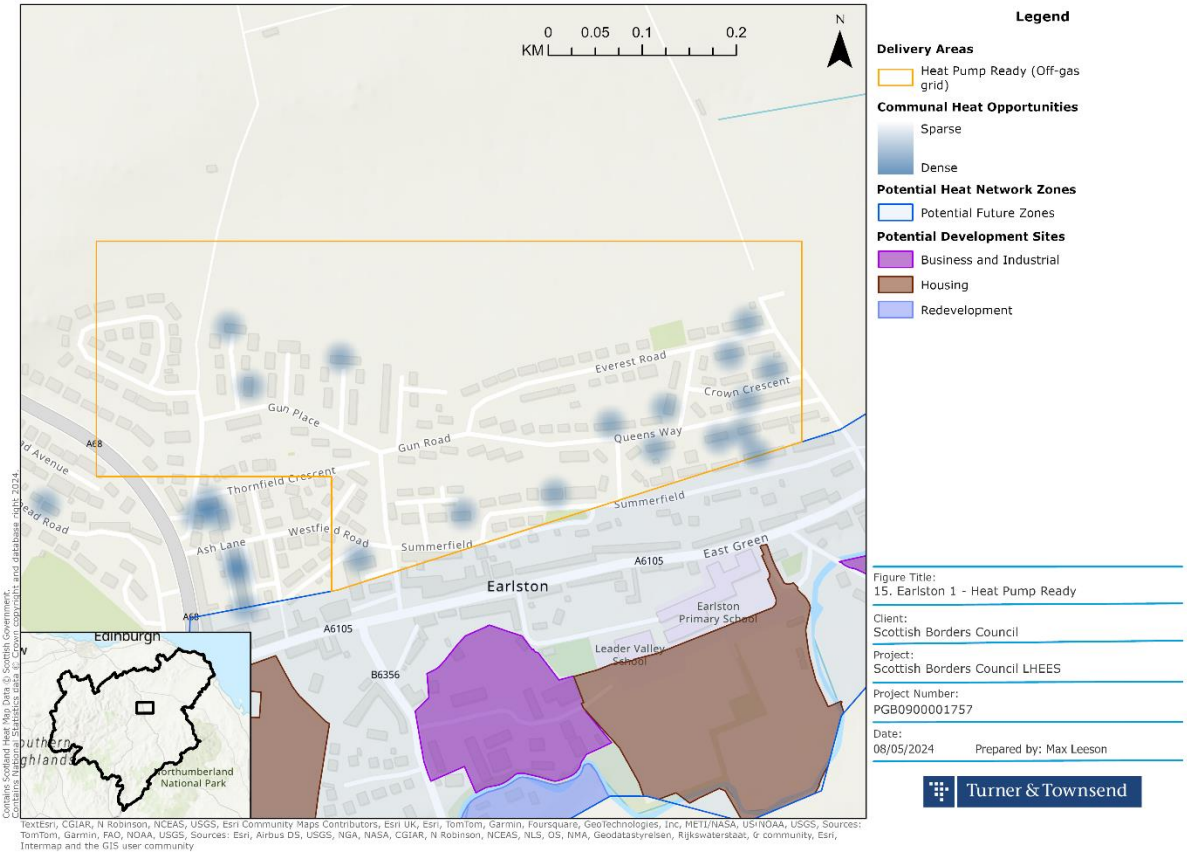
Potential Delivery Area	West Linton 1 – Heat Pump Ready
Property Count	238
Estimated Average CO_2 Savings (kg/yr)	3,320
Estimated Average Annual Energy Bill Savings	£899.31
Estimated Average of Total Intervention Cost	£ 20,960
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 14: Cardrona 1 – Heat Pump Ready



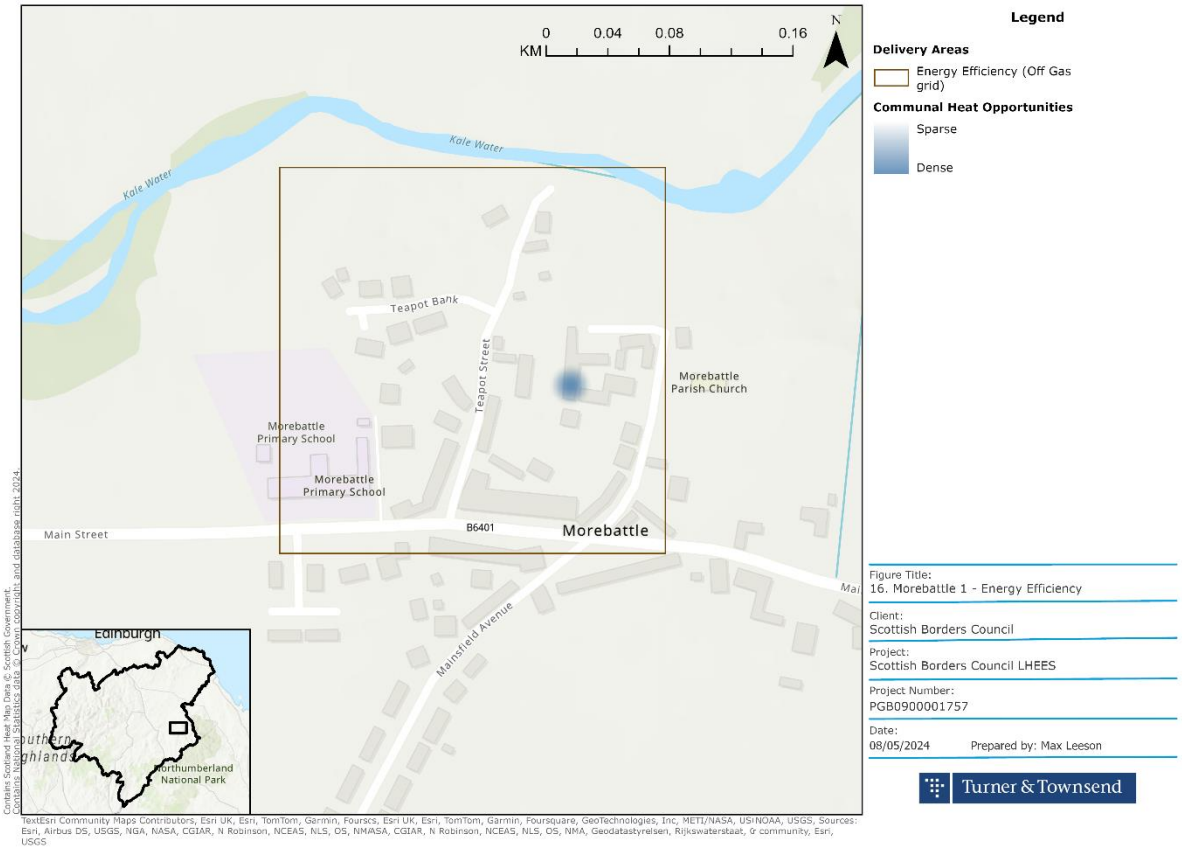
Potential Delivery Area	Cardrona 1 – Heat Pump Ready
Property Count	211
Estimated Average CO_2 Savings (kg/yr)	1,640
Estimated Average Annual Energy Bill Savings	£1,600
Estimated Average of Total Intervention Cost	£ 19,050
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 15: Earlston 1 – Heat Pump Ready



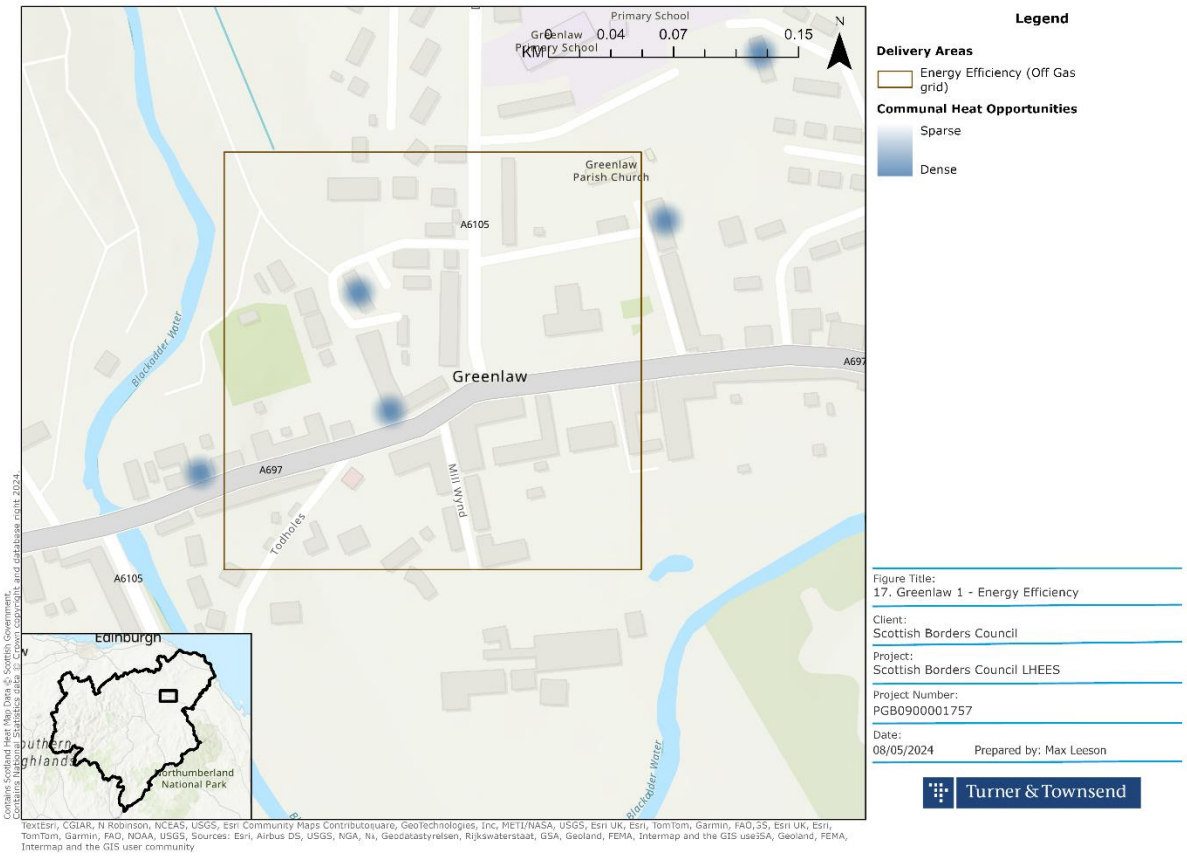
Potential Delivery Area	Earlston 1 – Heat Pump Ready
Property Count	192
Estimated Average CO_2 Savings (kg/yr)	3,020
Estimated Average Annual Energy Bill Savings	£1,500
Estimated Average of Total Intervention Cost	£ 22,910
Listed Buildings Count	0
Buildings in conservation areas	0

