



SCOTTISH BORDERS  
**LOCAL HEAT AND  
ENERGY EFFICIENCY  
DELIVERY PLAN**  
CONSULTATIVE DRAFT 2024





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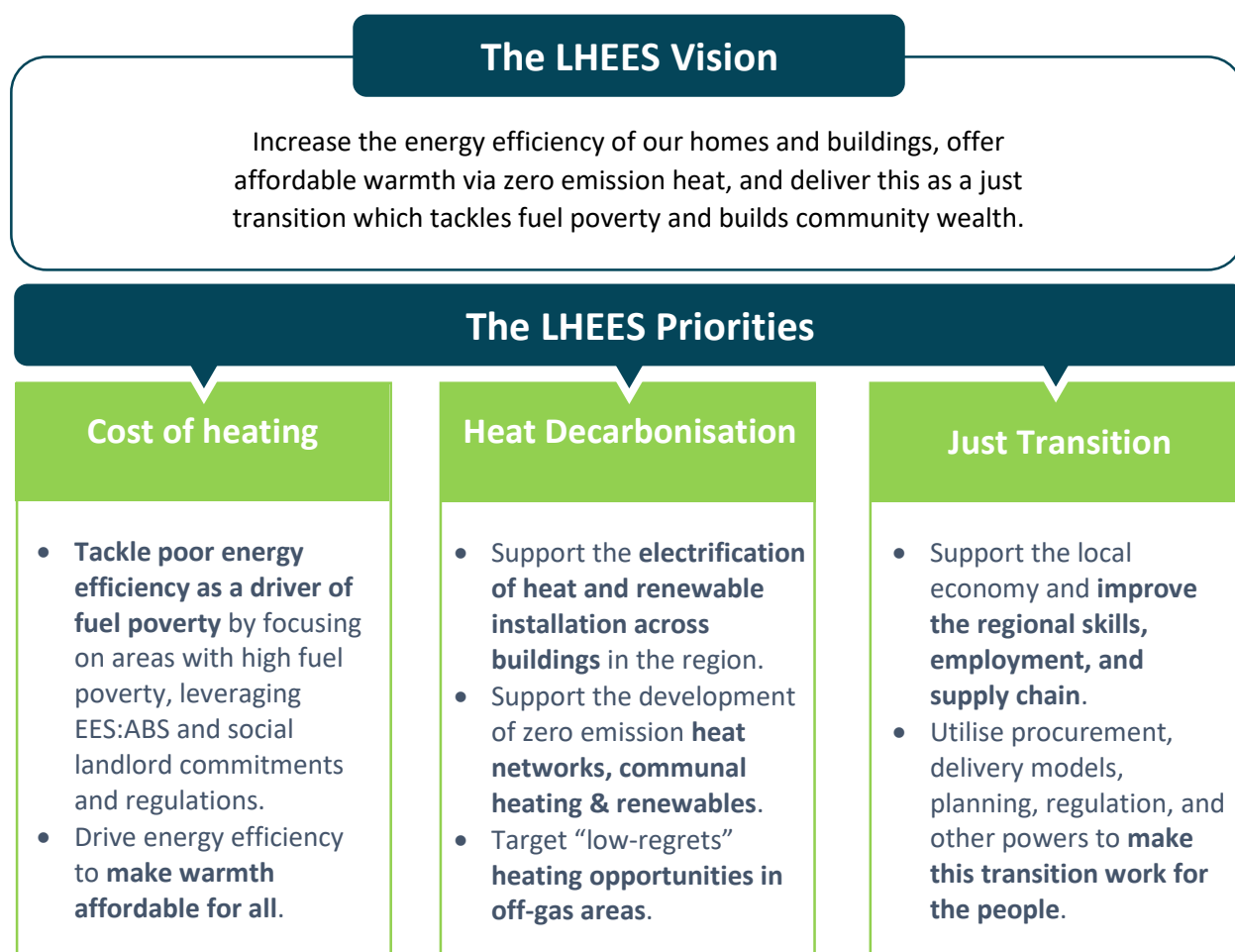
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## 1 Executive Summary

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 2024 to 2028.

Figure 1: The Scottish Borders LHEES Vision



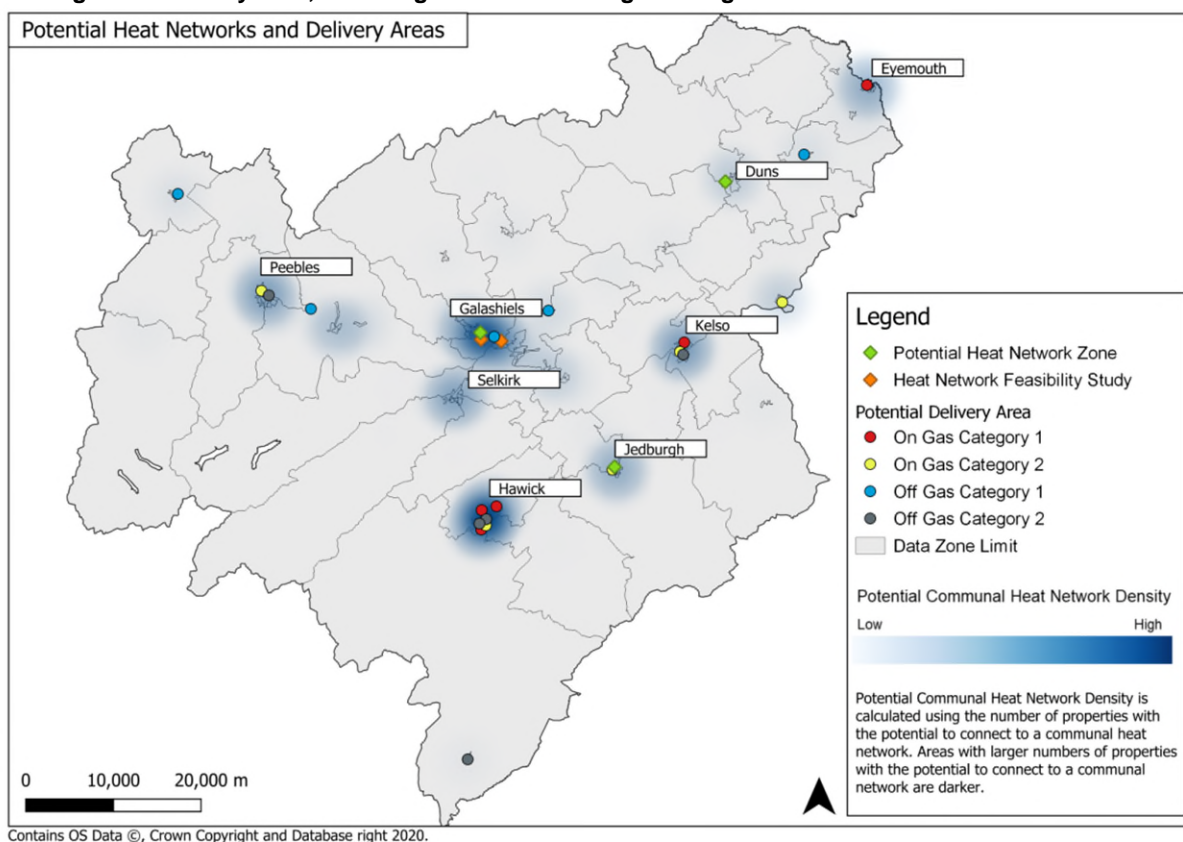
The council has developed a vision for the LHEES with three key priorities which underpin this vision (Figure 1). This Delivery Plan sets out the system through which the council will deliver this vision. The delivery model will be based on an LHEES Programme, led by the council and with participation 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, communal heating 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 (Figure 2):



1. **Potential Delivery Areas:** the LHEES strategic zoning identified two types of properties, category 1 ('heat pump-ready') and category 2 (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 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 and Communal Heating Systems:** the LHEES provided an overview of the potential areas where there is feasibility for heat networks as well as potential communal heating opportunities. The Delivery Plan provide specifics of these locations 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, 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 aspects are satisfied.

**Figure 2: This map presents a summary of all the types of areas where the council will progress activity through this Delivery Plan, including those concerning building retrofits and heat networks.**



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 three main strategic areas of: delivery models, investment opportunities, and building a management case.
- **Communication and Stakeholder Engagement:** the council will undertake consistent and ongoing stakeholder engagement across the Potential Delivery Areas, Potential Heat Network Zones and Communal Heating Scheme opportunities. 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, local basel & 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



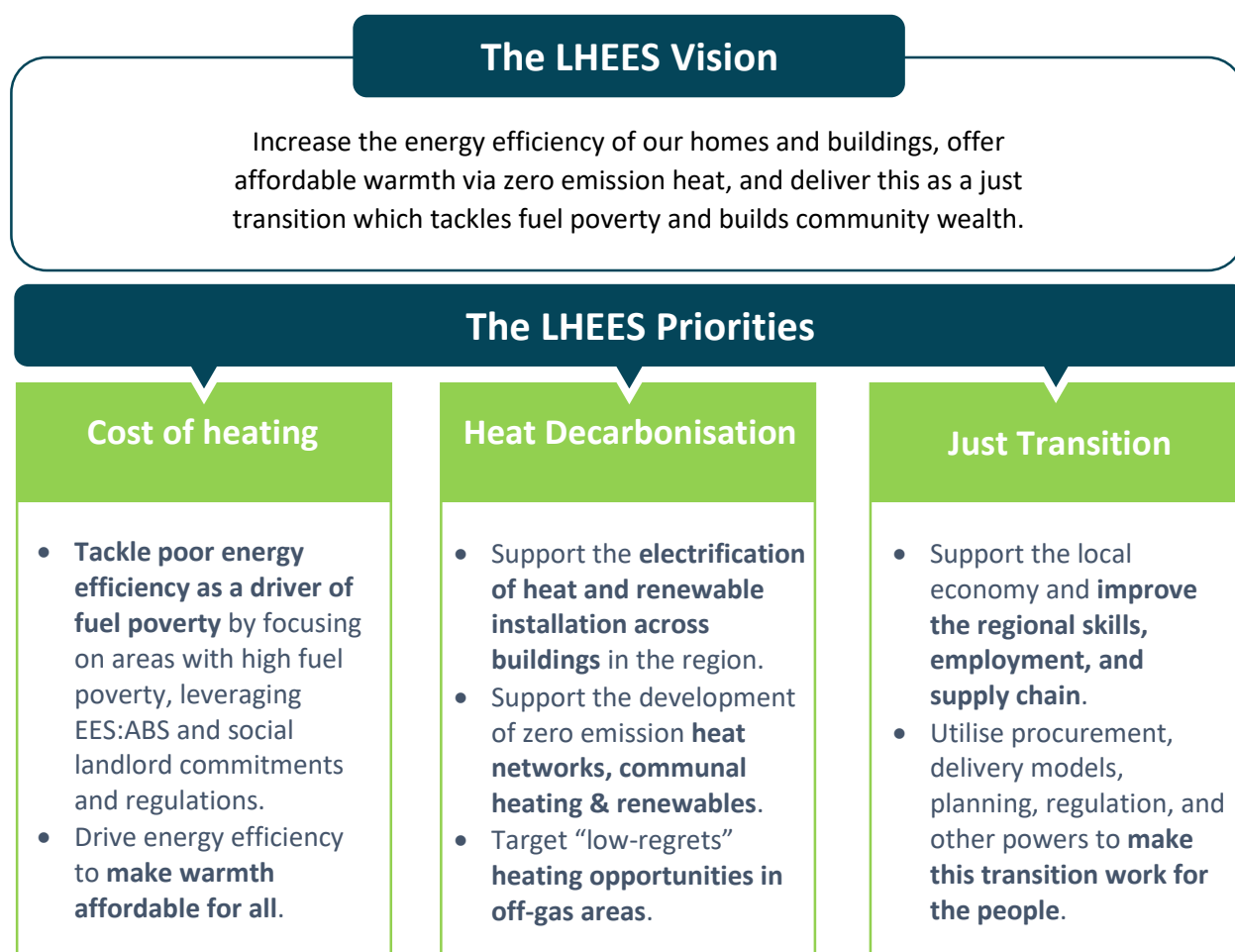
	heat to the end user. The carbon emissions of a heat pump are contingent on the grid emissions factor.
Indicator	<p>For a given Consideration, the purpose of an Indicator is:</p> <ol style="list-style-type: none"> <li>1) to act as a key information field to help characterise and baseline the local authority.</li> <li>2) to act as a key information field to support strategic zoning and generation of initial delivery areas;</li> <li>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.</li> </ol> <p>For some Considerations, one Indicator may be sufficient, but for others a range may be appropriate.</p>
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	<p>The LHEES Considerations are a list of technologies, building typologies and policy priorities used to identify and target interventions. They include:</p> <ul style="list-style-type: none"> <li>- Heat networks</li> <li>- Off-gas grid buildings</li> <li>- On-gas grid buildings</li> <li>- Poor building energy efficiency</li> <li>- Poor building energy efficiency as a driver for fuel poverty</li> <li>- Mixed-tenure, mixed-use and historic buildings</li> </ul>
LHEES Delivery Plan	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"> <li>1 - Policy and strategy review</li> <li>2 - Data and tools library</li> <li>3 - Strategic zoning and pathways</li> <li>4 - Generation of initial delivery areas</li> <li>5 - Building-level pathway assessment</li> <li>6 - Finalisation of delivery areas</li> <li>7 - LHEES Strategy</li> <li>8 - LHEES Delivery Plan</li> </ol>
LHEES Strategy	<p>An LHEES Strategy is a long-term strategic framework for—</p> <ul style="list-style-type: none"> <li>- the improvement of the energy efficiency of buildings in the local authority's area, and</li> <li>- the reduction of greenhouse gas emissions resulting from the heating of such buildings</li> </ul>
Mixed-tenure, mixed-use historic buildings tenure	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 historic buildings 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 3) over the next five years (2024-2028). 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 3: 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 the end of 2028. 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 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 constraints 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 an 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. 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.

<b>Actions</b>
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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.

#### **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 Heating 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 has already requested funding from the HNSU. The

Heat Network Delivery Plan will provide a route map for how the council will approach and roll out heat networks and communal heating systems 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 and communal heating systems, 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 **management case**. The intention of this strategic development work is to develop 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 to wider areas and the other potential heat networks in Galashiels, Jedburgh and Duns. Analysis of suitable delivery models will also include delivery of multiple smaller communal heating schemes where a large-scale network is not suitable. This methodology will follow the development of a detailed techno-economic model for each for the preferred technology options. Appraising delivery model options will help 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 of Jedburgh, Duns and Galashiels?
  - What delivery models are suitable for communal heating systems, especially in rural areas?
  - What are the delivery models that the council is willing to utilise for the above two scenarios?
- Analysis of **investment opportunities** will involve the assessment of the four heat network opportunities across Jedburgh, Duns, Galashiels to understand their potential scale and furthest extent. This will also include route mapping for a large-scale network to include the key anchor loads and heat sources identified across the Tweedbank and Galashiels area. This will include the areas of Galashiels (focussing on Croft Street as a key anchor load), Tweedbank (new development and existing estate), Melrose Road (identified through the LHEES methodology as zone 3, see section 2.2) and Langlee, with potential heat sources such as the Easter Langlee landfill gas recovery and waste-water heat recovery at Croft Street. Analysis will include future heat demand scenarios, incorporating the council's own retrofit plans. In addition to large-scale heat networks, the investment analysis will compare communal heating schemes 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 continuation of market engagement which has already started for Tweedbank heat network to test the attractiveness of these opportunities for investors as well as to identify potential funding opportunities. This engagement will be important for both heat networks and communal heating systems 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 larger heat networks across the 3 identified clusters of Jedburgh, Duns and Galashiels as well as communal heating systems?
- The management case for heat networks and communal heating across the Scottish Borders region 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 to ensure that the council is able to take a robust and standardised approach to delivering communal and/or district heating schemes. 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 the larger scale heat networks and for communal heating schemes?
  - 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 in the Jedburgh and Duns areas where the remaining two Potential Heat Network Zones were identified. Where appropriate, the council will gather real-world consumption data via engagement with heat off-takers and anchor load operators across the three main areas. The council will also begin identification and initial engagement with stakeholders for communal heating schemes. The council will begin with two

major stakeholder groups, social landlords and other public bodies, as they might play an important role in the development of large-scale heat networks as well as smaller communal heating schemes.