Potential Delivery Area 16: Morebattle 1 – Energy Efficiency



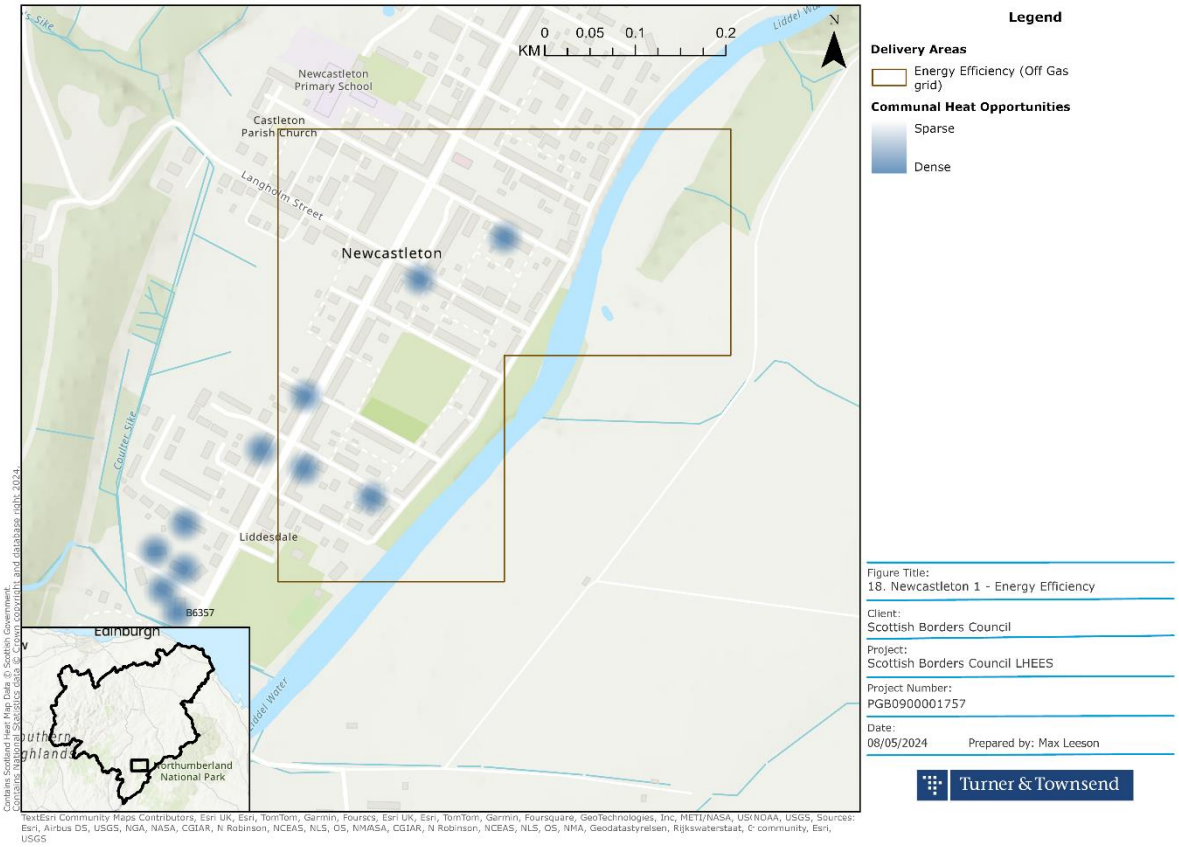
Potential Delivery Area	Morebattle 1 – Energy Efficiency
Property Count	28
Estimated Average CO_2 Savings (kg/yr)	2,030
Estimated Average Annual Energy Bill Savings	£790.12
Estimated Average of Total Intervention Cost	£ 14,590
Listed Buildings Count	0
Buildings in conservation areas	28

Potential Delivery Area 17: Greenlaw 1 – Energy Efficiency



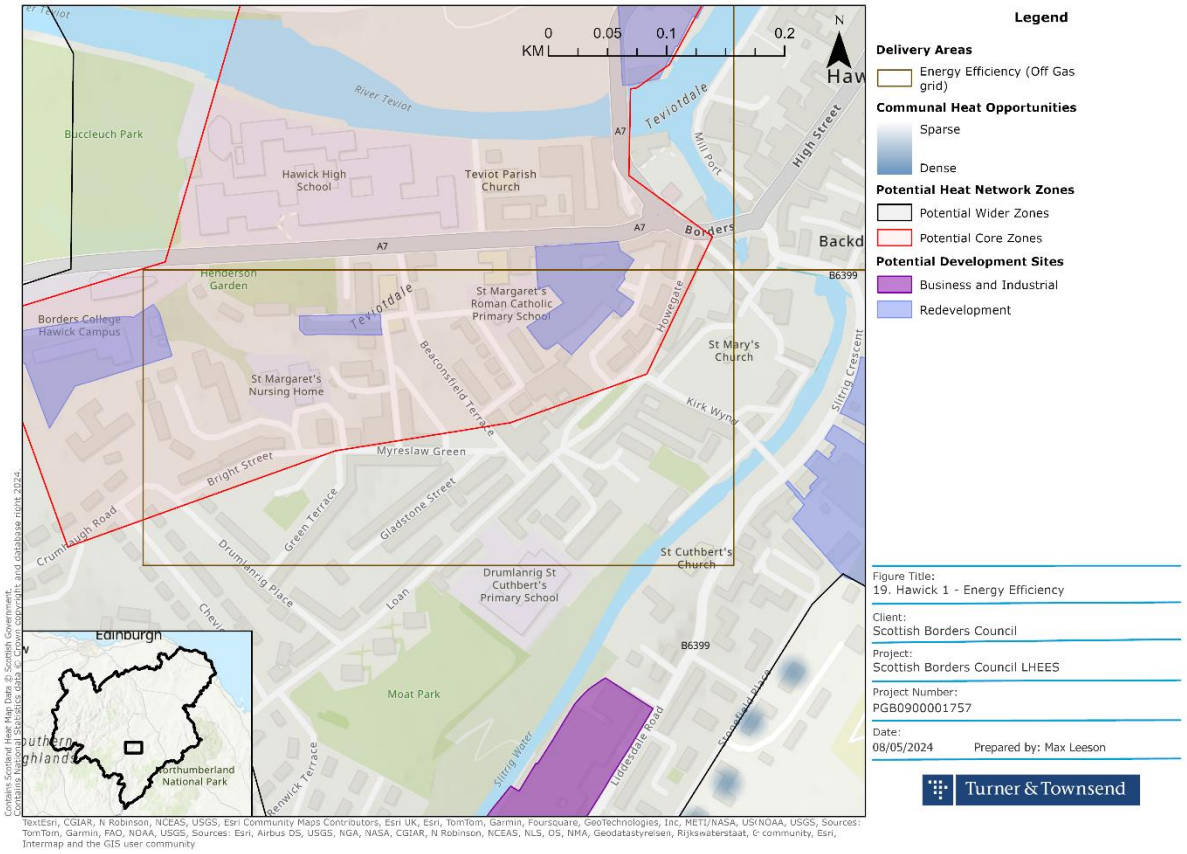
Potential Delivery Area	Greenlaw 1 – Energy Efficiency
Property Count	34
Estimated Average CO_2 Savings (kg/yr)	1,460
Estimated Average Annual Energy Bill Savings	£582.97
Estimated Average of Total Intervention Cost	£ 12,490
Listed Buildings Count	0
Buildings in conservation areas	32

Potential Delivery Area 18: Newcastleton 1 – Energy Efficiency



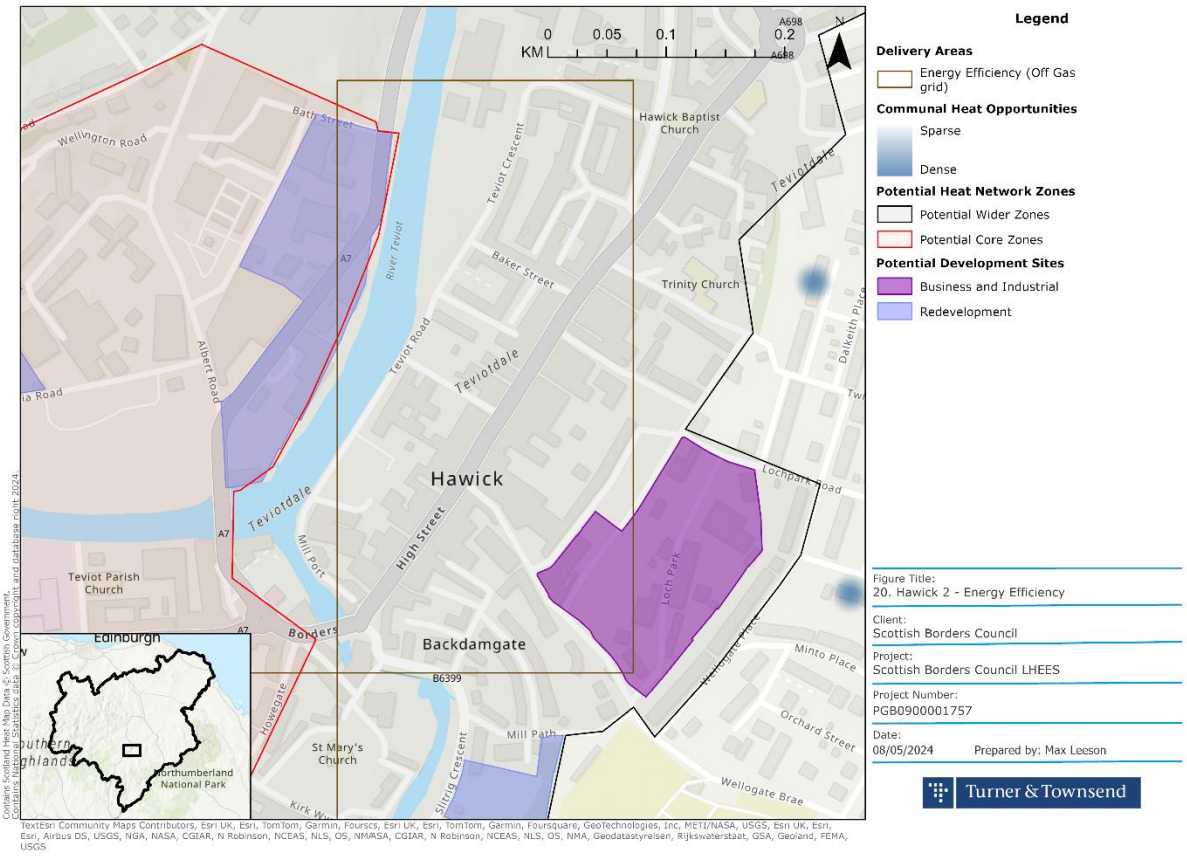
Potential Delivery Area	Newcastleton 1 – Energy Efficiency
Property Count	56
Estimated Average CO_2 Savings (kg/yr)	4,520
Estimated Average Annual Energy Bill Savings	£1,140.00
Estimated Average of Total Intervention Cost	£ 25,830
Listed Buildings Count	0
Buildings in conservation areas	53

Potential Delivery Area 19: Hawick 1 – Energy Efficiency



Potential Delivery Area	Hawick 1 – Energy Efficiency
Property Count	45
Estimated Average CO_2 Savings (kg/yr)	419.63
Estimated Average Annual Energy Bill Savings	£369.87
Estimated Average of Total Intervention Cost	£ 6,940
Listed Buildings Count	0
Buildings in conservation areas	45

Potential Delivery Area 20: Hawick 2 – Energy Efficiency



Potential Delivery Area	Hawick 2 – Energy Efficiency
Property Count	60
Estimated Average CO_2 Savings (kg/yr)	285.50
Estimated Average Annual Energy Bill Savings	£245.11
Estimated Average of Total Intervention Cost	£ 5,270
Listed Buildings Count	1
Buildings in conservation areas	60

2.2 Potential Heat Networks

The heat network analysis consisted of initially identifying zones by mapping the linear heat demand, which is a metric used to understand the presence of adequate heat demand for a heat network, across the Scottish Borders. The council analysed two levels of demand to identify areas with a high potential for heat networks as well as wider zones with the potential for expansion. Thereafter, the council assessed a third level consisting of potential future heat demand from currently known development sites. This analysis led to three tiers of Potential Heat Network Zones. These were further informed by heat supply data, internal stakeholder engagement with various council teams, external stakeholder engagement, public consultation, existing heat networks, constraints and multiple other factors to refine the boundaries. This resulted in the following zones summarised in Table 2:

- Potential Core Zones: these represent the zones with the highest current heat demand potential and priorities for the council to progress.
- Potential Wider Zones: these zones are typically extensions or additional zones which represent lower heat demand but still sufficient that they present viable opportunities for expansion or further investments.
- Potential Future Zones: these zones represent areas with potential future demand and could transition into a priority should development begin. These will be carefully tracked as part of the council's planning work.

The data used for this analysis is based on a combination of surveys and modelling carried out over many years. Thus, it might be outdated when compared with current building use or characteristics. While this is not a major problem when identifying opportunities at a high-level, it can have an impact when assessing feasibility of heat networks or practically implementing, the heat demand and especially the defined anchor loads which might have been repurposed.

Table 2: A summary of all Potential Heat Network Zones

Zone No.	Potential Heat Network Zone name	Zone Type	Zone Area (ha)	Estimated Heat Demand (MWh/y)	Fuel Poverty	Extreme Fuel Poverty	Percent domestic buildings
Zone 1:	Coldstream 1	Future	119	5569	41.5%	N/A	75%
Zone 2:	Duns 1	Wider	118	14456	25.0%	16.2%	81%
Zone 3:	Duns 2	Core	86	10989	33.6%	33.4%	43%
Zone 4:	Earlston 1	Future	194	11862	21.2%	4.7%	81%
Zone 5:	Eyemouth 1	Wider	148	16276	28.7%	11.2%	72%
Zone 6:	Eyemouth 2	Future	202	2758	41.7%	16.8%	33%
Zone 7:	Galashiels 1	Wider	504	68610	29.6%	16.1%	80%
Zone 8:	Galashiels 1a	Core	129	27207	30.5%	11.8%	80%
Zone 9:	Galashiels 1b	Core	26	3134	33.7%	18.3%	60%
Zone 10:	Galashiels 2	Wider	1220	84551	25.5%	8.5%	93%
Zone 11:	Galashiels 2a	Core	375	45040	21.3%	10.8%	80%
Zone 12:	Galashiels 2b	Core	120	15558	26.5%	18.6%	69%
Zone 13:	Hawick 1	Wider	472	82474	24.6%	8.0%	82%
Zone 14:	Hawick 1a	Core	76	12438	22.4%	6.0%	89%
Zone 15:	Hawick 1b	Core	88	22253	36.3%	18.8%	82%

Zone 16:	Hawick 2	Core	176	11354	23.5%	7.0%	93%
Zone 17:	Hawick 3	Future	214	2151	22.1%	5.2%	86%
Zone 18:	Jedburgh 1	Wider	505	43061	26.5%	10.5%	86%
Zone 19:	Jedburgh 1a	Core	131	18574	20.3%	1.4%	81%
Zone 20:	Kelso 1	Wider	146	23668	38.8%	22.2%	77%
Zone 21:	Kelso 1a	Core	19	8409	44.3%	30.7%	60%
Zone 22:	Kelso 2	Wider	242	13820	28.6%	18.1%	28%
Zone 23:	Kelso 2a	Core	133	8306	N/A	N/A	0%
Zone 24:	Newtown Saint Boswells 1	Future	502	14506	28.5%	11.0%	91%
Zone 25:	Peebles 1	Wider	220	39052	29.8%	13.0%	84%
Zone 26:	Peebles 1a	Core	80	13718	27.2%	12.5%	66%
Zone 27:	Selkirk 1	Wider	64	3565	31.5%	19.9%	94%
Zone 28:	Selkirk 2	Core	174	19569	25.1%	7.6%	42%

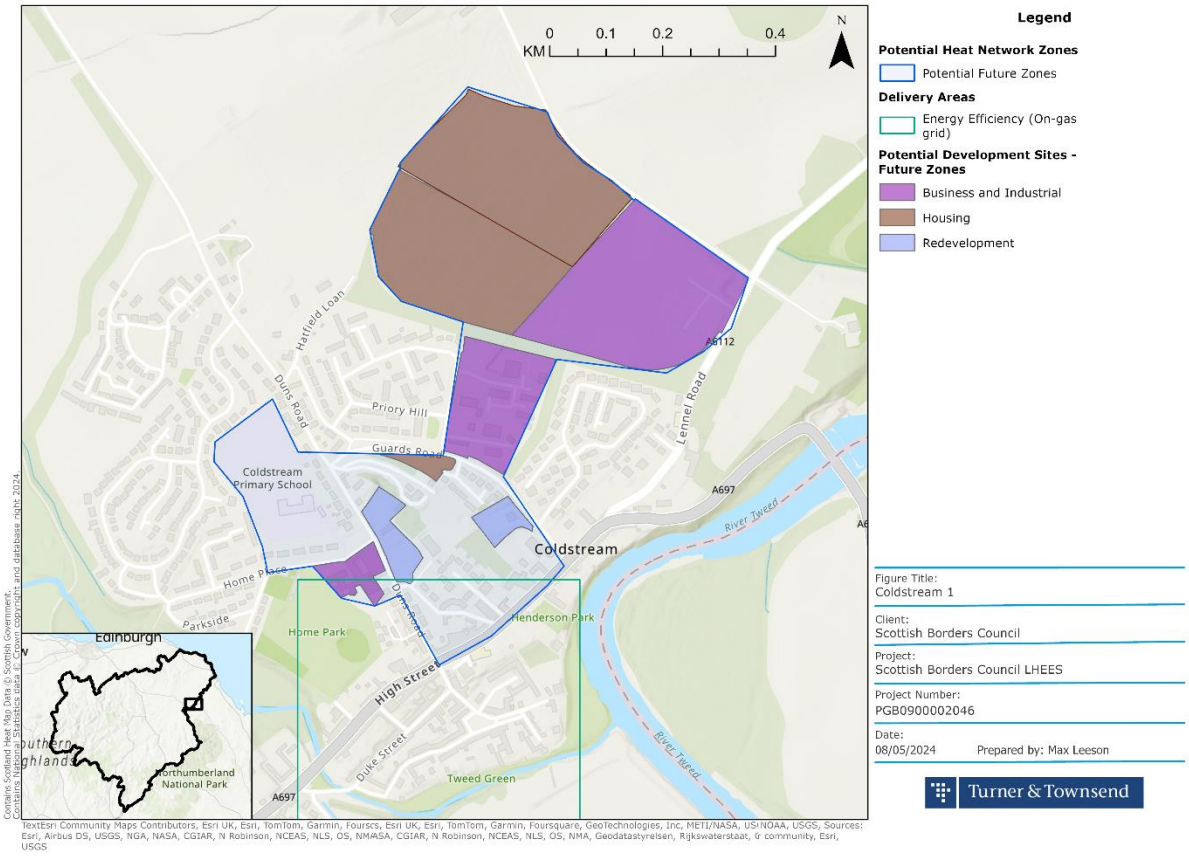
In addition to Potential Heat Network Zones identified, the council is already conducting feasibility work on a further two potential heat networks. Croft Street (in Galashiels) has significant potential heat demand which could be supplied by waste heat from wastewater mains pipes close to the area of demand. Tweedbank, east of Galashiels, contains the council's largest development site and represents a major opportunity for the council to facilitate the development of a heat network. Both of these sites are represented through the analysis in their respective zones.

The following sections show maps and table summaries for each Potential Heat Network Zone. The maps display:

- The boundaries of a Potential Heat Network Zone based on an analysis of anchor load requirement coupled with linear heat density.
- Existing heat networks and ongoing feasibilities, which might offer an opportunity for interconnectivity and expansion.
- Delivery Areas which provide opportunities for area-wide collaboration and synergies.
- Potential waste heat sources.
- Potential local development sites, displaying potential opportunities to align programmes with development activities as part of a holistic approach to regenerate and decarbonise the area.

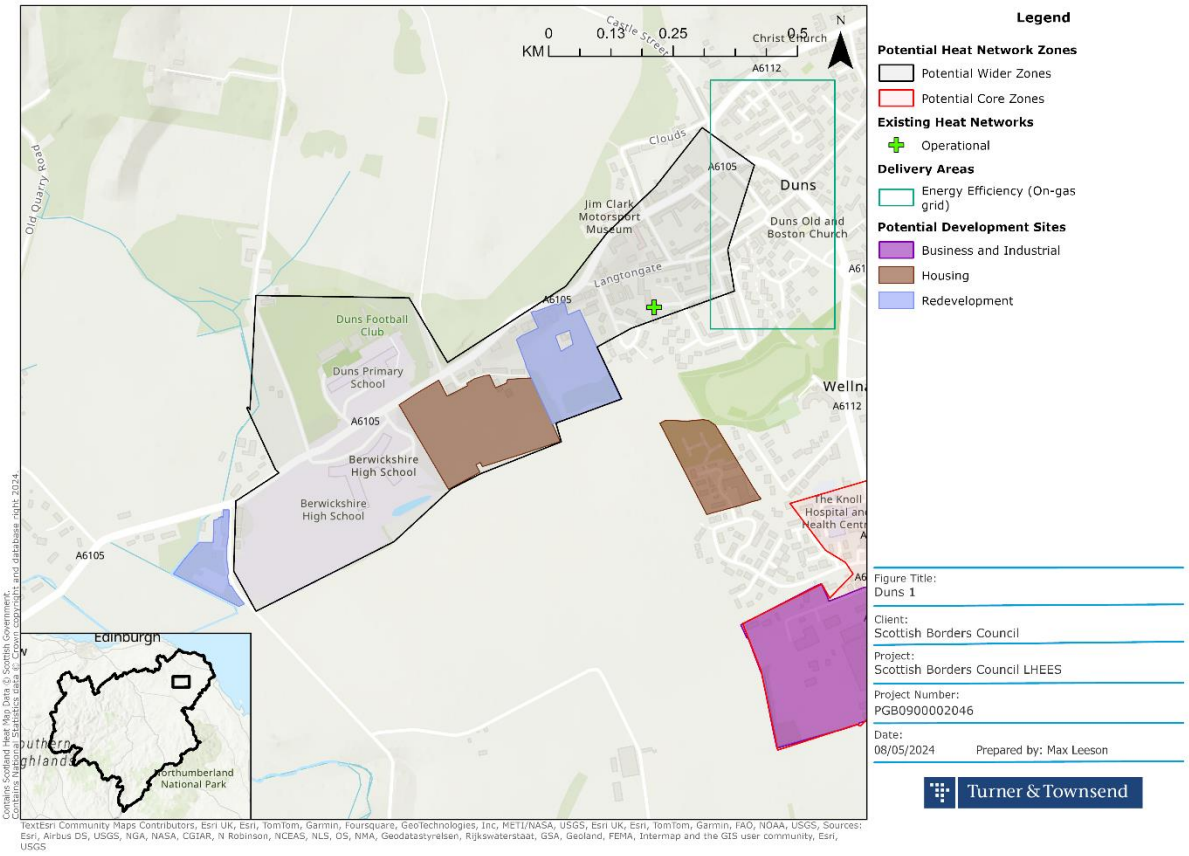
Tabular data alongside each Potential Heat Network Zone also provides detailed information highlighting the heat demand profile, possible anchor loads and potential heat supply sources.

Potential Heat Network Zone 1: Coldstream 1



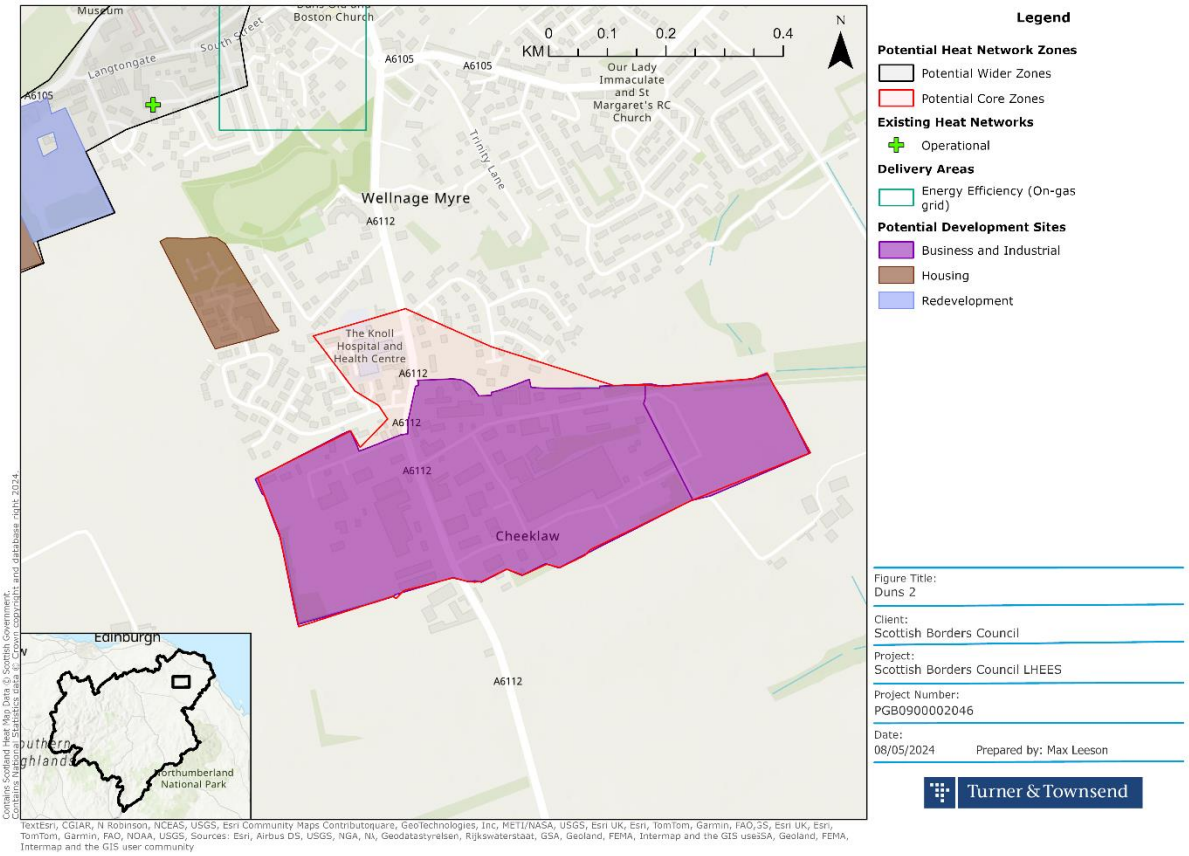
Zone Name	Coldstream 1
Zone Type	Future
Zone Area (ha)	119
Estimated Zone Heat Demand (MWh/y)	5,569
Fuel Poverty (Percentage of Households)	41.5%
Extreme Fuel Poverty (Percentage of Households)	N/A
Proportion of Domestic Buildings	75%