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.
- 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 the council's powers to mandate connection to a heat network, whether this is through the planning process for new developments or for existing public buildings.

#### **Actions**

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.

### **1.5 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.

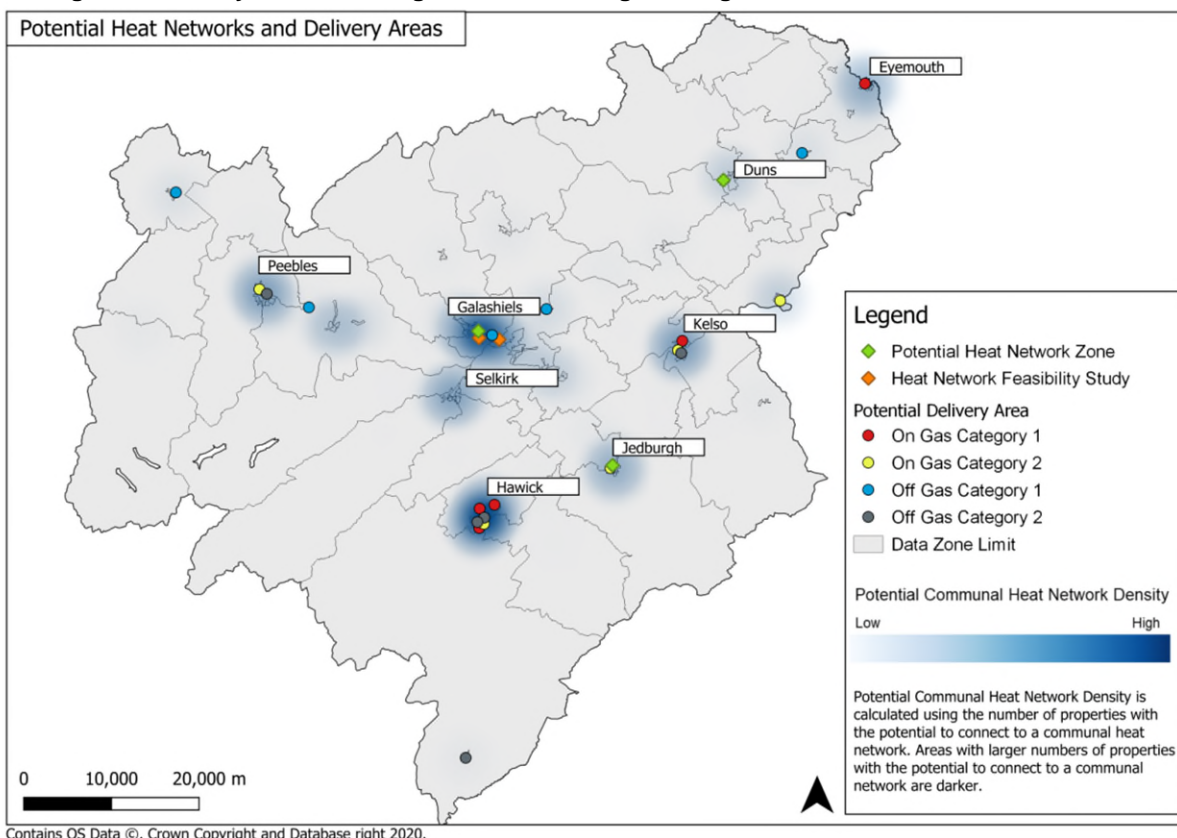
#### **Actions**

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.

## 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, 3 Potential Heat Network Zones and several hundred communal heating system opportunities. This is in addition to the 2 heat network feasibilities the council is already undertaking. These are all mapped in Figure 4.

**Figure 4: This map presents a summary of all the types of areas where the council will progress activity through this Delivery Plan, including those concerning building level works and heat networks.**



While the selection of areas is based on rigorous data analysis, they are only 'starting points'. This is because the data available for analysing building performance is not always up-to-date or accurate. To mitigate the impact of any major inaccuracies, the council will aim, when feasible, to update this data for further analysis as required. This limitation has 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 and Communal Heating Systems are detailed in section 2.2.



## 2.1 Potential Delivery Areas

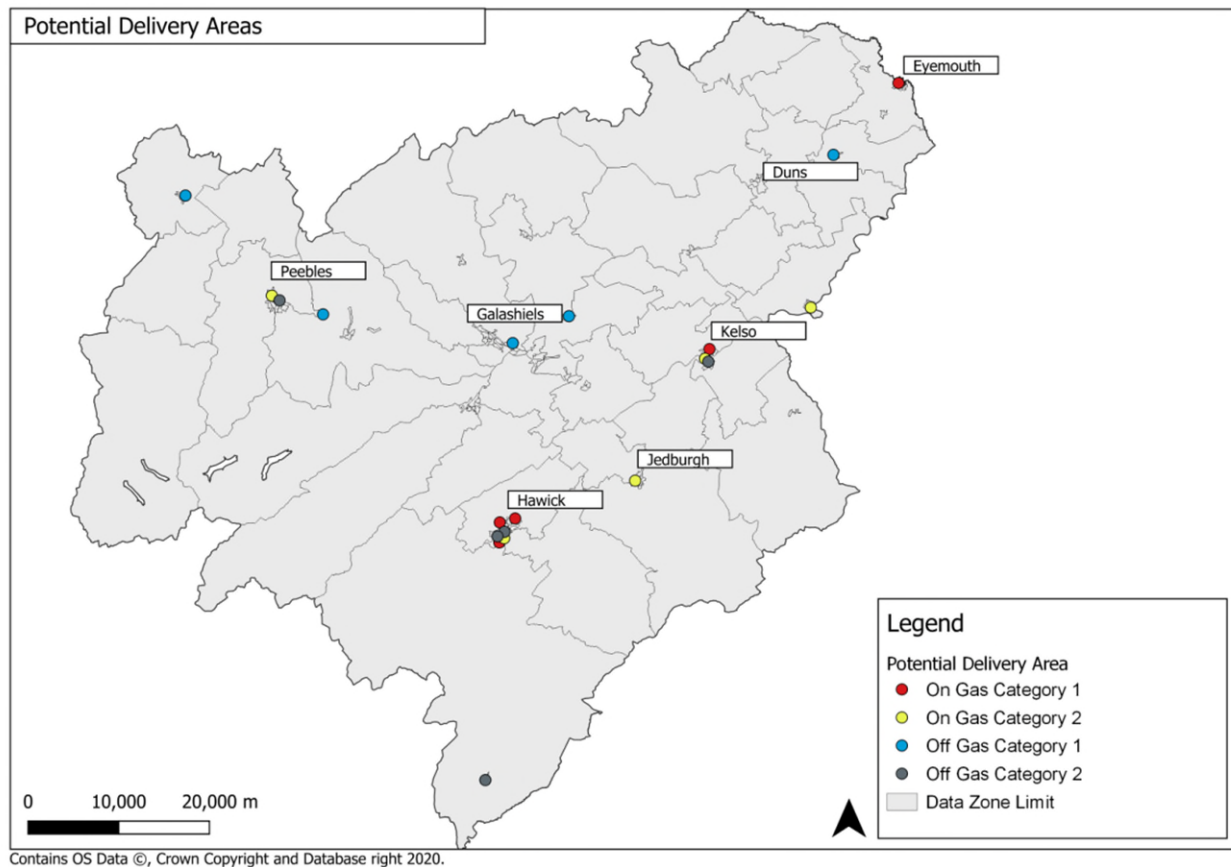
The council has prioritised Delivery Areas with the largest numbers of category 1 and 2 properties and defined them in terms of whether they are on-gas or off-gas, as per the LHEES Methodology. Category 1 properties are well insulated or mostly well insulated, requiring minimal or no building fabric measures and “heat pump-ready”. These properties are usually the most straightforward to decarbonise. Category 2 properties often require some form of fabric upgrade, such as wall insulation, before they are ready for a heat pump installation.

The Potential Delivery Areas are summarised in Table 1 and mapped in Figure 5.

**Table 1: List of Potential Delivery Areas within Scottish Borders**

Potential Delivery Area Name	Type of Delivery Area	Properties	Average CO <sub>2</sub> Savings (kg/y)	Average Bill Savings	Average Retrofit Cost
<b>1: Kelso</b>	On Gas Category 1	1143	2,120	£ 343.51	£ 19,000
<b>2: Hawick 1</b>	On Gas Category 1	920	2,300	£ 348.47	£ 22,000
<b>3: Eyemouth W</b>	On Gas Category 1	572	1,890	£ 309.7	£ 18,000
<b>4: Hawick 2</b>	On Gas Category 1	542	1,080	£ 225.44	£ 11,000
<b>5: Hawick 3</b>	On Gas Category 1	538	1,520	£ 278.14	£ 14,000
<b>6: Kelso</b>	On Gas Category 2	280	916.82	£ 193.01	£ 9,024
<b>7: Peebles N</b>	On Gas Category 2	229	1,890	£ 306.6	£ 16,000
<b>8: Coldstream</b>	On Gas Category 2	132	940.84	£ 173.87	£ 9,297
<b>9: Jedburgh</b>	On Gas Category 2	99	1,010	£ 236.53	£ 10,000
<b>10: Hawick S</b>	On Gas Category 2	97	915.42	£ 229.08	£ 9,140
<b>11: Chrinside</b>	Off Gas Category 1	250	3,030	£ 1,220	£ 22,000
<b>12: West Linton</b>	Off Gas Category 1	238	3,320	£ 899.31	£ 21,000
<b>13: Cardrona</b>	Off Gas Category 1	211	1,640	£ 1,600	£ 19,000
<b>14: Earlston</b>	Off Gas Category 1	194	3,010	£ 1,490	£ 23,000
<b>15: Gala</b>	Off Gas Category 1	138	1,510	£ 1,140	£ 16,000
<b>16: Kelso S</b>	Off Gas Category 2	132	314.60	£ 293.86	£ 4,456
<b>17: Peebles N</b>	Off Gas Category 2	117	128.75	£ 124.41	£ 2,850
<b>18: Hawick C</b>	Off Gas Category 2	60	285.50	£ 245.11	£ 5,270
<b>19: Newcastleton</b>	Off Gas Category 2	56	4,520	£ 1,140	£ 26,000
<b>20: Hawick C &amp; W</b>	Off Gas Category 2	45	419.63	£ 369.87	£ 6,940

**Figure 5: A map of all 20 Potential Delivery Areas identified.**

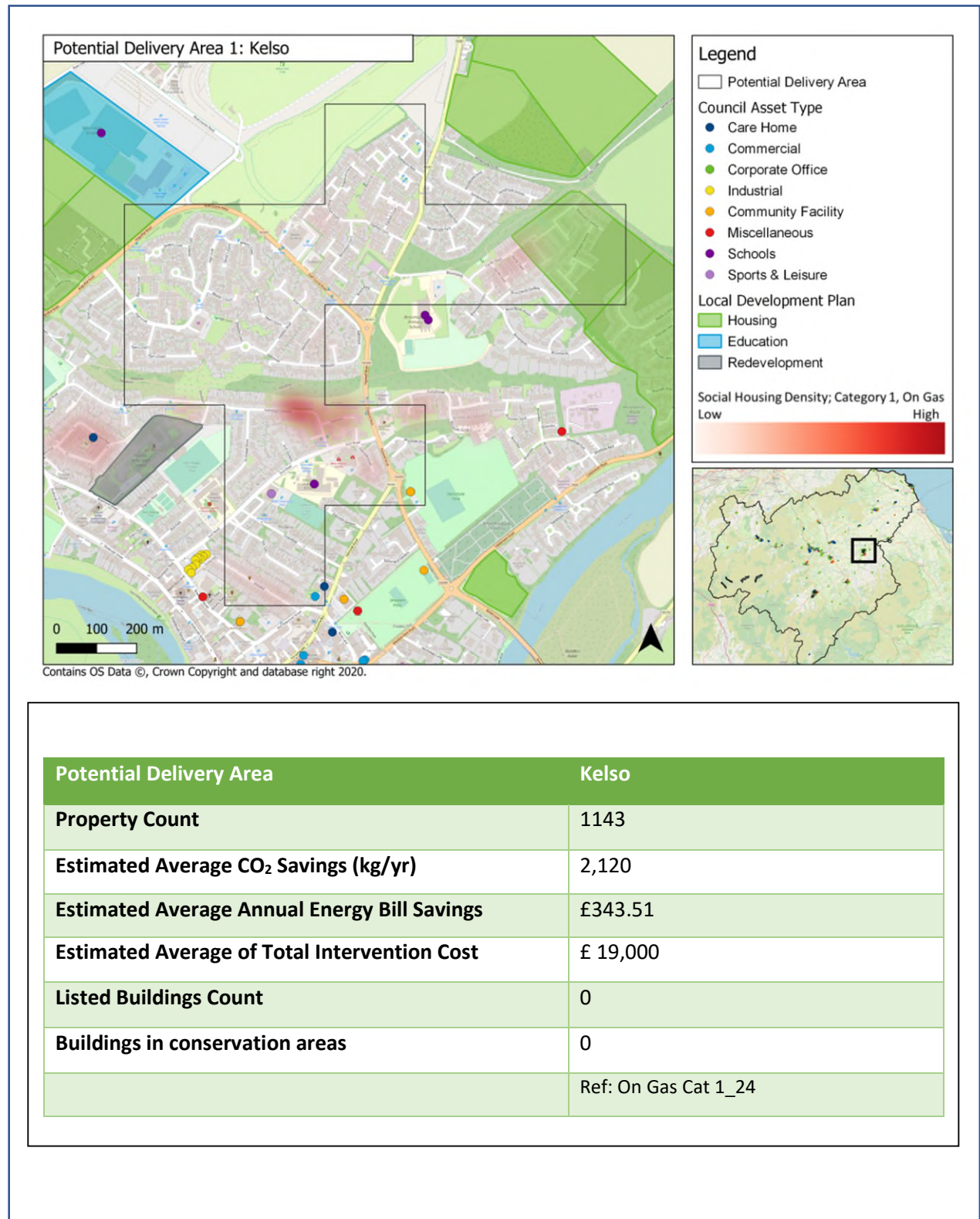


The following sections show maps and table summaries of the decarbonisation pathways for individual Potential Delivery Areas. The maps display:

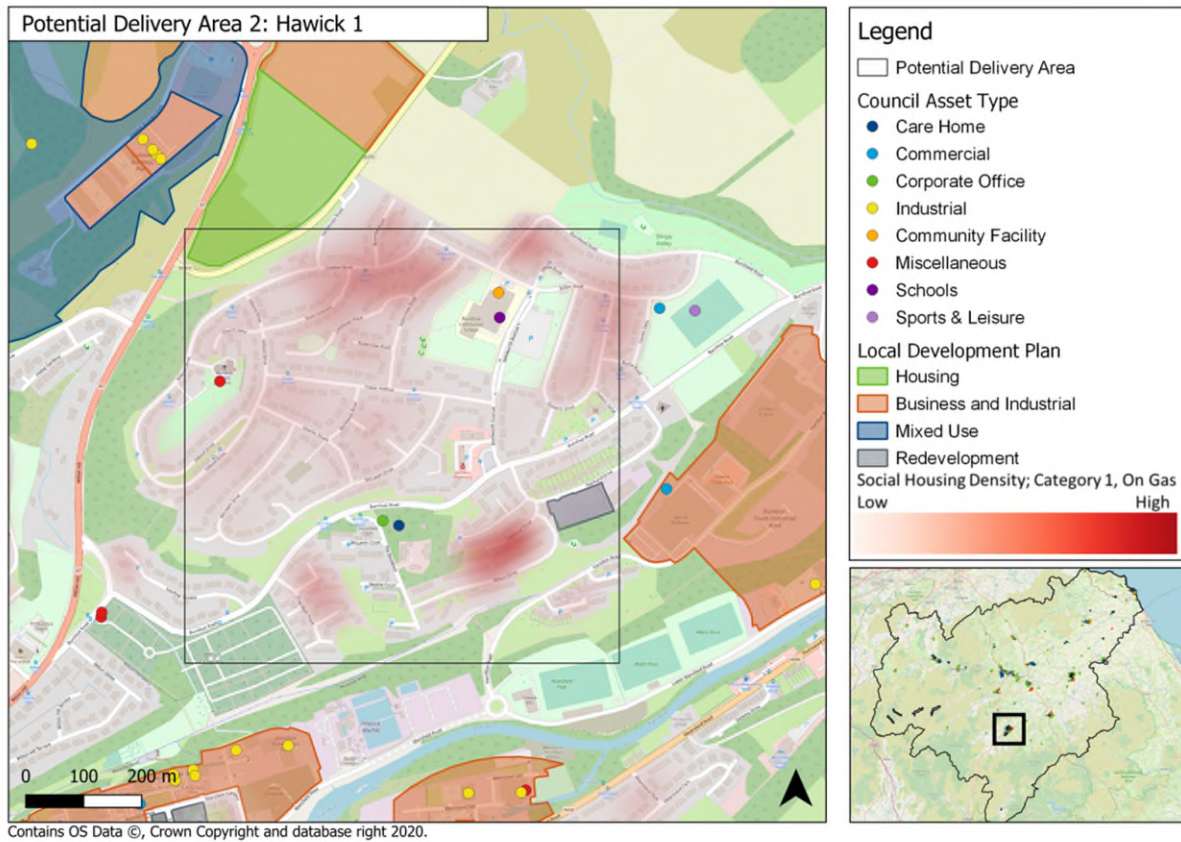
- A boundary of the Potential Delivery Area indicating a presence of properties belonging to that type of Delivery Area.
- A mapping of the various types of council assets to identify potential synergies with the council's own retrofit plans.
- Local development plan sites, displaying potential opportunities to align programmes with development activities as part of a holistic approach to regenerate and decarbonise the area.
- The density of social housing