Potential Heat Network Zone 2: Duns 1



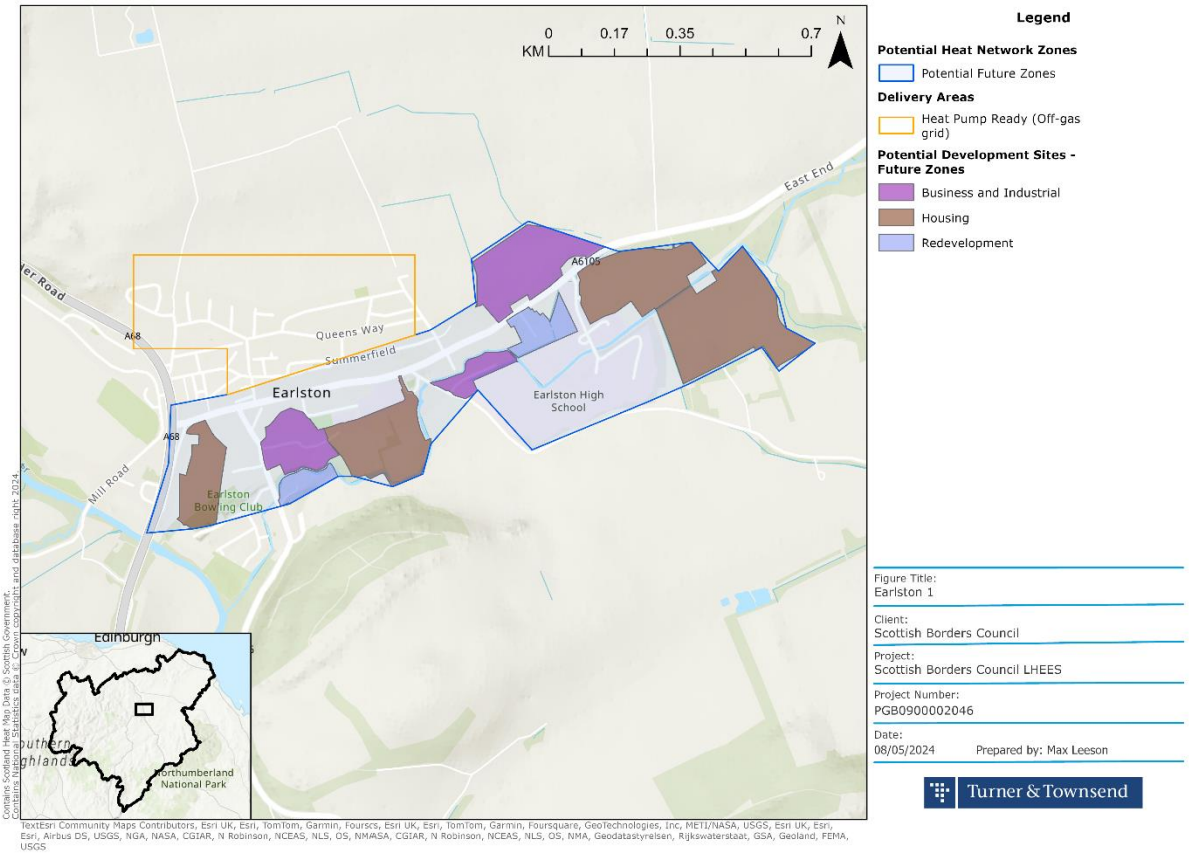
Zone Name	Duns 1
Zone Type	Wider
Zone Area (ha)	118
Estimated Zone Heat Demand (MWh/y)	14,456
Fuel Poverty (Percentage of Households)	25.0%
Extreme Fuel Poverty (Percentage of Households)	16.2%
Proportion of Domestic Buildings	81%

Potential Heat Network Zone 3: Duns 2



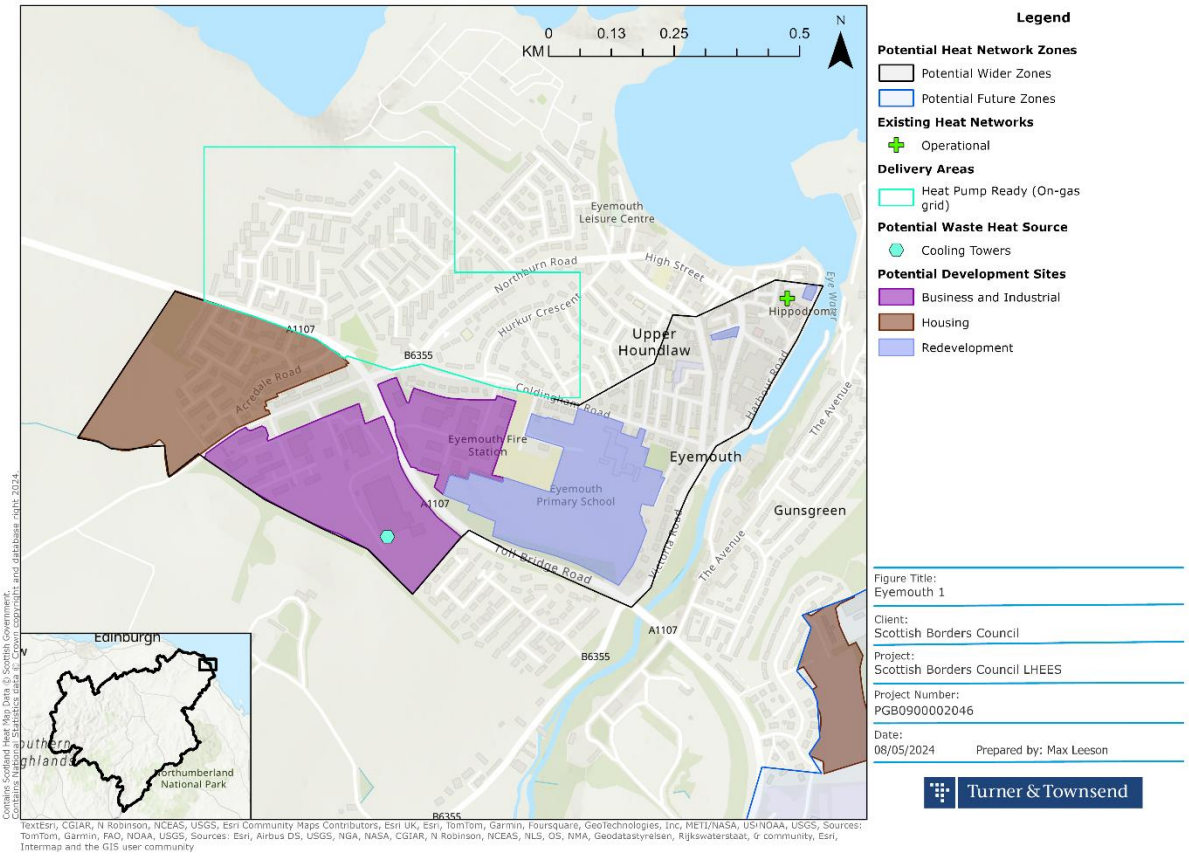
Zone Name	Duns 2
Zone Type	Core
Zone Area (ha)	86
Estimated Zone Heat Demand (MWh/y)	10,989
Fuel Poverty (Percentage of Households)	33.6%
Extreme Fuel Poverty (Percentage of Households)	33.4%
Proportion of Domestic Buildings	43%

Potential Heat Network Zone 4: Earlston 1



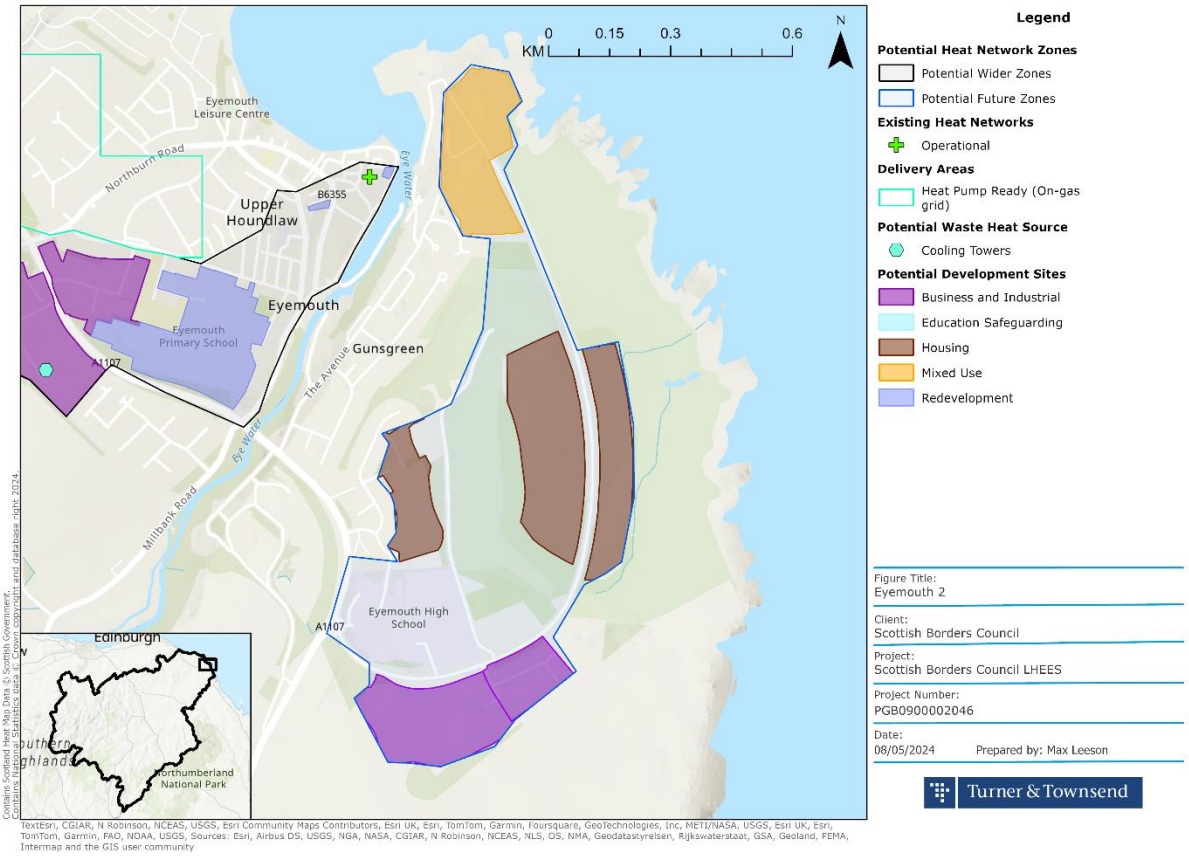
Zone Name	Earlston 1
Zone Type	Future
Zone Area (ha)	194
Estimated Zone Heat Demand (MWh/y)	11,862
Fuel Poverty (Percentage of Households)	21.2%
Extreme Fuel Poverty (Percentage of Households)	4.7%
Proportion of Domestic Buildings	81%