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: Kelso



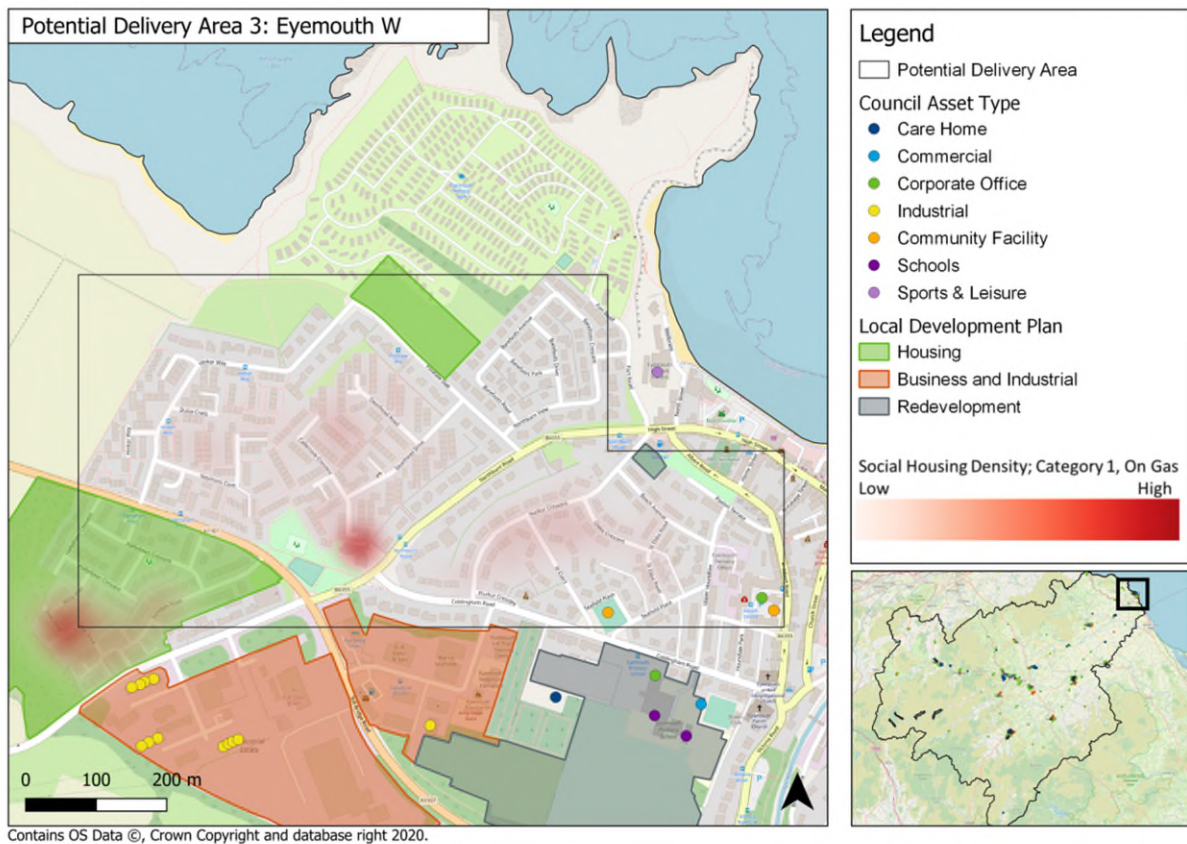
## Potential Delivery Area 2: Hawick 1



Potential Delivery Area	Hawick 1
Property Count	920
Estimated Average CO <sub>2</sub> Savings (kg/yr)	2,300
Estimated Average Annual Energy Bill Savings	£348.47
Estimated Average of Total Intervention Cost	£ 22,000
Listed Buildings Count	0
Buildings in conservation areas	0
	Ref: On Gas Cat 1_20

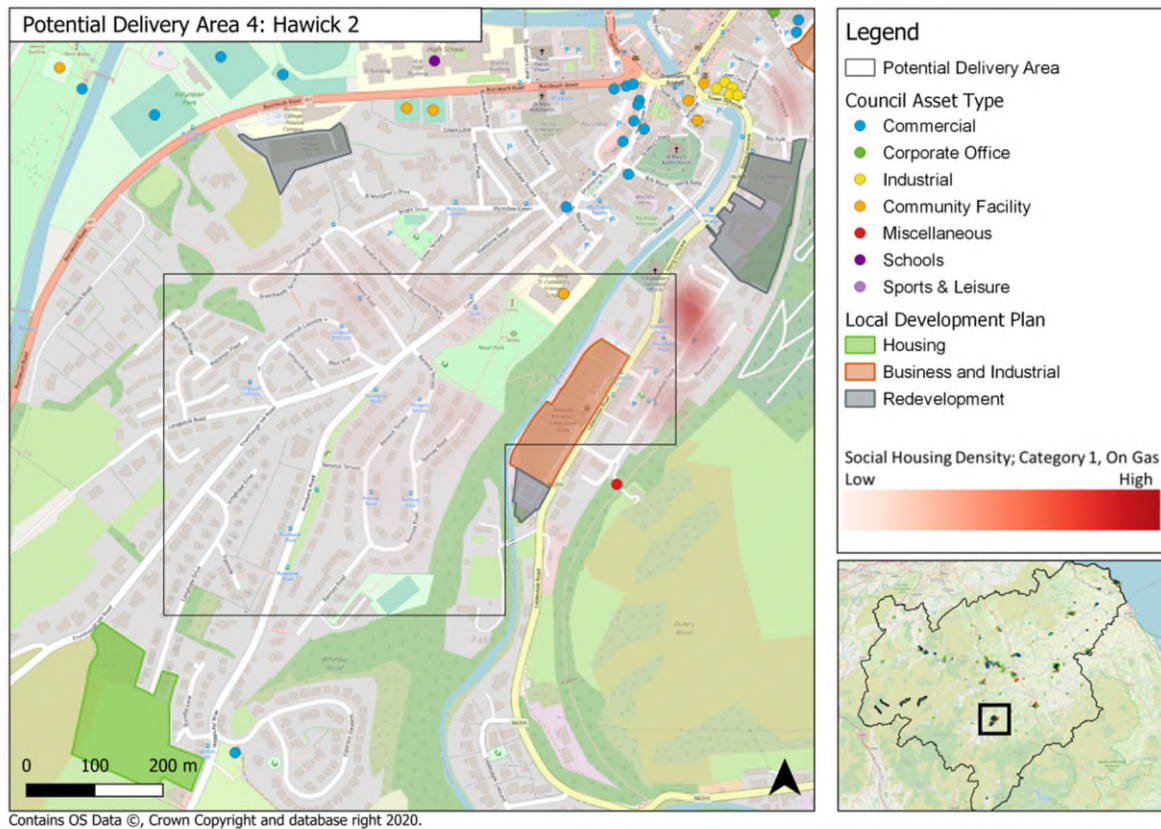


## Potential Delivery Area 3: Eyemouth W



Potential Delivery Area	Eyemouth W
<b>Property Count</b>	572
<b>Estimated Average CO<sub>2</sub> Savings (kg/yr)</b>	1,890
<b>Estimated Average Annual Energy Bill Savings</b>	£309.70
<b>Estimated Average of Total Intervention Cost</b>	£ 18,000
<b>Listed Buildings Count</b>	0
<b>Buildings in conservation areas</b>	0
	Ref: On Gas Cat 1_44

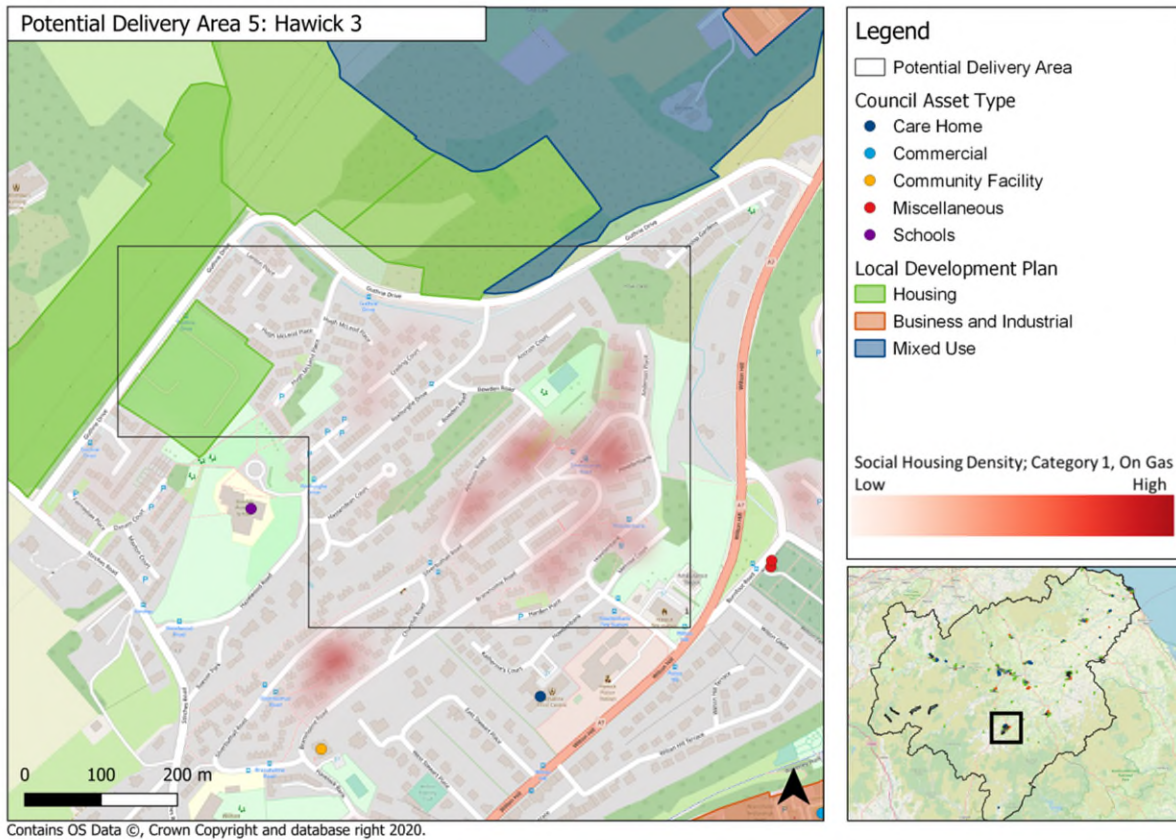
## Potential Delivery Area 4: Hawick 2



Potential Delivery Area	Hawick 2
Property Count	542
Estimated Average CO <sub>2</sub> Savings (kg/yr)	1,080
Estimated Average Annual Energy Bill Savings	£343.51
Estimated Average of Total Intervention Cost	£ 19,000
Listed Buildings Count	0
Buildings in conservation areas	0
	Ref: On Gas Cat 1_17

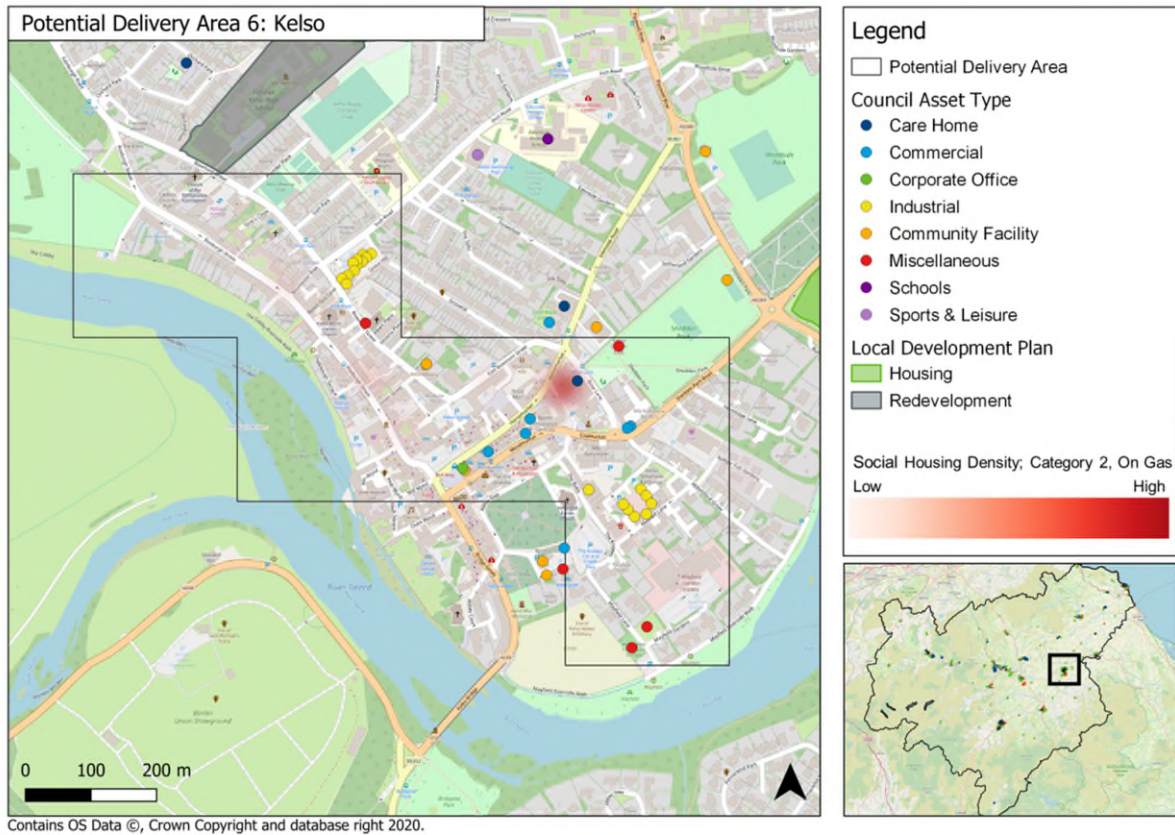


## Potential Delivery Area 5: Hawick 3



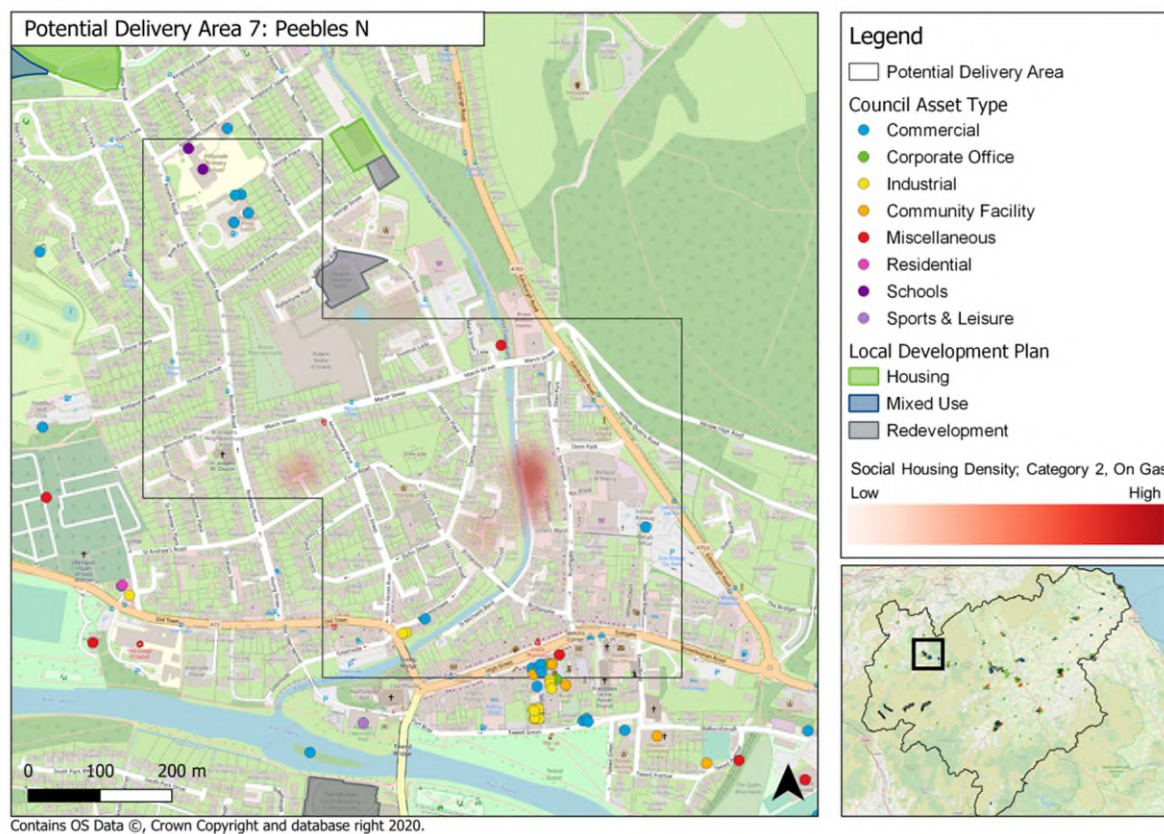
Potential Delivery Area	Hawick 3
Property Count	538
Estimated Average CO <sub>2</sub> Savings (kg/yr)	1,520
Estimated Average Annual Energy Bill Savings	£278.14
Estimated Average of Total Intervention Cost	£ 14,000
Listed Buildings Count	0
Buildings in conservation areas	0
	Ref: On Gas Cat 1_19

## Potential Delivery Area 6: Kelso



Potential Delivery Area	Kelso
Property Count	280
Estimated Average CO <sub>2</sub> Savings (kg/yr)	1,890
Estimated Average Annual Energy Bill Savings	£306.60
Estimated Average of Total Intervention Cost	£ 16,000
Listed Buildings Count	36
Buildings in conservation areas	274
	Ref: On Gas Cat 2_11

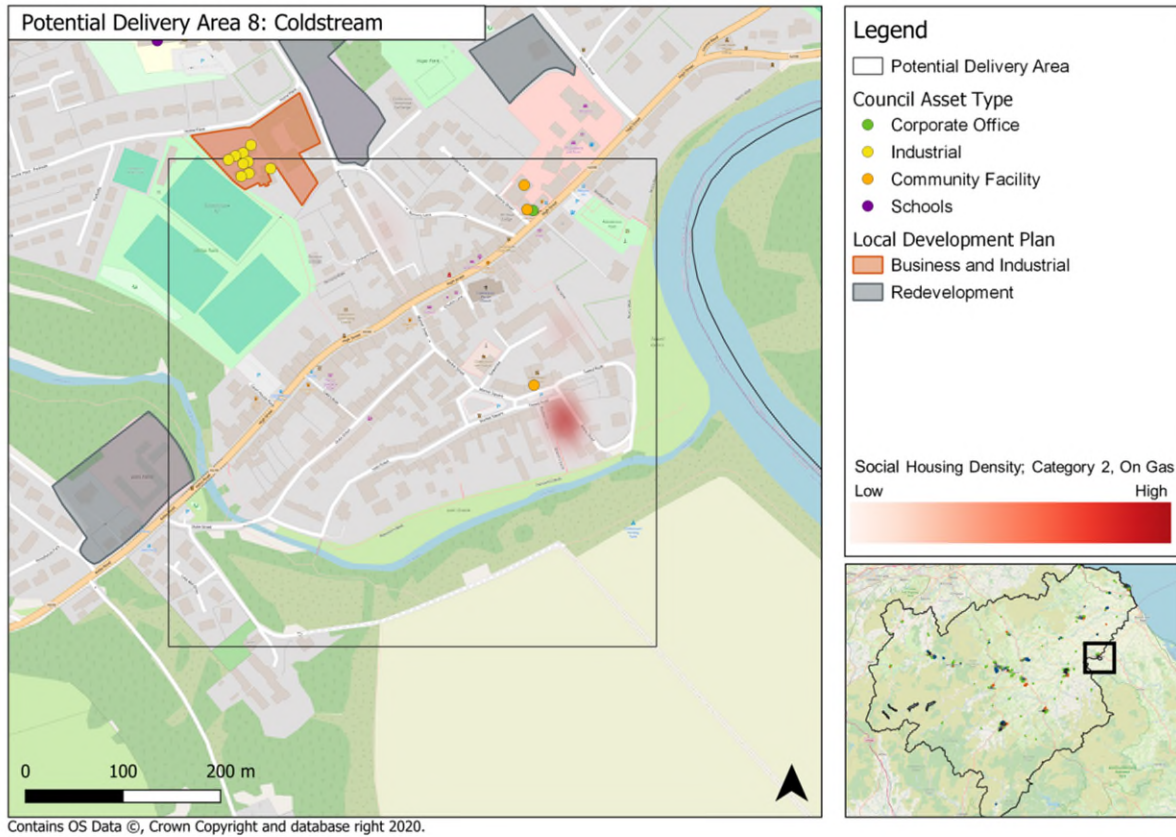
## Potential Delivery Area 7: Peebles N



Potential Delivery Area	Peebles N
<b>Property Count</b>	229
<b>Estimated Average CO<sub>2</sub> Savings (kg/yr)</b>	1,890
<b>Estimated Average Annual Energy Bill Savings</b>	£306.60
<b>Estimated Average of Total Intervention Cost</b>	£ 16,000
<b>Listed Buildings Count</b>	5
<b>Buildings in conservation areas</b>	223
	Ref: On Gas Cat 2_10

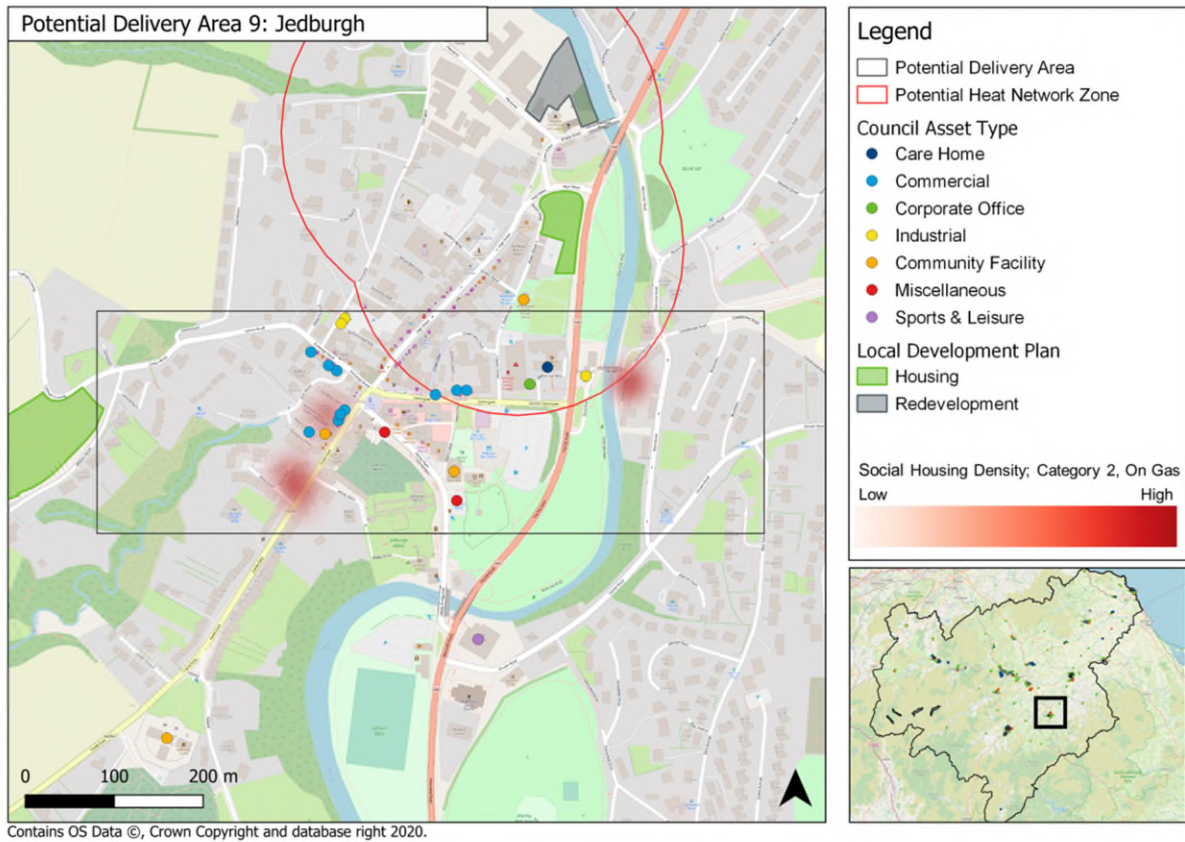


## Potential Delivery Area 8: Coldstream



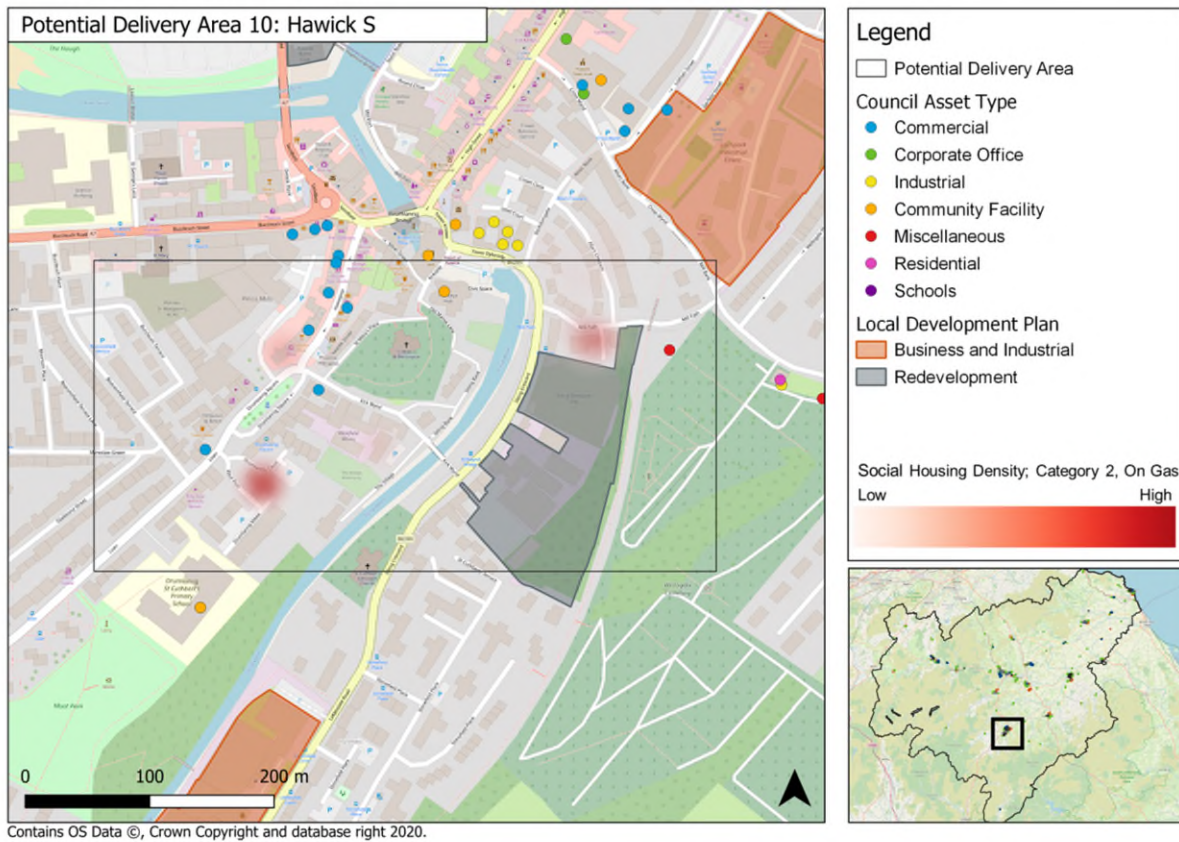
Potential Delivery Area	Coldstream
Property Count	132
Estimated Average CO <sub>2</sub> Savings (kg/yr)	940.84
Estimated Average Annual Energy Bill Savings	£173.87
Estimated Average of Total Intervention Cost	£ 9,297
Listed Buildings Count	21
Buildings in conservation areas	132
	Ref: On Gas Cat 2_09

## Potential Delivery Area 9: Jedburgh



Potential Delivery Area	Jedburgh
<b>Property Count</b>	99
<b>Estimated Average CO<sub>2</sub> Savings (kg/yr)</b>	1,010
<b>Estimated Average Annual Energy Bill Savings</b>	£236.53
<b>Estimated Average of Total Intervention Cost</b>	£ 10,000
<b>Listed Buildings Count</b>	27
<b>Buildings in conservation areas</b>	94
	Ref: On Gas Cat 2_08

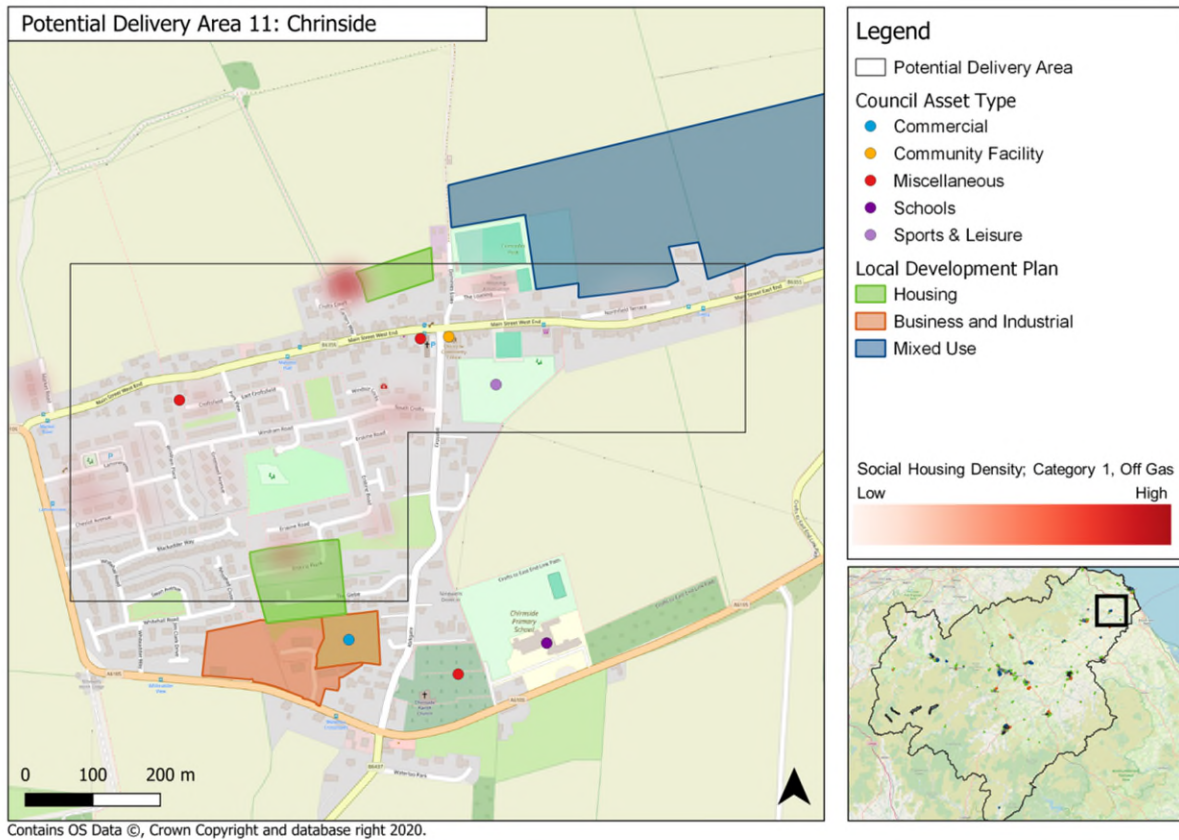
## Potential Delivery Area 10: Hawick S



Potential Delivery Area	Hawick S
Property Count	97
Estimated Average CO <sub>2</sub> Savings (kg/yr)	915.42
Estimated Average Annual Energy Bill Savings	£229.08
Estimated Average of Total Intervention Cost	£ 9,140
Listed Buildings Count	10
Buildings in conservation areas	74
	Ref: On Gas Cat 2_03