Potential Heat Network Zone 5: Eyemouth 1



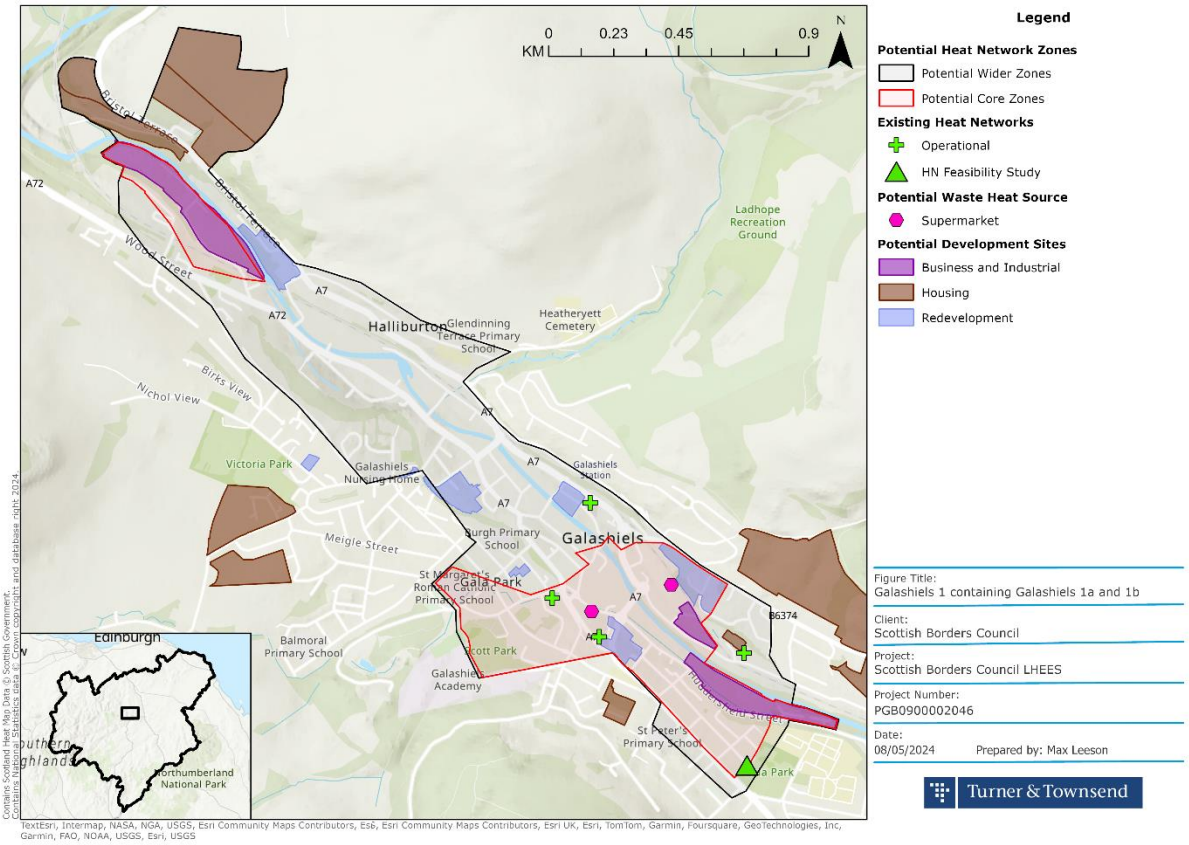
Zone Name	Eyemouth 1
Zone Type	Wider
Zone Area (ha)	148
Estimated Zone Heat Demand (MWh/y)	16,276
Fuel Poverty (Percentage of Households)	28.7%
Extreme Fuel Poverty (Percentage of Households)	11.2%
Proportion of Domestic Buildings	72%

Potential Heat Network Zone 6: Eyemouth 2



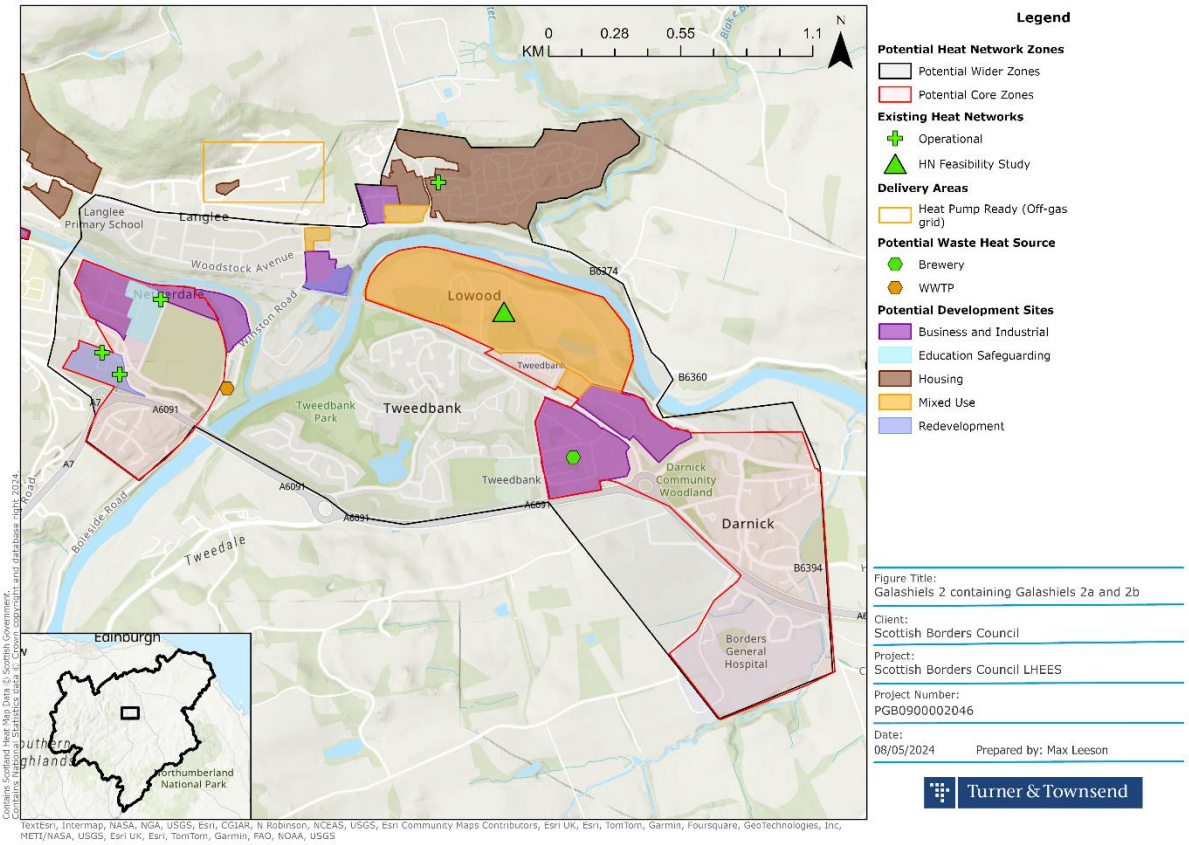
Zone Name	Eyemouth 2
Zone Type	Future
Zone Area (ha)	202
Estimated Zone Heat Demand (MWh/y)	2,758
Fuel Poverty (Percentage of Households)	41.7%
Extreme Fuel Poverty (Percentage of Households)	16.8%
Proportion of Domestic Buildings	33%

Potential Heat Network Zone 7, 8 and 9: Galashiels 1 containing Galashiels 1a and 1b



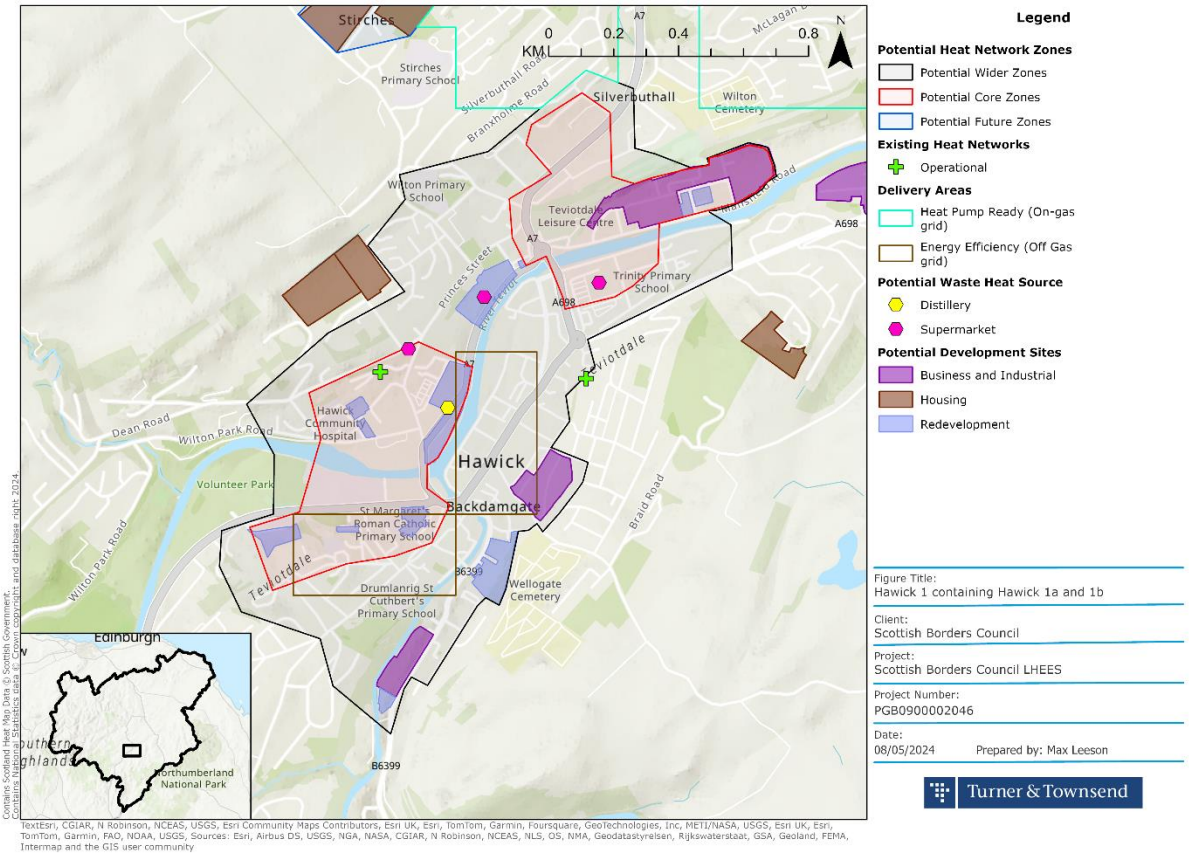
Zone Name	Galashiels 1	Galashiels 1a	Galashiels 1b
Zone Type	Wider	Core	Core
Zone Area (ha)	504	129	26
Estimated Zone Heat Demand (MWh/y)	68,610	27,207	3,134
Fuel Poverty (Percentage of Households)	29.6%	30.5%	33.7%
Extreme Fuel Poverty (Percentage of Households)	16.1%	11.8%	18.3%
Proportion of Domestic Buildings	80%	80%	60%

Potential Heat Network Zone 10, 11 and 12: Galashiels 2 containing Galashiels 2a and 2b



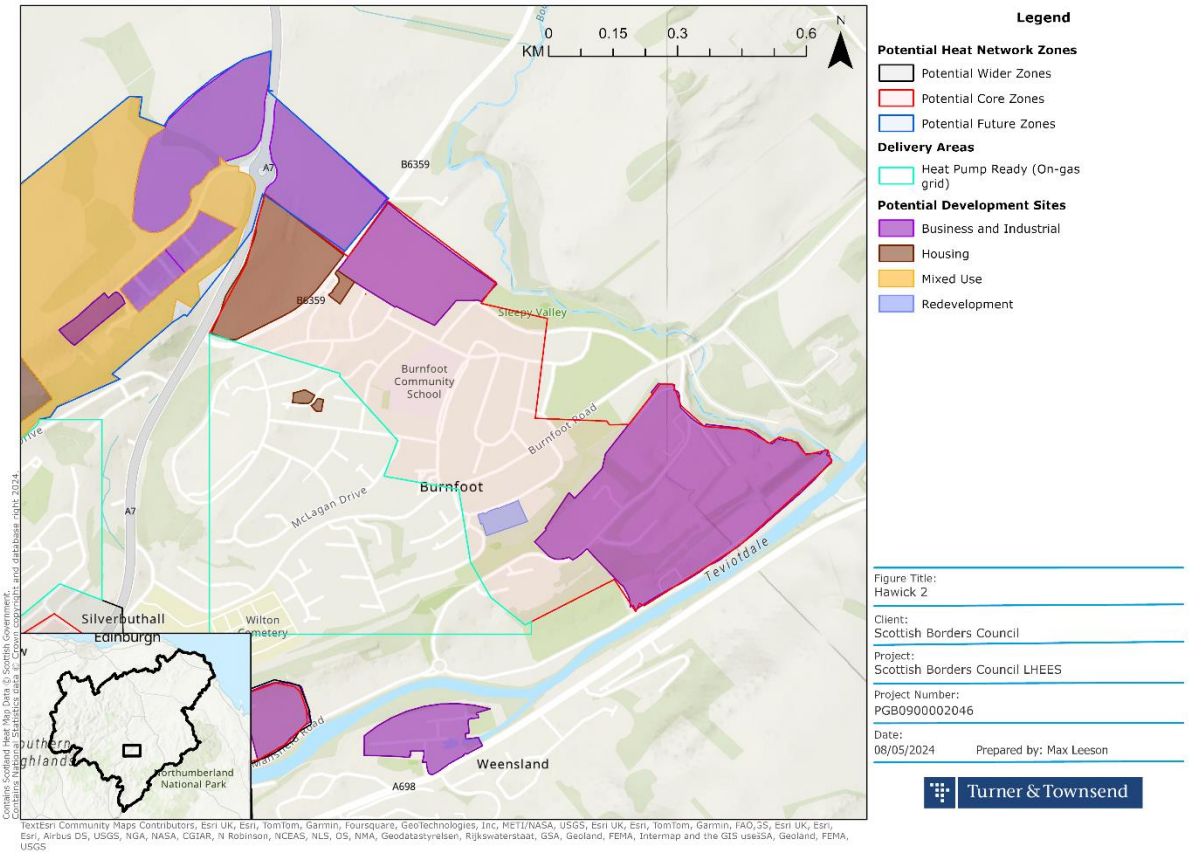
Zone Name	Galashiels 2	Galashiels 2a	Galashiels 2b
Zone Type	Wider	Core	Core
Zone Area (ha)	1220	375	120
Estimated Zone Heat Demand (MWh/y)	84,551	45,040	15,558
Fuel Poverty (Percentage of Households)	25.5%	21.3%	26.5%
Extreme Fuel Poverty (Percentage of Households)	8.5%	10.8%	18.6%
Proportion of Domestic Buildings	93%	80%	69%

Potential Heat Network Zone 13, 14 and 15: Hawick 1 containing Hawick 1a and 1b



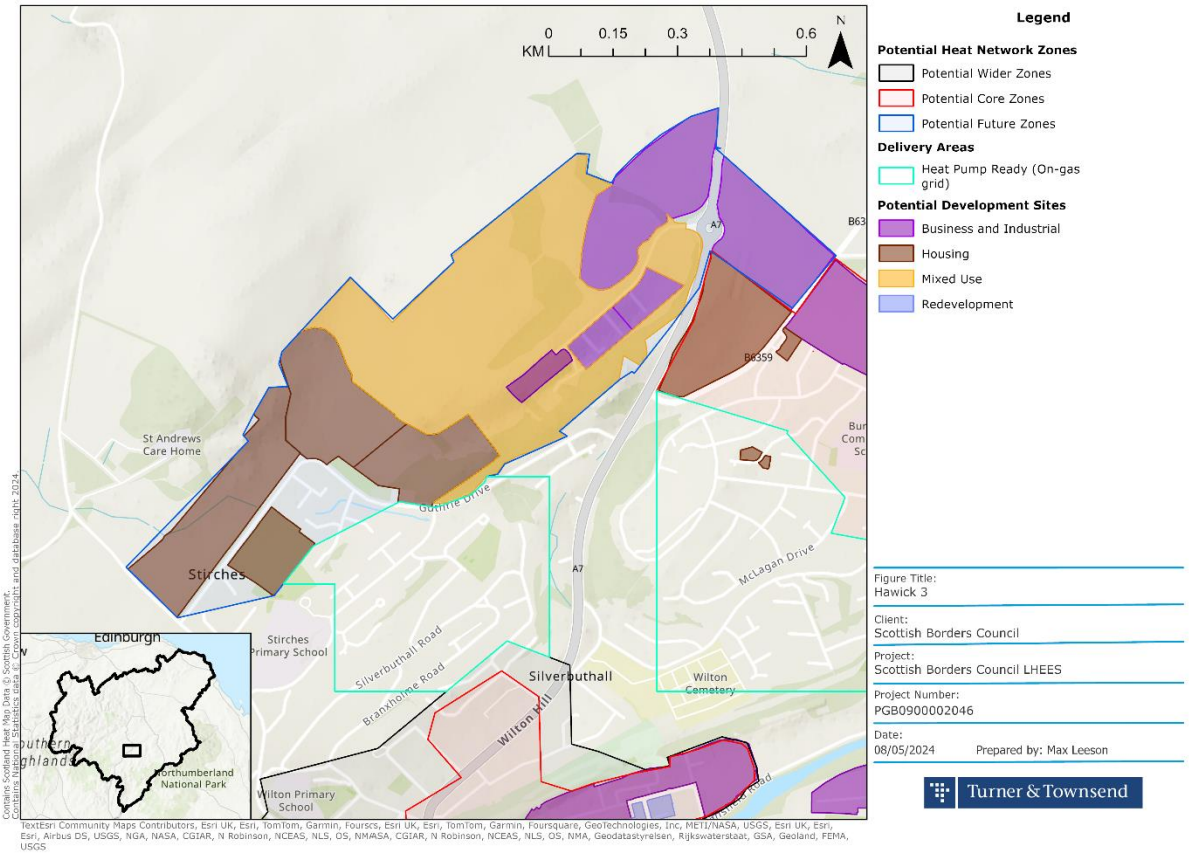
Zone Name	Hawick 1	Hawick 1a	Hawick 1b
Zone Type	Wider	Core	Core
Zone Area (ha)	472	76	88
Estimated Zone Heat Demand (MWh/y)	82,474	12,438	22,253
Fuel Poverty (Percentage of Households)	24.6%	22.4%	36.3%
Extreme Fuel Poverty (Percentage of Households)	8.0%	6.0%	18.8%
Proportion of Domestic Buildings	82%	89%	82%

Potential Heat Network Zone 16: Hawick 2



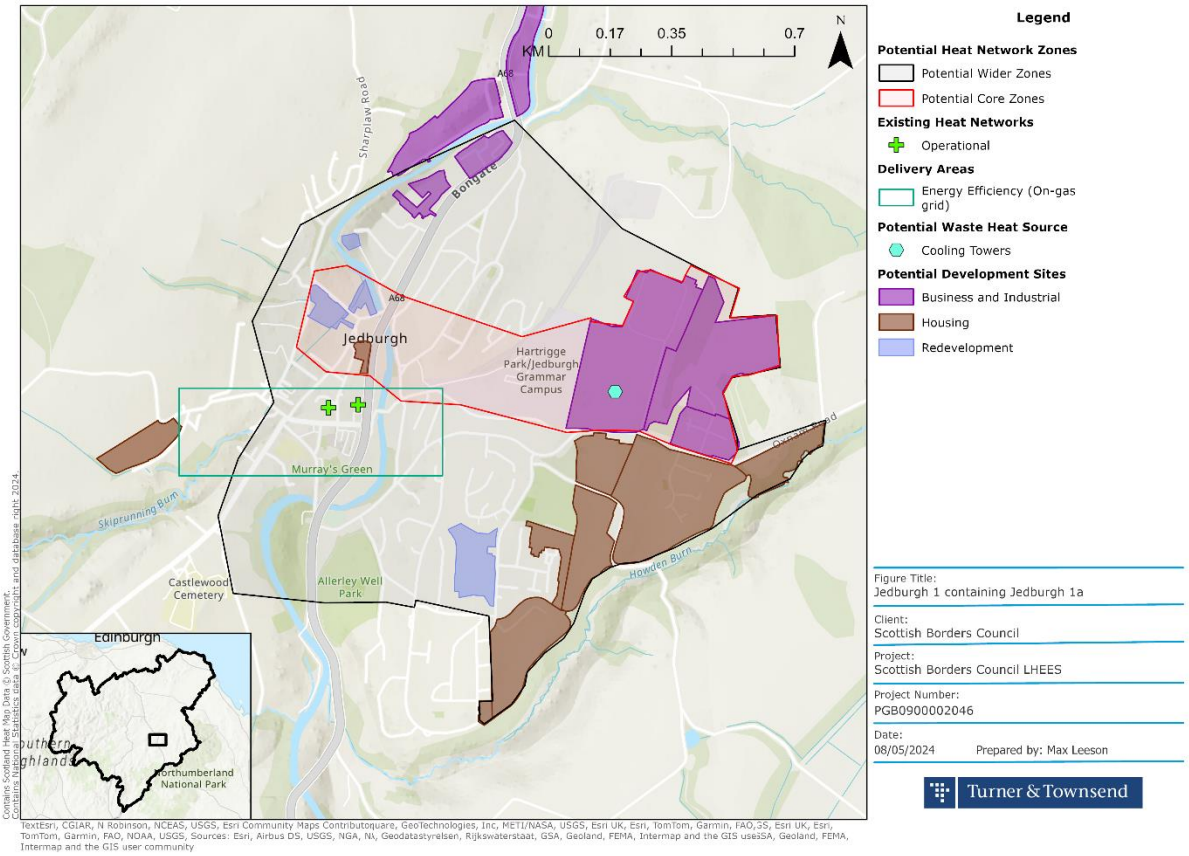
Zone Name	Hawick 2
Zone Type	Core
Zone Area (ha)	176
Estimated Zone Heat Demand (MWh/y)	11,354
Fuel Poverty (Percentage of Households)	23.5%
Extreme Fuel Poverty (Percentage of Households)	7.0%
Proportion of Domestic Buildings	93%

Potential Heat Network Zone 17: Hawick 3



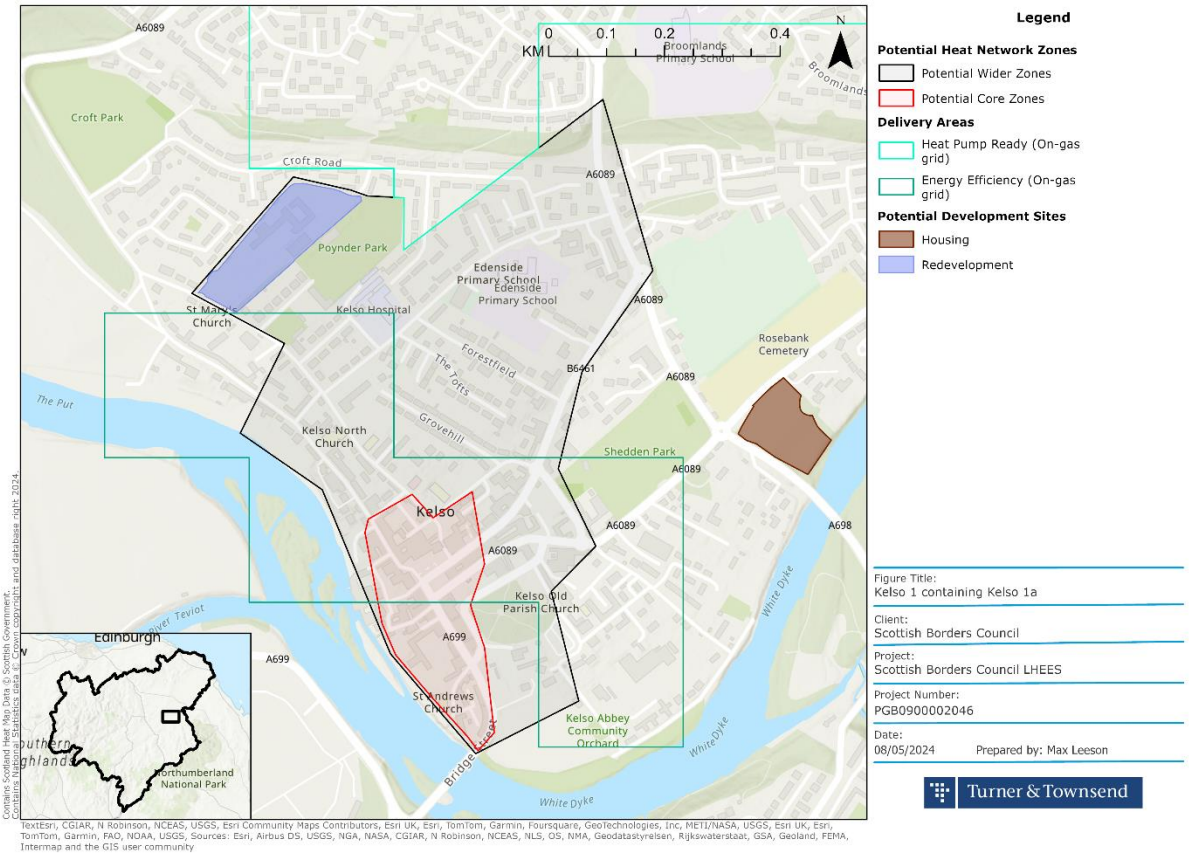
Zone Name	Hawick 3
Zone Type	Future
Zone Area (ha)	214
Estimated Zone Heat Demand (MWh/y)	2,151
Fuel Poverty (Percentage of Households)	22.1%
Extreme Fuel Poverty (Percentage of Households)	5.2%
Proportion of Domestic Buildings	86%