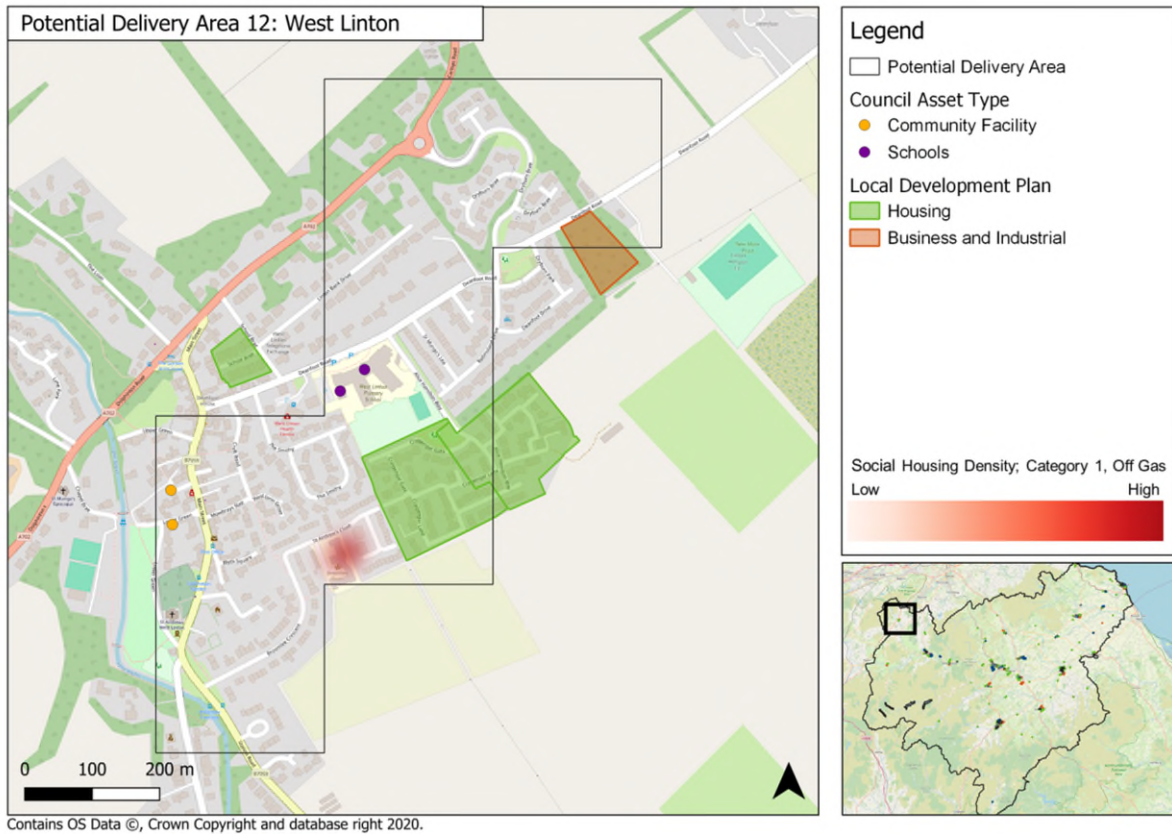


## Potential Delivery Area 11: Chrinside



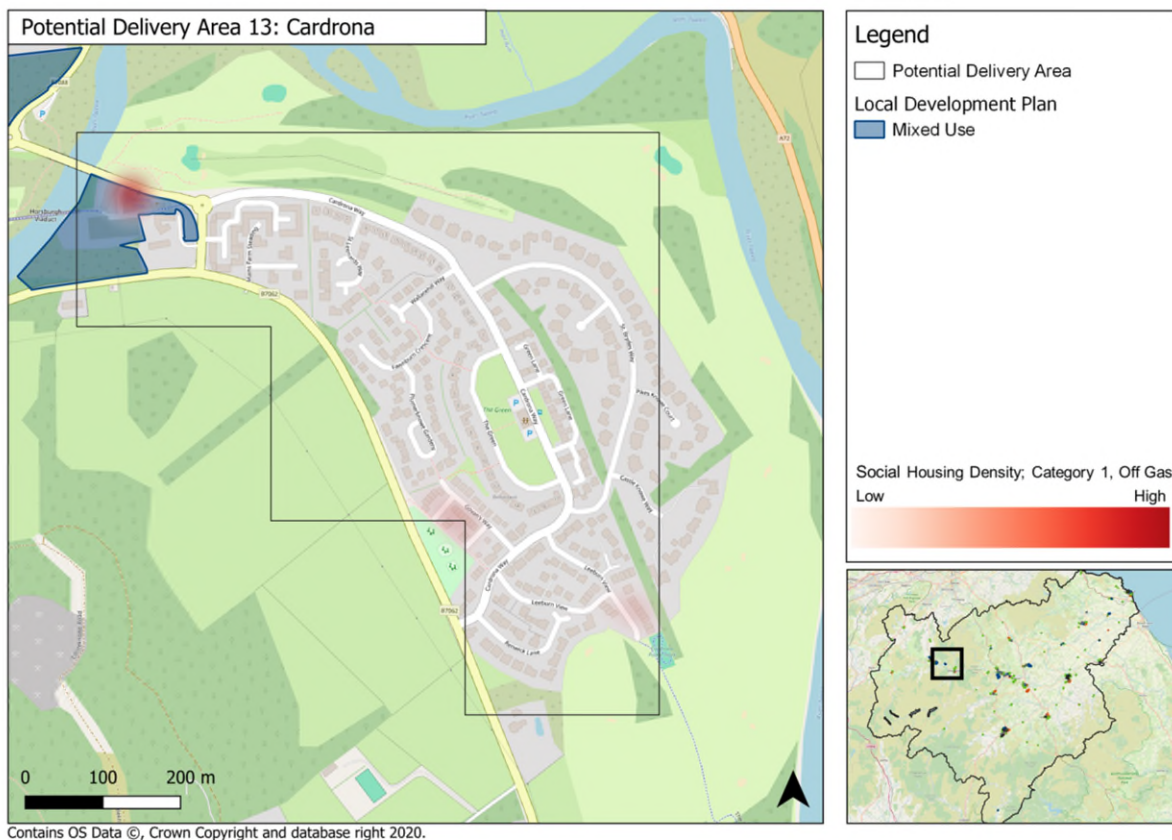
Potential Delivery Area	Chrinside
Property Count	250
Estimated Average CO <sub>2</sub> Savings (kg/yr)	3,030
Estimated Average Annual Energy Bill Savings	£1220
Estimated Average of Total Intervention Cost	£ 22,000
Listed Buildings Count	0
Buildings in conservation areas	0
	Ref: Off Gas Cat 1_10

## Potential Delivery Area 12: West Linton



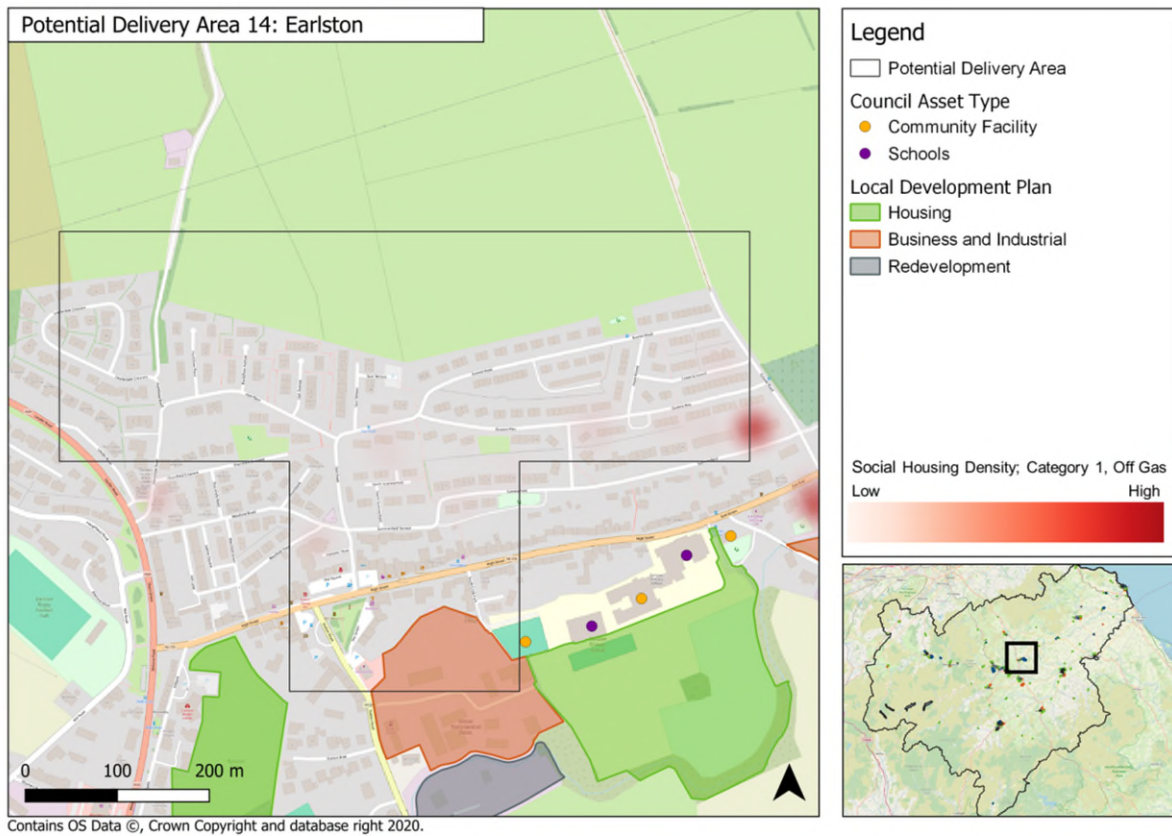
Potential Delivery Area	West Linton
Property Count	238
Estimated Average CO <sub>2</sub> Savings (kg/yr)	3,320
Estimated Average Annual Energy Bill Savings	£899.31
Estimated Average of Total Intervention Cost	£ 21,000
Listed Buildings Count	0
Buildings in conservation areas	0
	Ref: Off Gas Cat 1_13

## Potential Delivery Area 13: Cardrona



Potential Delivery Area	Cardrona
Property Count	211
Estimated Average CO <sub>2</sub> Savings (kg/yr)	2,640
Estimated Average Annual Energy Bill Savings	£1,600
Estimated Average of Total Intervention Cost	£ 19,000
Listed Buildings Count	0
Buildings in conservation areas	0
	Ref: Off Gas Cat 1_55

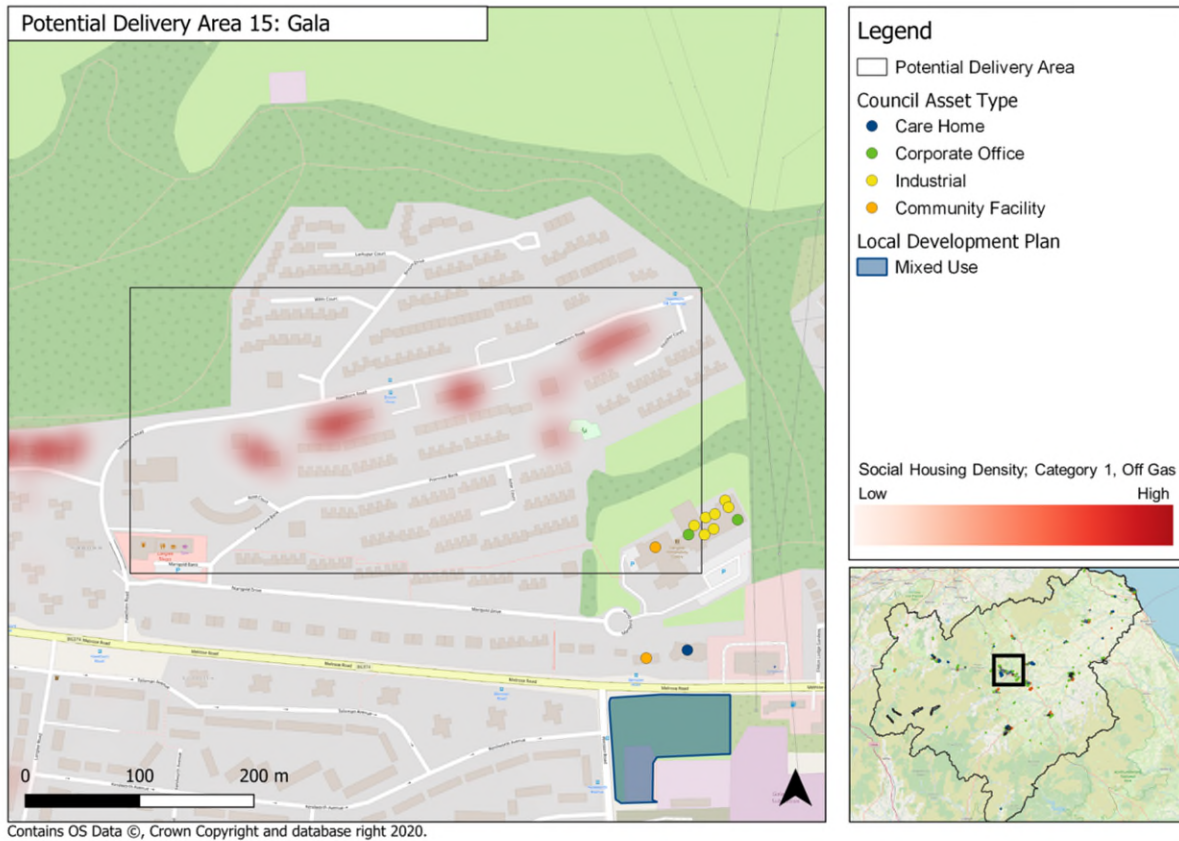
## Potential Delivery Area 14: Earlston



Potential Delivery Area	Earlston
Property Count	194
Estimated Average CO <sub>2</sub> Savings (kg/yr)	3,010
Estimated Average Annual Energy Bill Savings	£1,490
Estimated Average of Total Intervention Cost	£ 23,000
Listed Buildings Count	0
Buildings in conservation areas	0
	Ref: Off Gas Cat 1_56

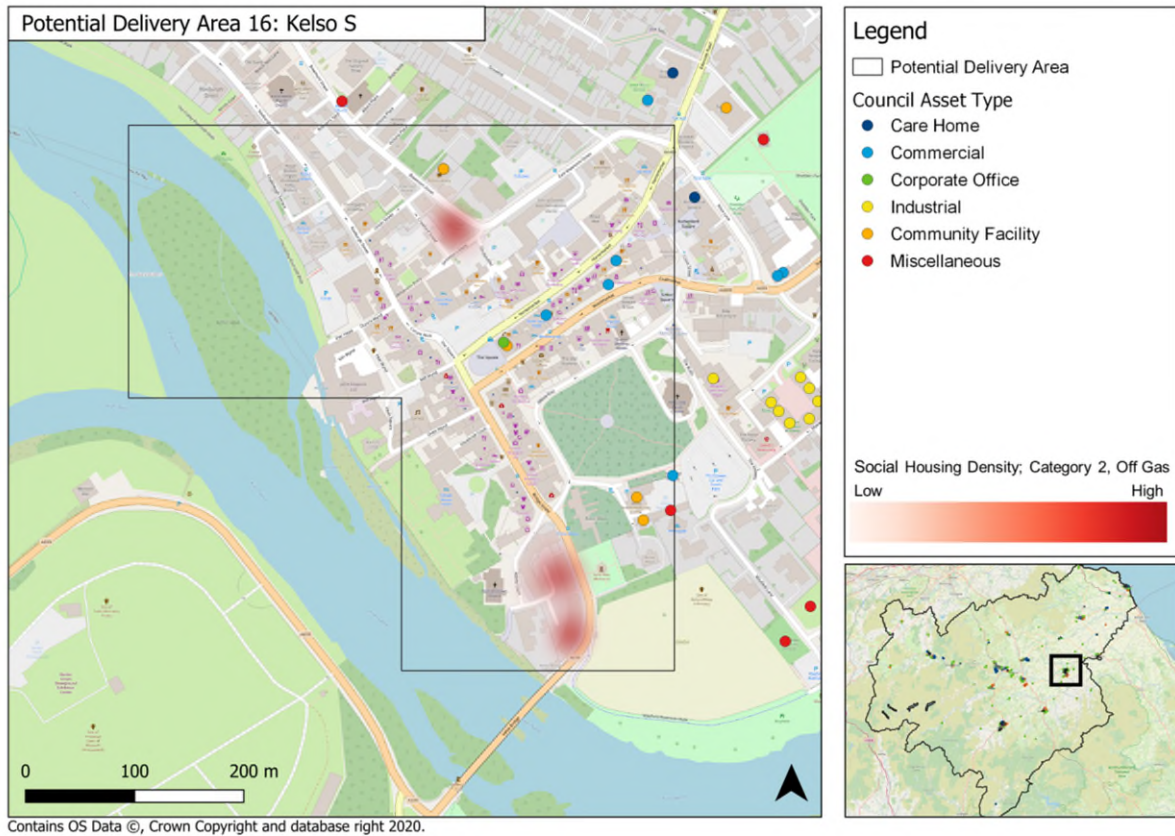


## Potential Delivery Area 15: Gala



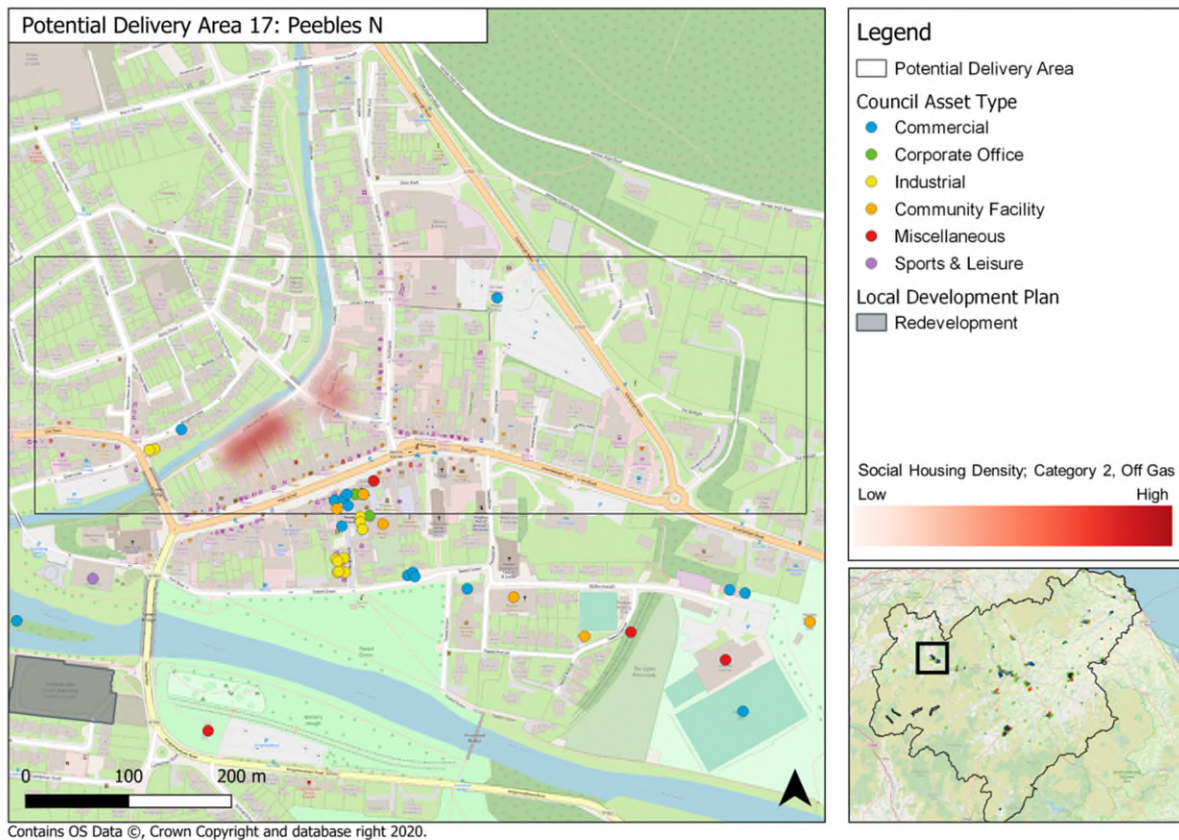
Potential Delivery Area	Gala
Property Count	138
Estimated Average CO <sub>2</sub> Savings (kg/yr)	1,510
Estimated Average Annual Energy Bill Savings	£1,140
Estimated Average of Total Intervention Cost	£ 16,000
Listed Buildings Count	0
Buildings in conservation areas	0
	Ref: Off Gas Cat 1_06

## Potential Delivery Area 16: Kelso S



Potential Delivery Area	Kelso S
<b>Property Count</b>	132
<b>Estimated Average CO<sub>2</sub> Savings (kg/yr)</b>	314.60
<b>Estimated Average Annual Energy Bill Savings</b>	£293.86
<b>Estimated Average of Total Intervention Cost</b>	£ 4,456
<b>Listed Buildings Count</b>	12
<b>Buildings in conservation areas</b>	132
	Ref: Off Gas Cat 2_05

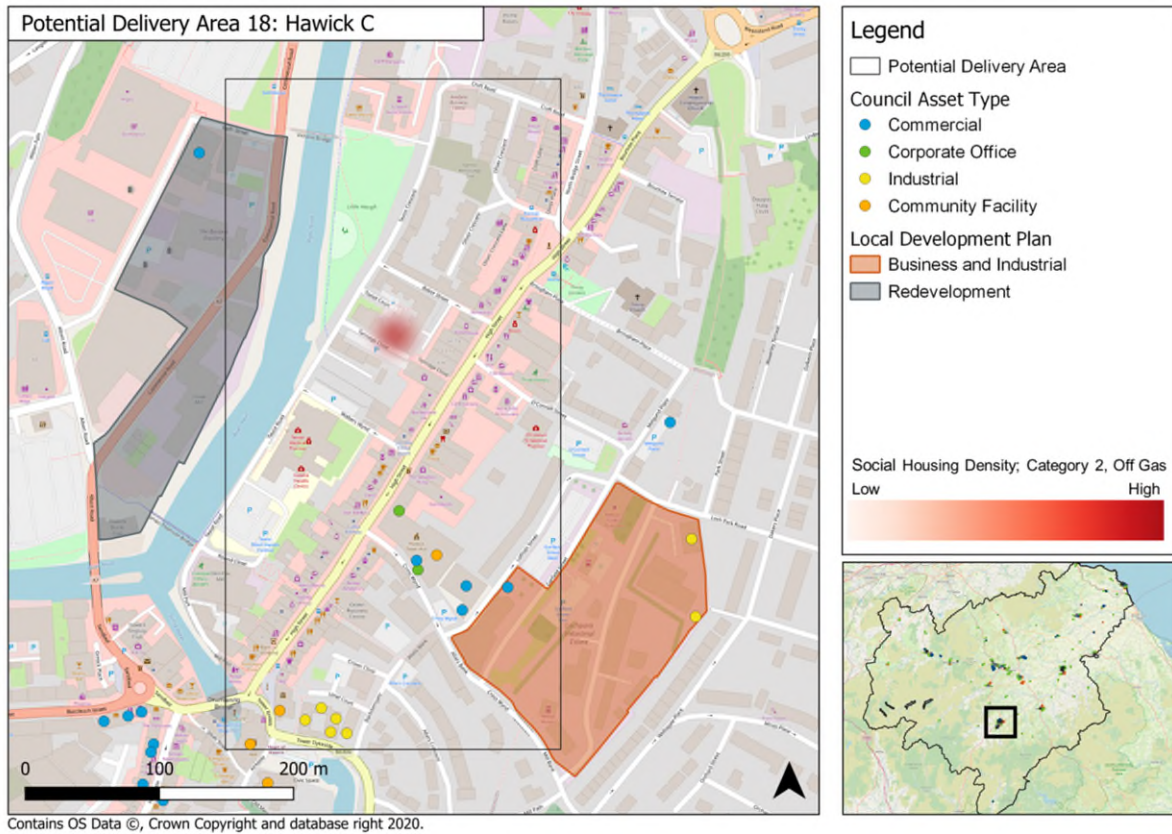
## Potential Delivery Area 17: Peebles N



Potential Delivery Area	Peebles N
Property Count	117
Estimated Average CO <sub>2</sub> Savings (kg/yr)	128.75
Estimated Average Annual Energy Bill Savings	£124.41
Estimated Average of Total Intervention Cost	£ 2,850
Listed Buildings Count	0
Buildings in conservation areas	117
	Ref: Off Gas Cat 2_01

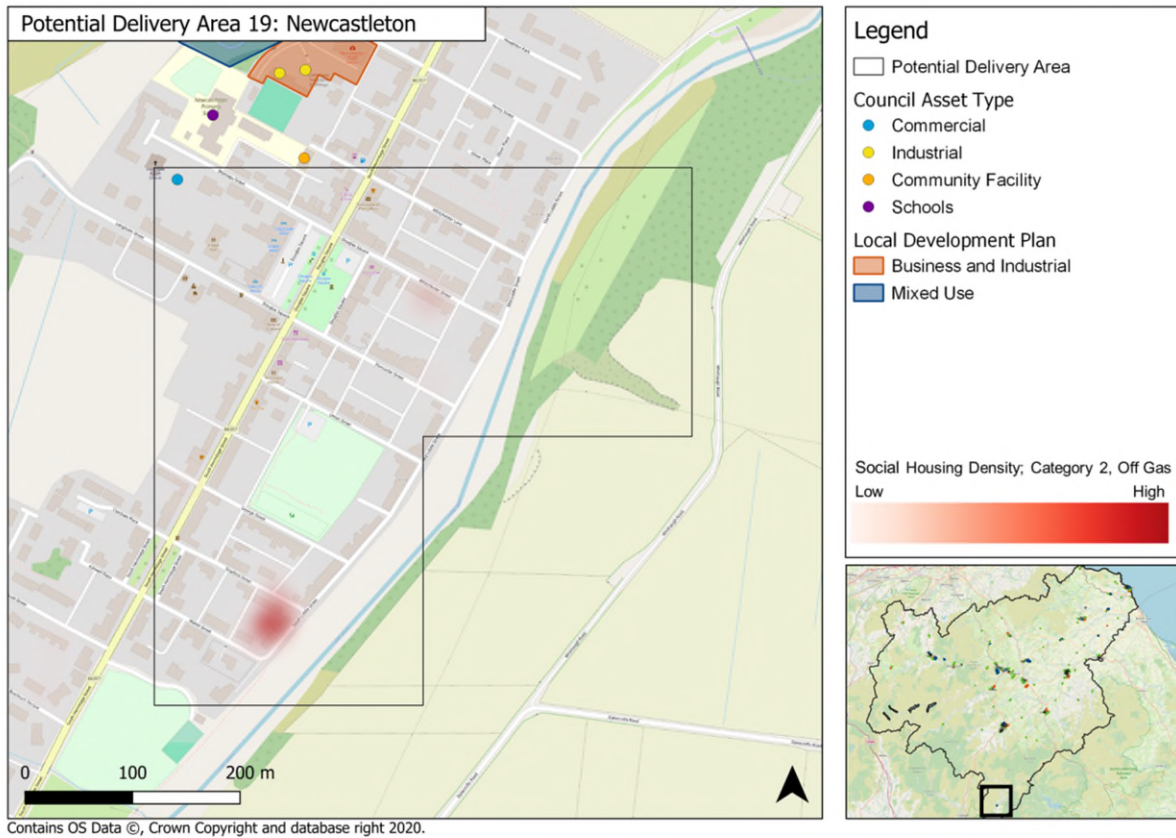


## Potential Delivery Area 18: Hawick C



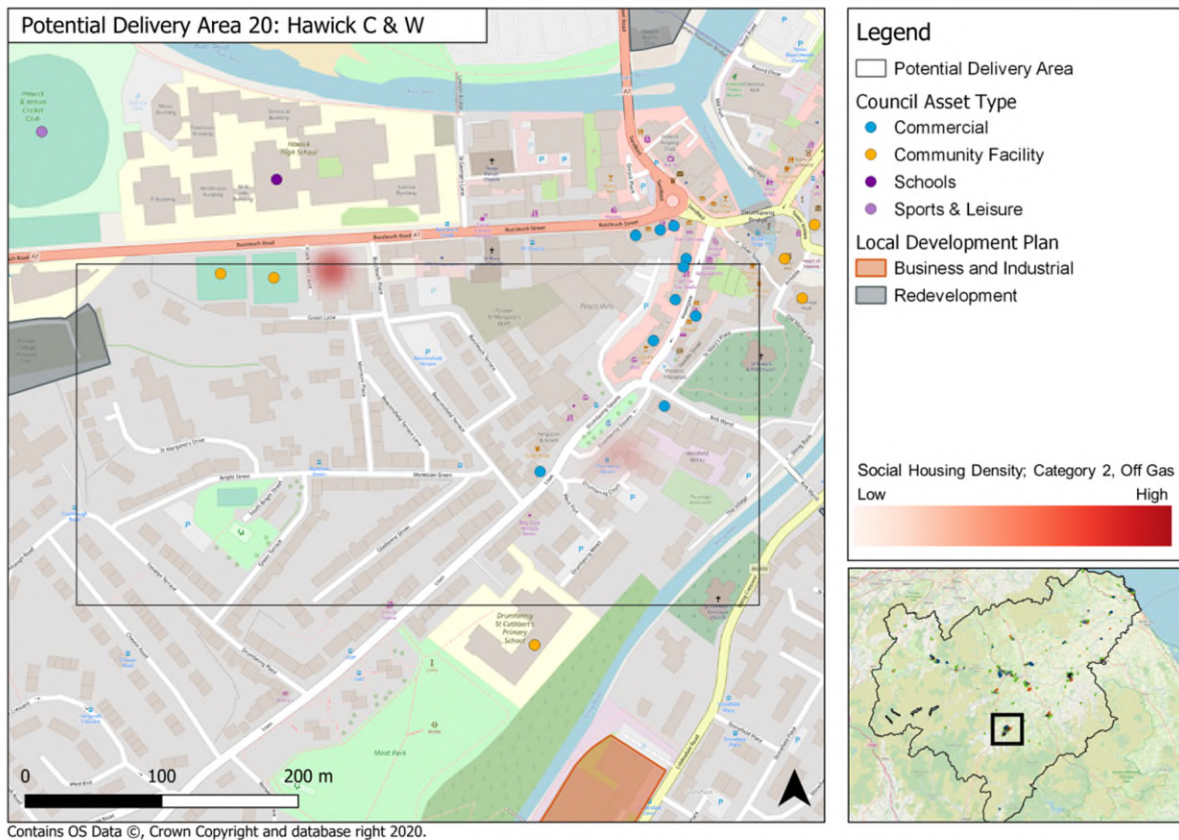
Potential Delivery Area	Hawick C
Property Count	60
Estimated Average CO <sub>2</sub> Savings (kg/yr)	285.50
Estimated Average Annual Energy Bill Savings	£245.11
Estimated Average of Total Intervention Cost	£ 5,270
Listed Buildings Count	1
Buildings in conservation areas	60
	Ref: Off Gas Cat 2_04

## Potential Delivery Area 19: Newcastleton



Potential Delivery Area	Newcastleton
Property Count	56
Estimated Average CO <sub>2</sub> Savings (kg/yr)	4,520
Estimated Average Annual Energy Bill Savings	£1,140
Estimated Average of Total Intervention Cost	£ 26,000
Listed Buildings Count	0
Buildings in conservation areas	53
	Ref: Off Gas Cat 2_02

## Potential Delivery Area 20: Hawick C & W



Potential Delivery Area	Hawick C & W
Property Count	45
Estimated Average CO <sub>2</sub> 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
	Ref: Off Gas Cat 2_03

## 2.2 Potential Heat Networks and Communal Heating Systems

The council has identified 3 main Potential Heat Network Zones – Jedburgh, Duns and Galashiels. These 3 areas were identified following the LHEES methodology with a slight variation to select anchor loads which are in public or partially public ownership. This was to identify opportunities where the council and public sector may have the most leverage to enable the development of a heat network by offering guaranteed connections to anchor loads. The analysis shows that Jedburgh has the highest domestic heat demand of all heat networks at 3,047 MWh followed by Galashiels with 1,942 MWh and finally Duns with 146 MWh. However, Duns and Galashiels have higher estimated overall heat demand when including the anchor loads and non-domestic buildings. Additionally, all 3 clusters have a similar area of roughly 200,000 m<sup>2</sup>.