Potential Heat Network Zone 18 and 19: Jedburgh 1 containing Jedburgh 1a



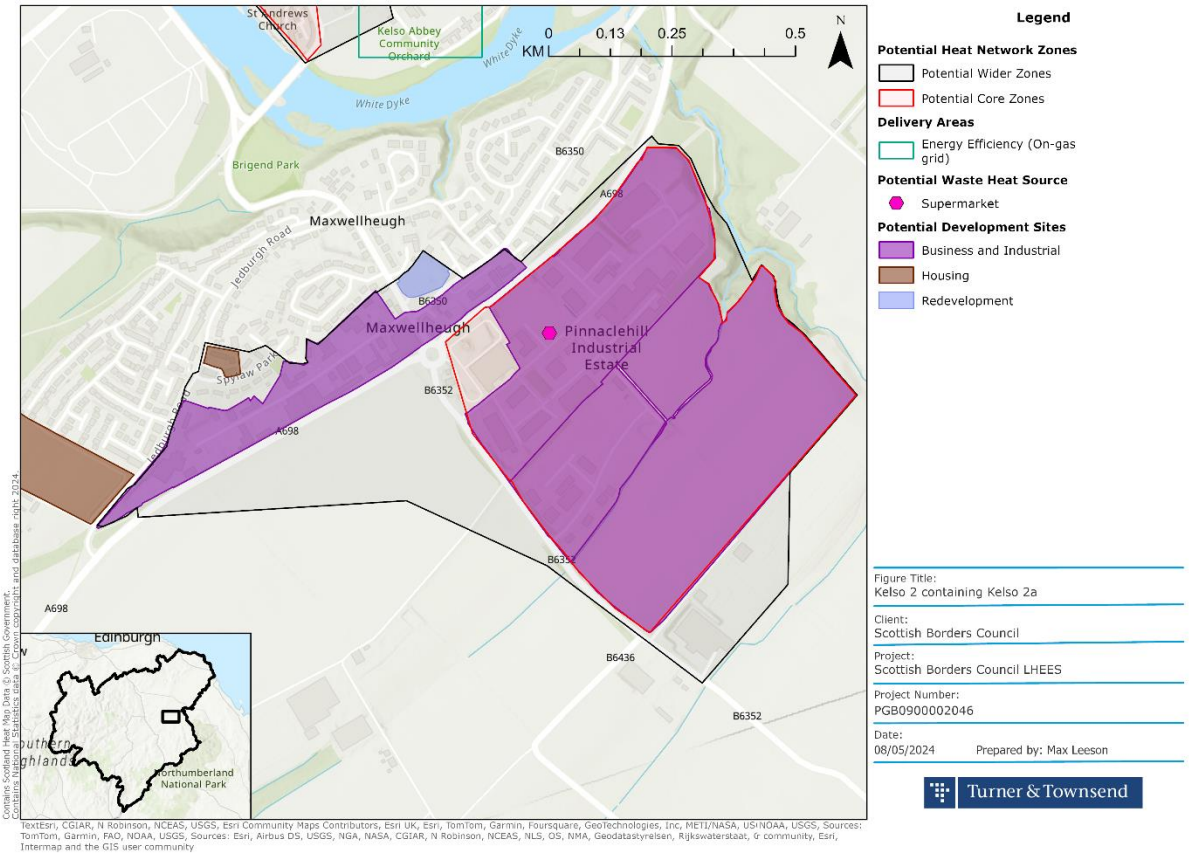
Zone Name	Jedburgh 1	Jedburgh 1a
Zone Type	Wider	Core
Zone Area (ha)	505	131
Estimated Zone Heat Demand (MWh/y)	43,061	18,574
Fuel Poverty (Percentage of Households)	26.5%	20.3%
Extreme Fuel Poverty (Percentage of Households)	10.5%	1.4%
Proportion of Domestic Buildings	86%	81%

Potential Heat Network Zone 20 and 21: Kelso 1 containing Kelso 1a



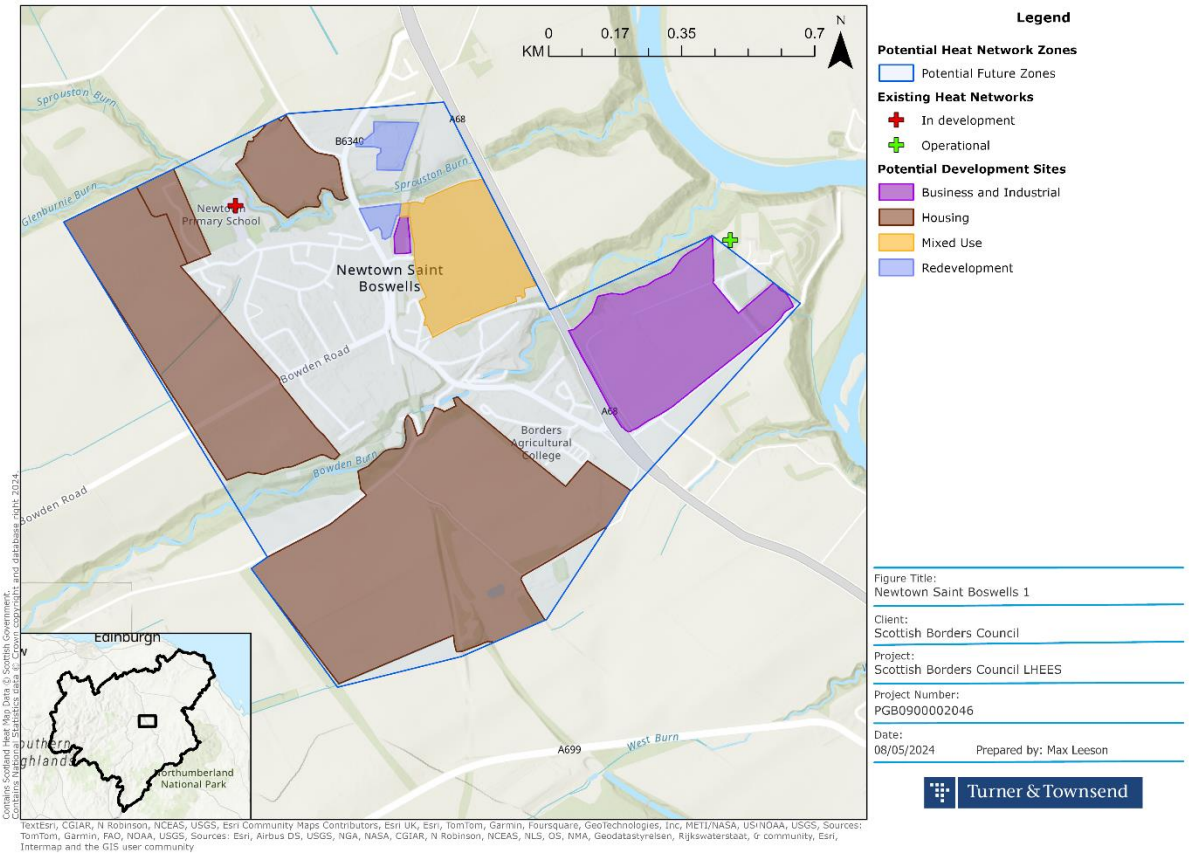
Zone Name	Kelso 1	Kelso 1a
Zone Type	Wider	Core
Zone Area (ha)	146	19
Estimated Zone Heat Demand (MWh/y)	23,668	8,409
Fuel Poverty (Percentage of Households)	38.8%	44.3%
Extreme Fuel Poverty (Percentage of Households)	22.2%	30.7%
Proportion of Domestic Buildings	77%	60%

Potential Heat Network Zone 22 and 23: Kelso 2 containing Kelso 2a



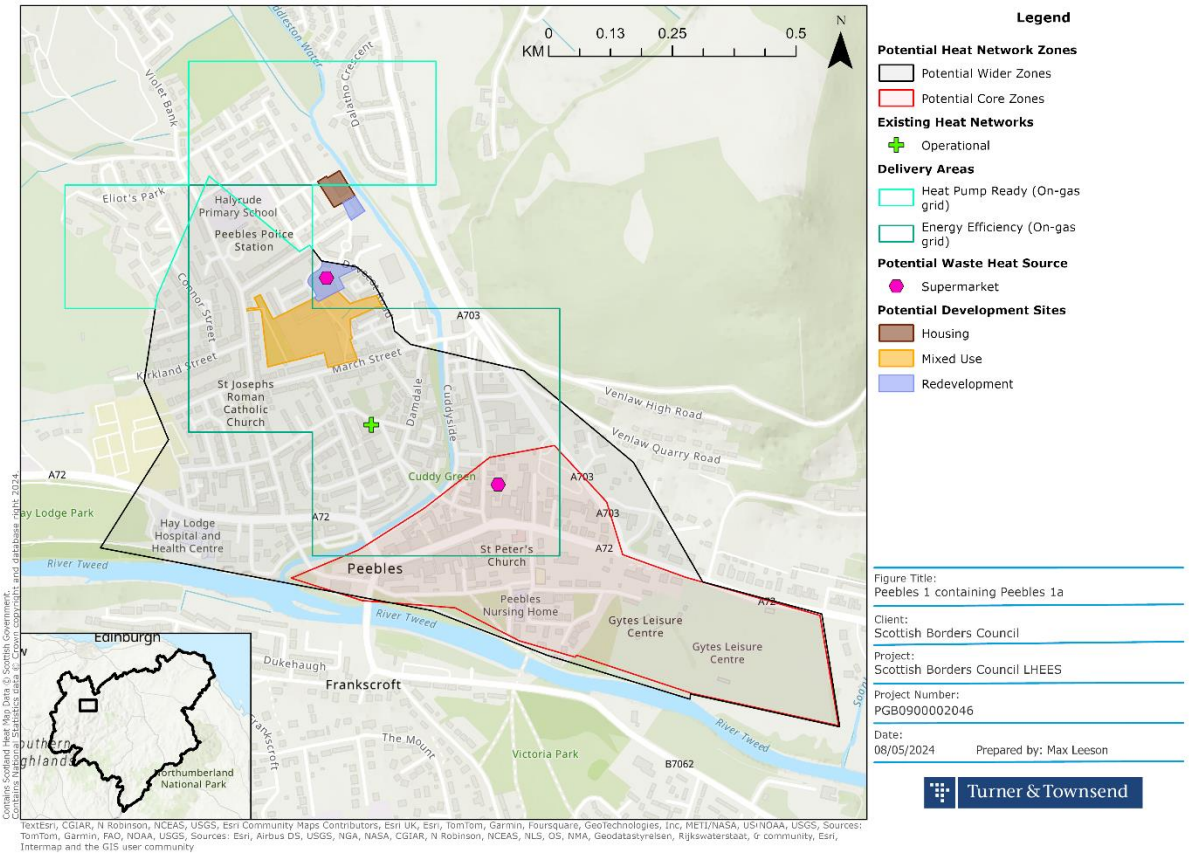
Zone Name	Kelso 2	Kelso 2a
Zone Type	Wider	Core
Zone Area (ha)	242	133
Estimated Zone Heat Demand (MWh/y)	13,820	8,306
Fuel Poverty (Percentage of Households)	28.6%	N/A
Extreme Fuel Poverty (Percentage of Households)	18.1%	N/A
Proportion of Domestic Buildings	28%	0%

Potential Heat Network Zone 24: Newton Saint Boswells 1



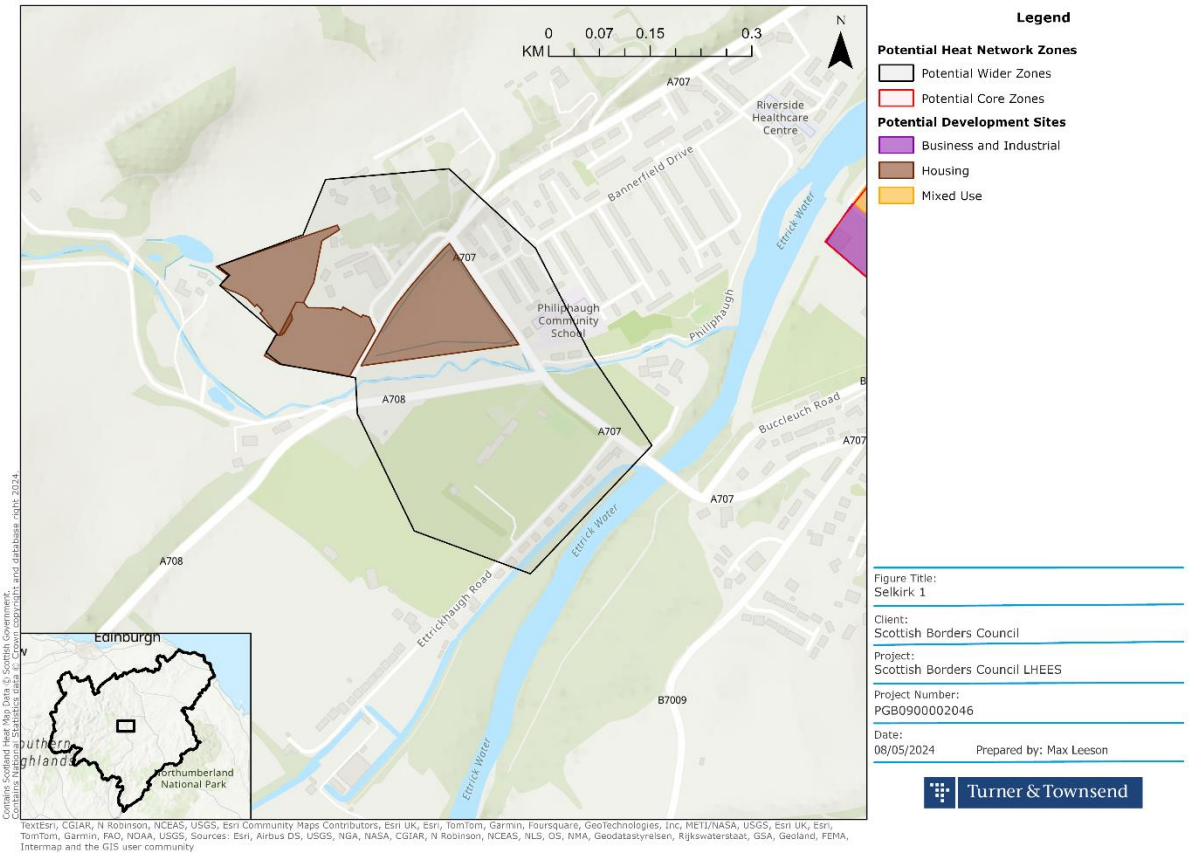
Zone Name	Newton Saint Boswells 1
Zone Type	Future
Zone Area (ha)	502
Estimated Zone Heat Demand (MWh/y)	14,506
Fuel Poverty (Percentage of Households)	28.5%
Extreme Fuel Poverty (Percentage of Households)	11.0%
Proportion of Domestic Buildings	91%

Potential Heat Network Zone 25 and 26: Peebles 1 containing Peebles 1a



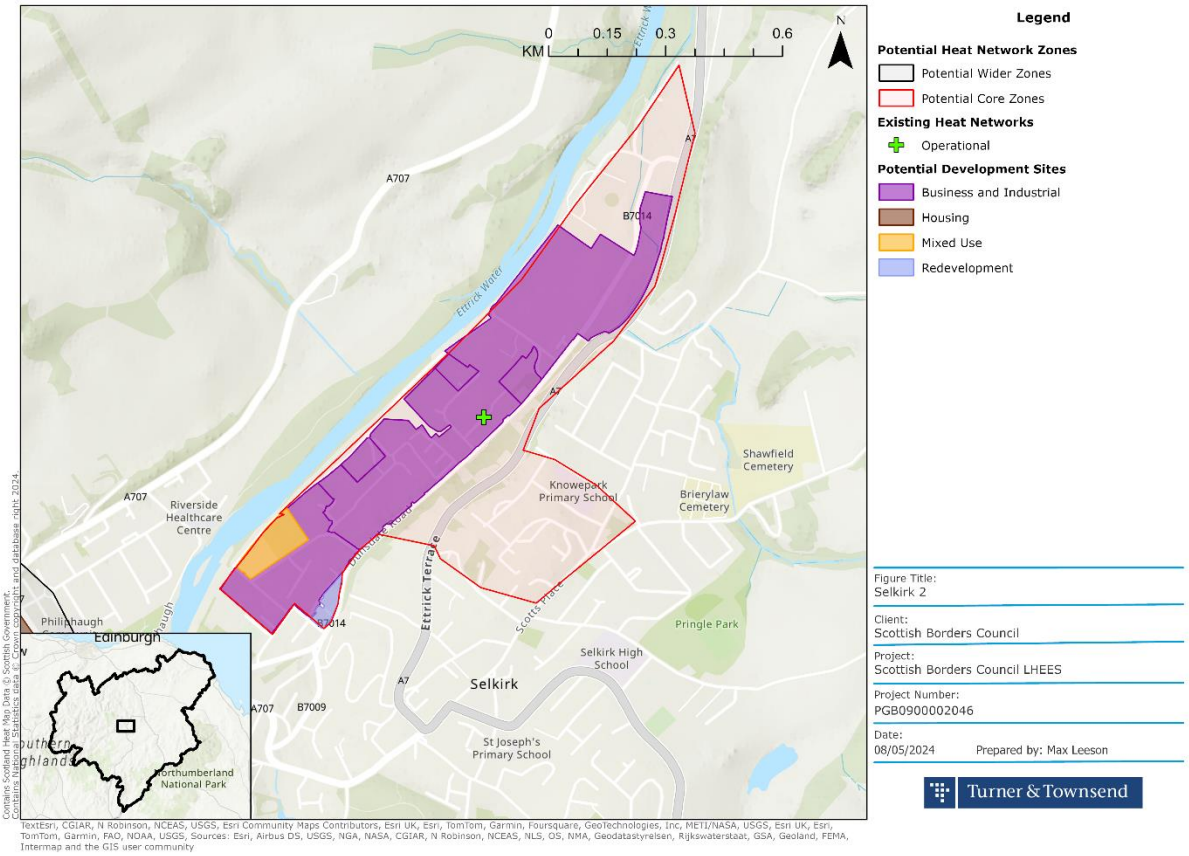
Zone Name	Peebles 1	Peebles 1a
Zone Type	Wider	Core
Zone Area (ha)	220	80
Estimated Zone Heat Demand (MWh/y)	39,052	13,718
Fuel Poverty (Percentage of Households)	29.8%	27.2%
Extreme Fuel Poverty (Percentage of Households)	13.0%	12.5%
Proportion of Domestic Buildings	84%	66%

Potential Heat Network Zone 27: Selkirk 1



Zone Name	Selkirk 1
Zone Type	Wider
Zone Area (ha)	64
Estimated Zone Heat Demand (MWh/y)	3,565
Fuel Poverty (Percentage of Households)	31.5%
Extreme Fuel Poverty (Percentage of Households)	19.9%
Proportion of Domestic Buildings	94%

Potential Heat Network Zone 28: Selkirk 2



Zone Name	Selkirk 2
Zone Type	Core
Zone Area (ha)	174
Estimated Zone Heat Demand (MWh/y)	19,569
Fuel Poverty (Percentage of Households)	25.1%
Extreme Fuel Poverty (Percentage of Households)	7.6%
Proportion of Domestic Buildings	42%

3 Monitoring and reporting

3.1 Data for reporting and monitoring

The success of the LHEES will be measured through the delivery of the LHEES Vision, priorities and actions. The actions will be monitored annually by the Principal LHEES Officer who will ensure that the learning outcomes from initial stages are adopted and used to refine the subsequent iterations of LHEES, and evaluate progress against the national and local targets for energy efficiency and heat decarbonisation. Alongside monitoring of LHEES actions we will develop an approach to align with wider monitoring processes, including the Council's Local Housing Strategy. The Schedule of Actions is provided below.

Action	
1.1	The council will update the LHEES and develop a new Delivery Plan before the end of 2028, as per legal requirements.
1.2	An annual update to the documents will be carried out if the need for an update reaches the appropriate level of materiality for each given year.
1.3	The council will use the LHEES as the starting point for further data collection and analysis (e.g. on building stock and heat demand) to deepen its understanding of opportunities as well as to keep the work started for LHEES and Delivery Plan updated.
1.4	The council will seek further funding, including from the Scottish Government, to enable delivery at scale. The council will use this funding to build capacity and develop an LHEES Programme to deliver on the LHEES Vision.
1.5	The council will integrate its existing programmes into the LHEES Programme to develop a single vehicle to support the delivery of energy efficiency, heat decarbonisation and heat network projects.
1.6	The council will begin delivery of the LHEES Programme to the extent allowed and within the limited resources it currently has. The council will engage with the Scottish Government and other partners to discuss resource constrains as well as opportunities to grow the LHEES Programme.
1.7	The council will develop and implement programme management tools to deliver the appropriate projects where it has direct involvement.
1.8	The council will allocate responsibility of delivering the LHEES and this Delivery Plan to appropriate members of staff.
1.9	The council will establish a dedicated net zero programme to decarbonise its estate in line with national targets.
1.10	The council will use the decarbonisation of its estate to maximise any value that can be contributed to the success of the LHEES.
1.11	The council will develop a supply chain programme to address the dual challenges of (1) lack of skilled workers to deliver projects and (2) regional green economic growth and skilled employment. This will begin with a supply chain programme plan, which will be used to implement the programme.
1.12	Recognising that the success of the LHEES Vision is impingent upon investment, the council will work to ensure that it is maximising the funding available for projects across the Scottish Borders.

1.13	If the council is successful in its funding application to the HNSU, it will utilise that resource to develop a Heat Network Delivery Plan covering the three main strategic areas of delivery models, investment opportunities, and building a management case.
1.14	The council will undertake consistent and ongoing stakeholder engagement across the Delivery Areas, Heat Network Zones and Communal Heating Scheme opportunities. The council will also drive communication to inspire, support, advise and signpost people toward action, focusing these locations and growing this activity across the region as far as practical.

3.2 Impact assessment

A series of impact assessments were undertaken as part of developing the LHEES and this Delivery Plan.

- Business and Regulatory Impact Assessment (BRIA).
- Child Rights and Wellbeing Impact Assessment (CRWIA).
- Fairer Scotland Duty (FSD).
- Strategic Environmental Assessment (SEA).
- Integrated Impact Assessment (IIA).
- Health Inequality Impact Assessment (HIIA).
- Rural Proofing.

The council will assess whether there is need for additional impact assessments and/or mitigating actions beyond the LHEES and Delivery Plan as work progresses toward implementation of projects activities. For activities involving the use of personal or identifiable data, a Data Protection Impact Assessment (DPIA) will be conducted.

The council will give due regard to equalities and shall not unfairly discriminate based on any protected characteristics.

You can get this document on audio CD, in large print, and various other formats by contacting us at the address below. In addition, contact the address below for information on language translations, additional copies, or to arrange for an officer to meet with you to explain any areas of the publication that you would like clarified.

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