In addition to these heat networks, 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.

The Home Analytics data indicates that 912 properties in the Scottish Borders already have communal heating as their primary heating. The council conducted further analysis matching energy and heat use with building types to identify potential communal heating opportunities across the Scottish Borders. This produced several hundred potential opportunities which the council will take forward as a core component through the Heat Network Delivery Plan.

The Potential Heat Network Zones, ongoing feasibilities, and communal heating systems opportunities area mapped in Figure 6.

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 many properties in an area, it can have an impact when assessing feasibility of heat networks, the heat demand and especially the defined anchor loads which might have been repurposed.

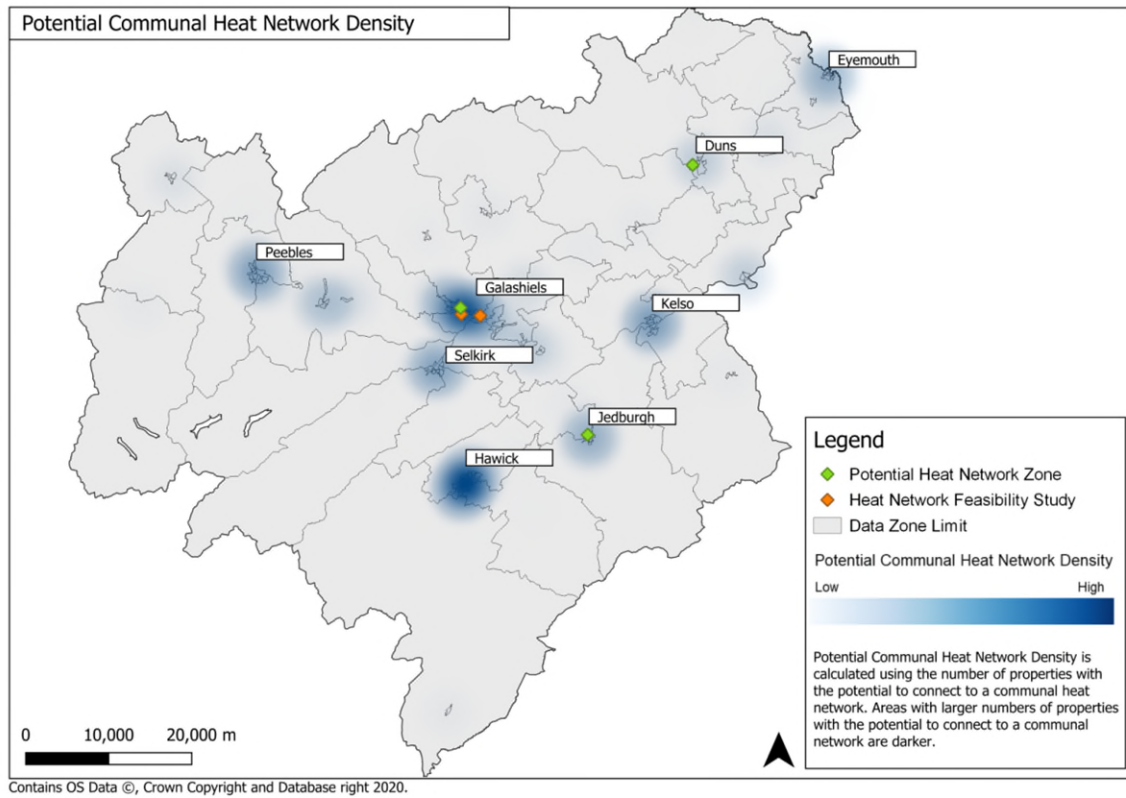
The following sections show maps and table summaries of the decarbonisation pathways for individual Potential Delivery Areas. The maps display:

- The boundaries of a Potential Heat Network Zone based on an analysis of anchor load requirement coupled with linear heat density.
- Existing heat networks which might offer an opportunity for interconnectivity and expansion.
- A mapping of the various types of council assets to identify potential for these to improve the feasibility of a heat network.
- 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.
- Opportunities for potential communal heat networks.

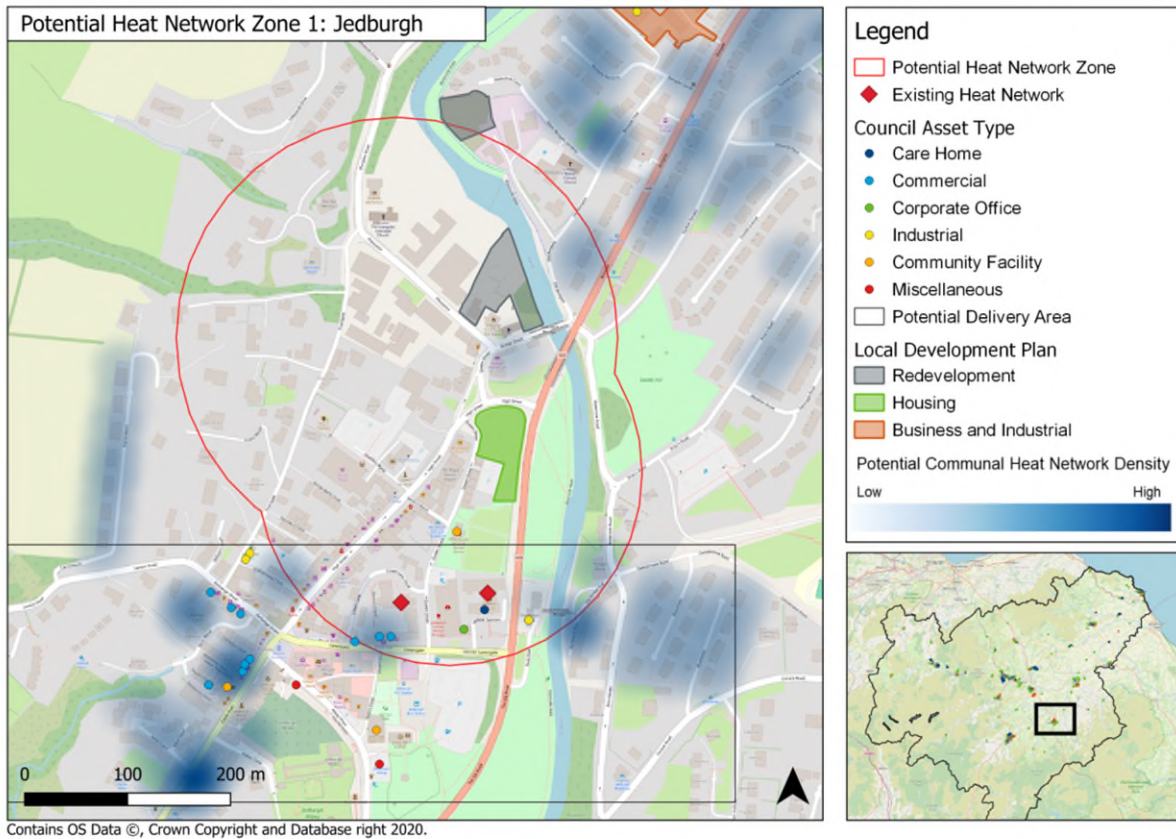
Tabular data alongside each Potential Heat Network Zone also provides detailed information highlighting the heat demand profile, possible anchor loads and potential heat supply sources.



**Figure 6: This map pinpoints all heat network-related opportunities identified and being taken forward through this Delivery Plan.**



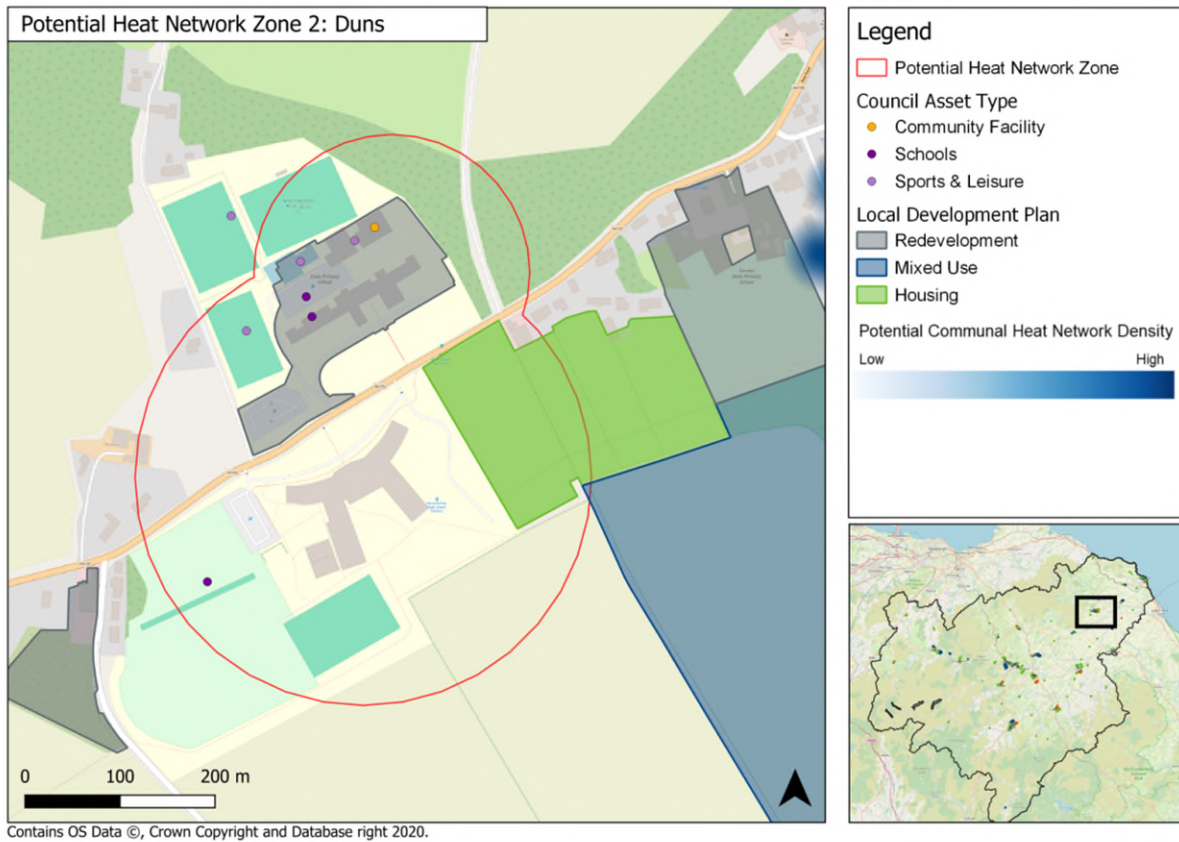
## Potential Heat Network Zone 1: Jedburgh



Potential Heat Network Zone	Jedburgh
Estimated Zone Heat Demand (MWh/y)	6,931,795
Area (m <sup>2</sup> )	182,834
Potential Anchor Loads	<ul style="list-style-type: none"> <li>Jedburgh Grammar School (858 MWh/yr)</li> <li>Royal British Legion (749 MWh/yr)</li> </ul>
Ground Source Heat Pump annual potential (assumed 40% of the total area) MWh/yr	2,906
GSHP peak potential (assumed 40% of the total area) MW	1,212
Green Space Area (m <sup>2</sup> )	43,089

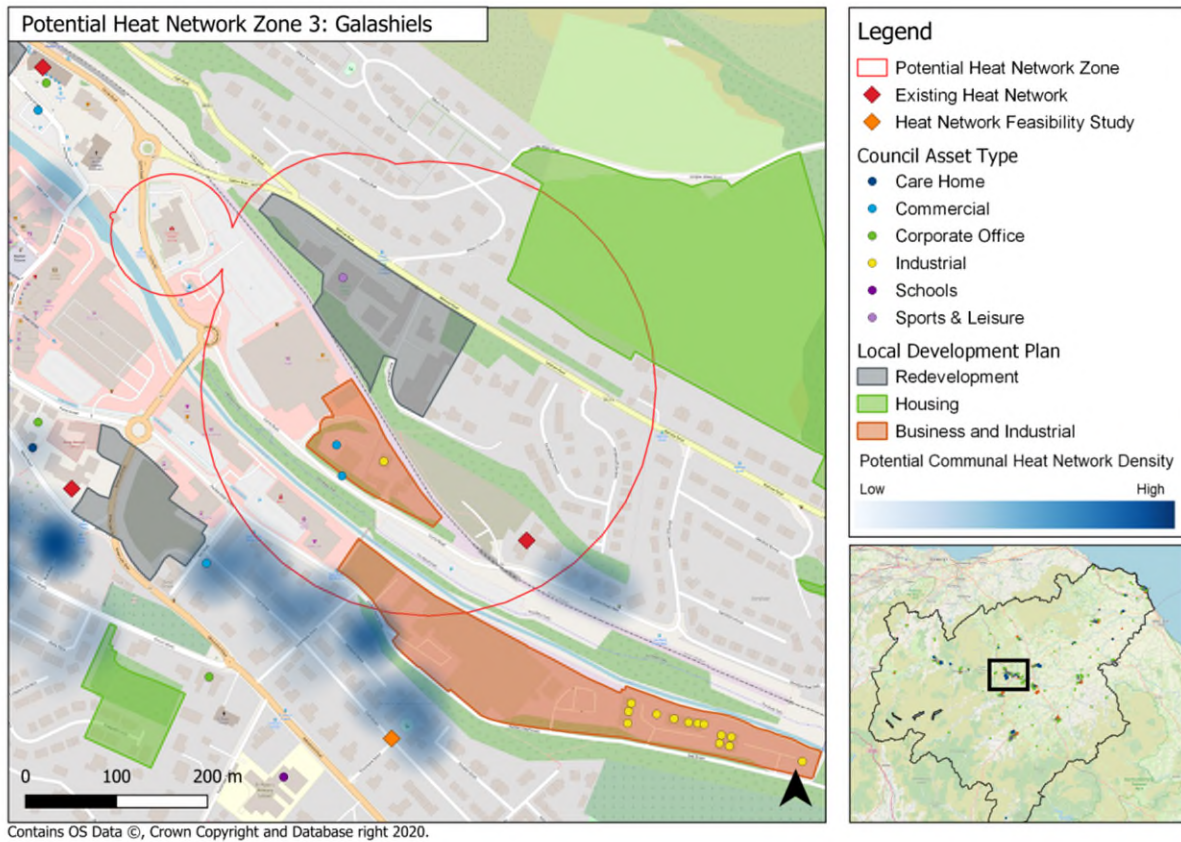


## Potential Heat Network Zone 2: Duns



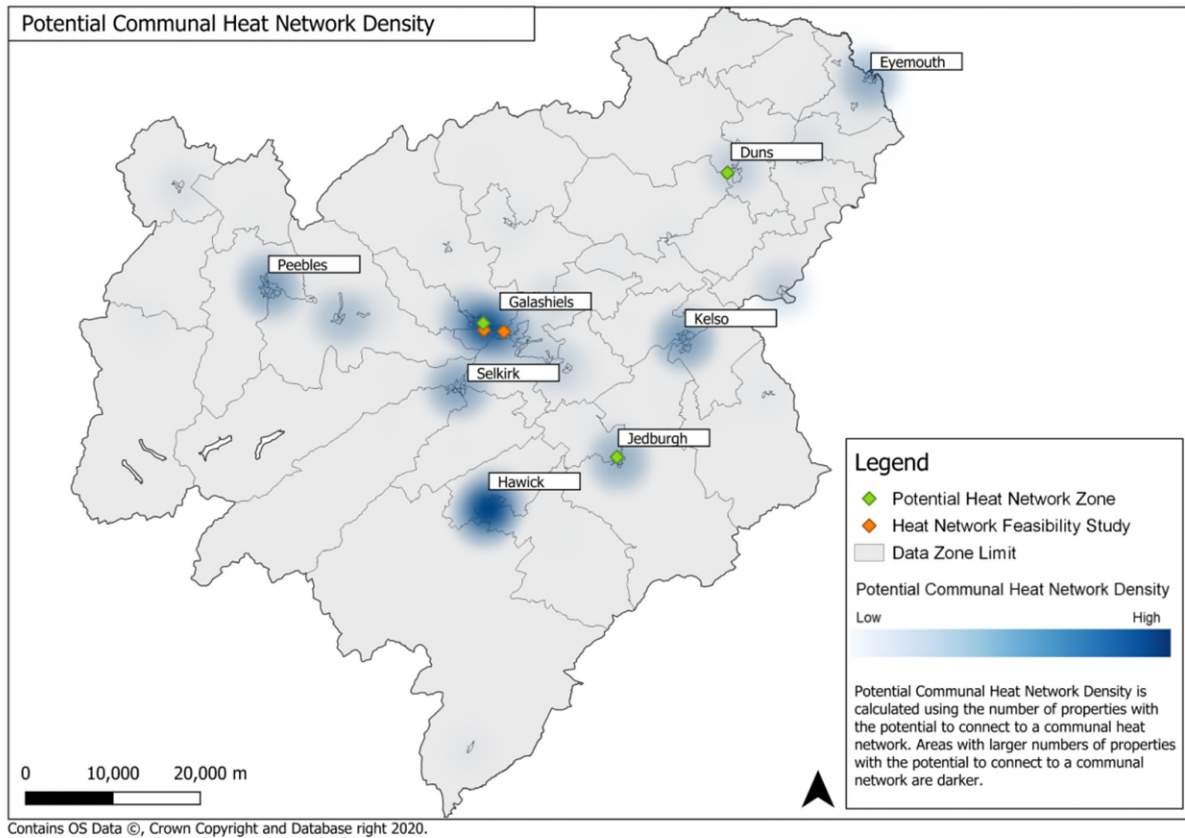
Potential Heat Network Zone	Duns
<b>Estimated Zone Heat Demand</b>	7,074,973
<b>Area (m<sup>2</sup>)</b>	216,108
<b>Potential Anchor Loads</b>	<ul style="list-style-type: none"> <li>The Berwickshire High School (960 MWh/yr)</li> <li>Duns Primary School (580 MWh/yr)</li> </ul>
<b>GSHP annual potential (assumed 40% of the total area) MWh/yr</b>	6,835
<b>GSHP peak potential (assumed 40% of the total area) MW</b>	2,848
<b>Green Space Area (m<sup>2</sup>)</b>	101,349

### Potential Heat Network Zone 3: Galashiels



Potential Heat Network Zone	Galashiels
Estimated Zone Heat Demand	7,232,616
Area (m <sup>2</sup> )	211,233
Potential Anchor Loads	<ul style="list-style-type: none"> <li>Borders College (1,019 MWh/yr) (Possibility of being repurposed in the coming years)</li> <li>Sports Centre, Melrose Road (544 MWh/yr)</li> </ul>
GSHP annual potential (assumed 40% of the total area) MWh/yr	2,832
GSHP peak potential (assumed 40% of the total area) MW	1,182
Green Space Area (m <sup>2</sup> )	41,987

## Potential Communal Heating Systems

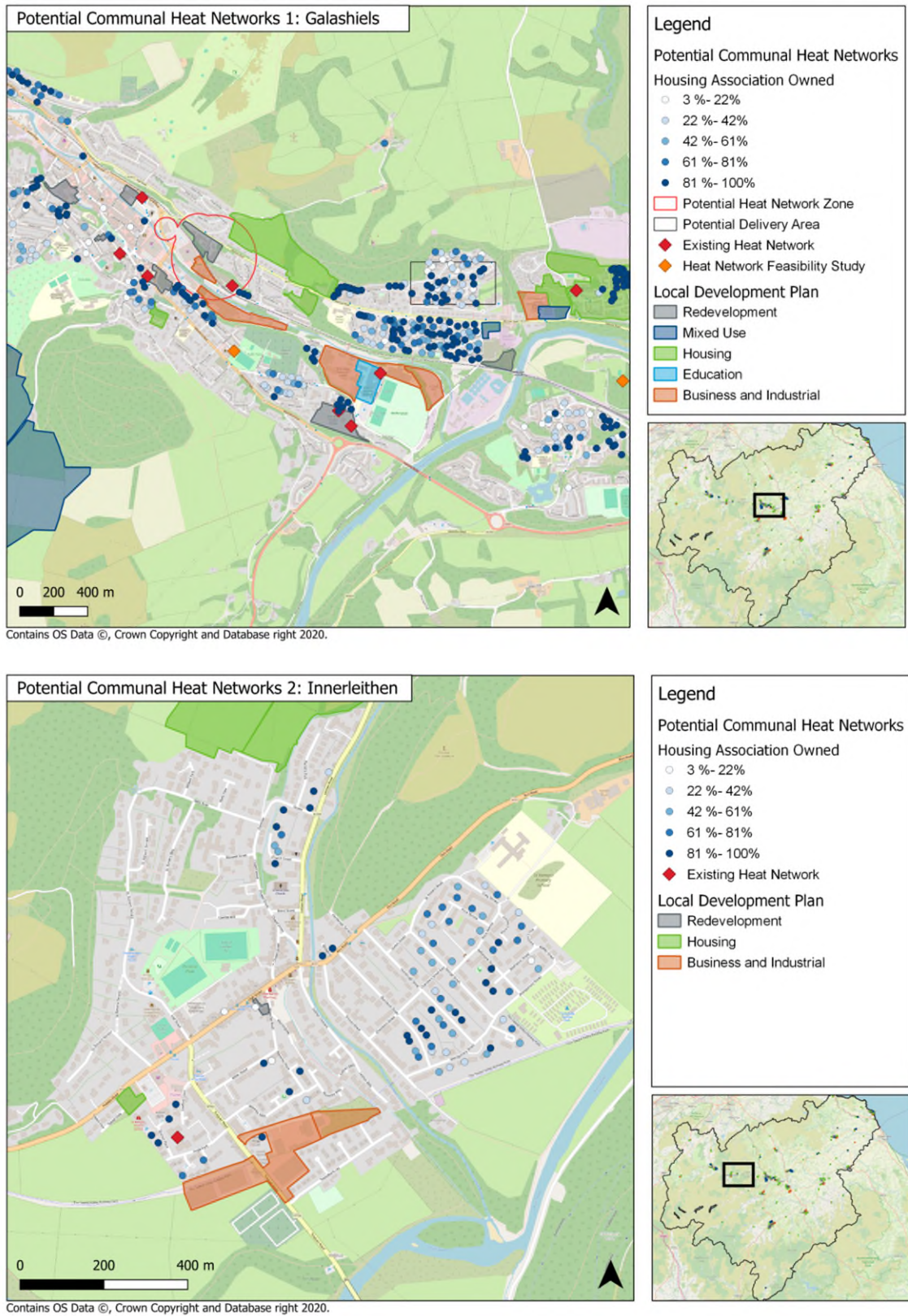


### Potential Communal Heating Systems

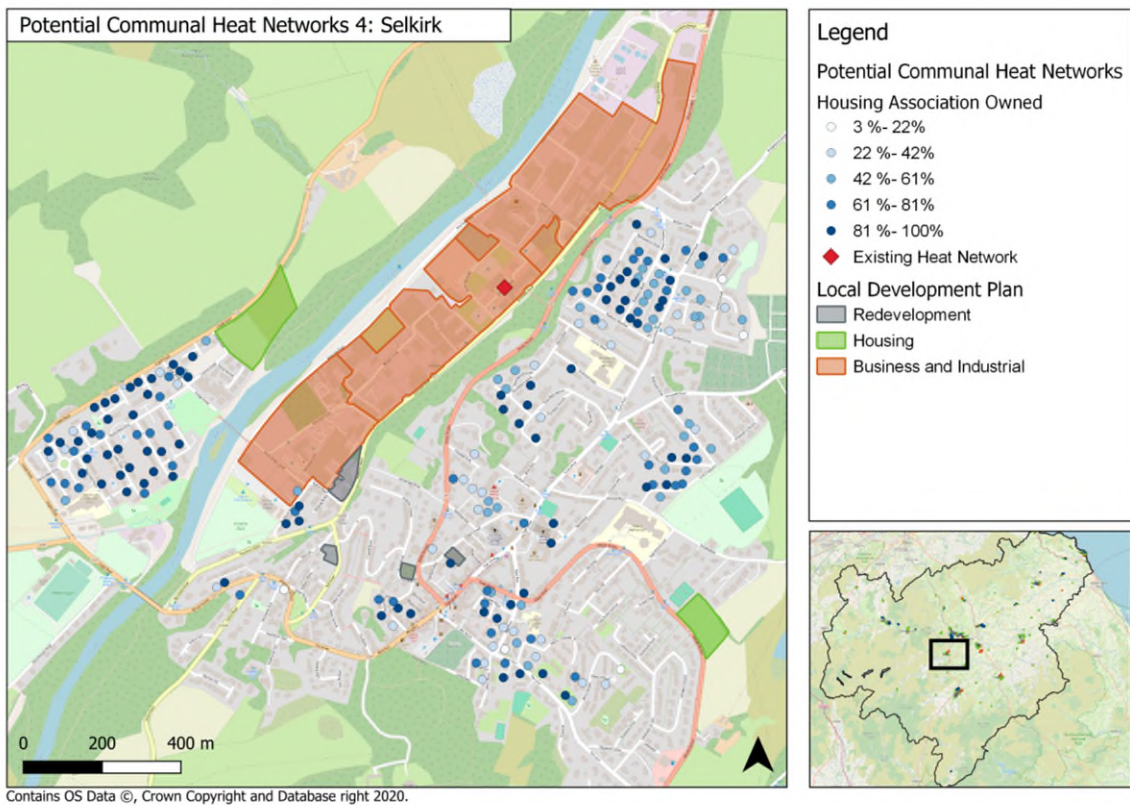
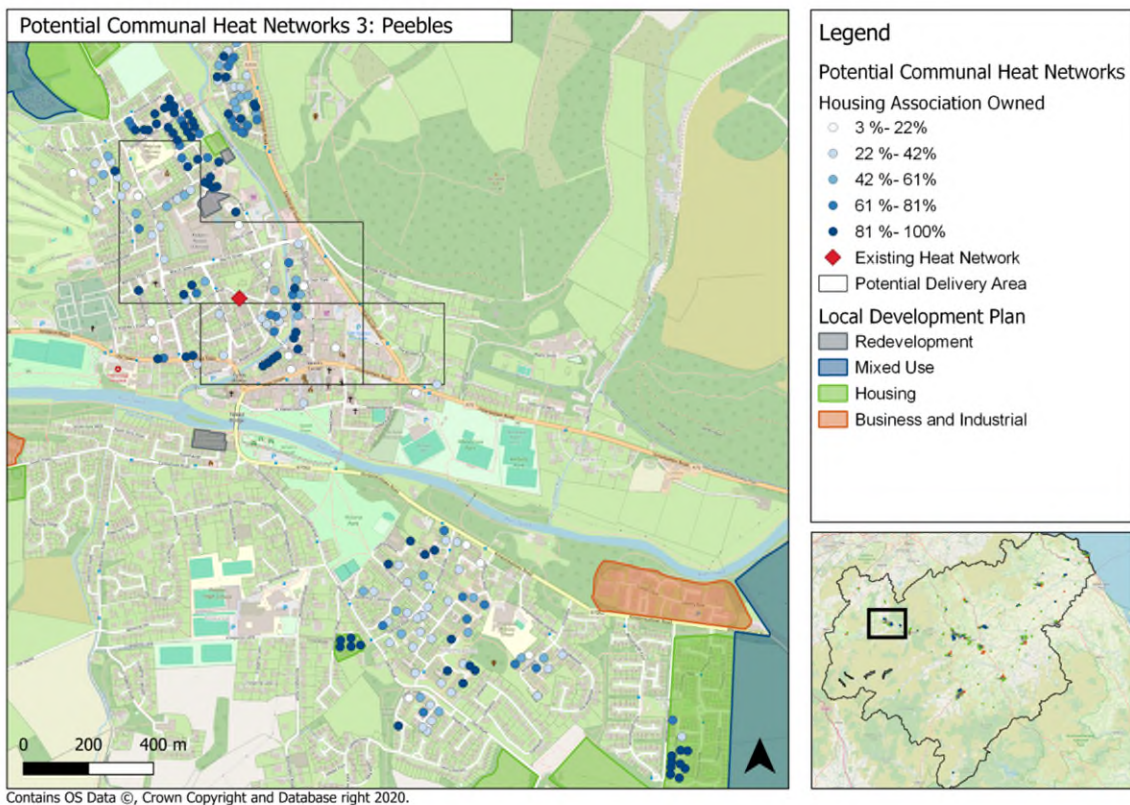
<b>Total Heat demand (MWh/y)</b>	139,332
<b>Total Heat demand on gas blocks (MWh/y)</b>	117,863
<b>Total Heat demand off gas blocks (MWh/y)</b>	21,469
<b>Total Number of Properties</b>	13,413 (in 2,459 blocks)
<b>Percentage owned by housing association</b>	66.4%



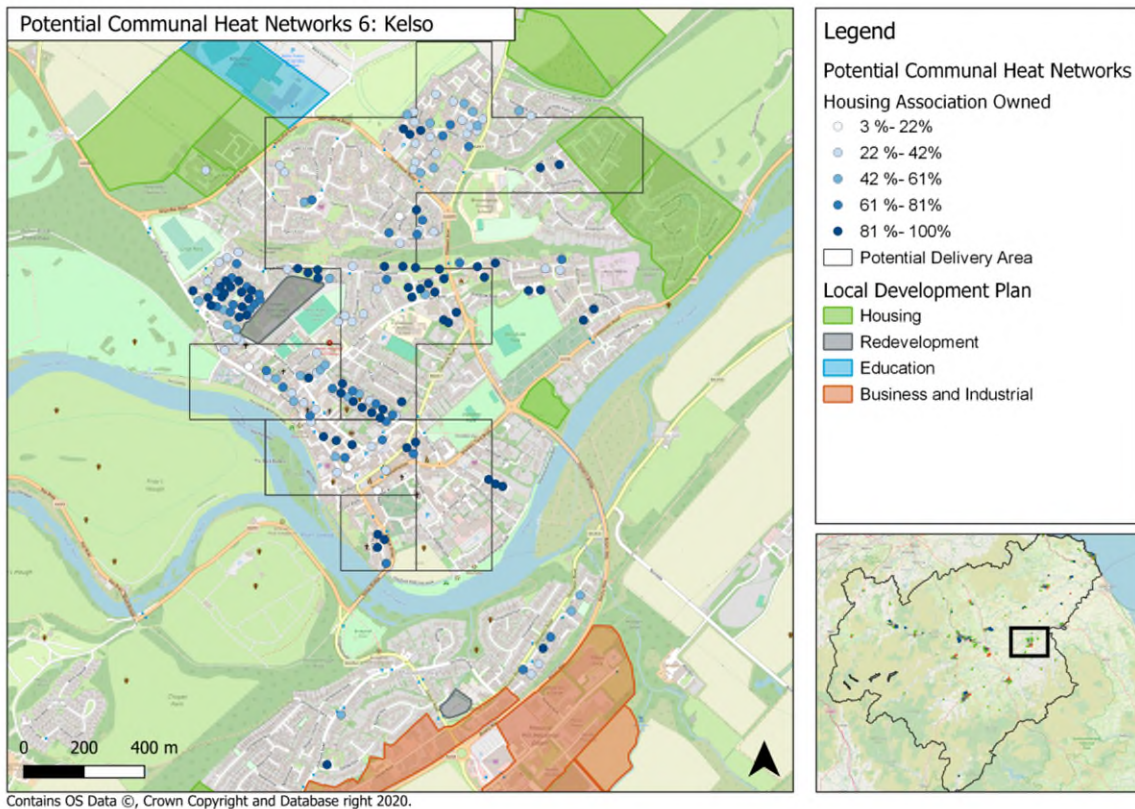
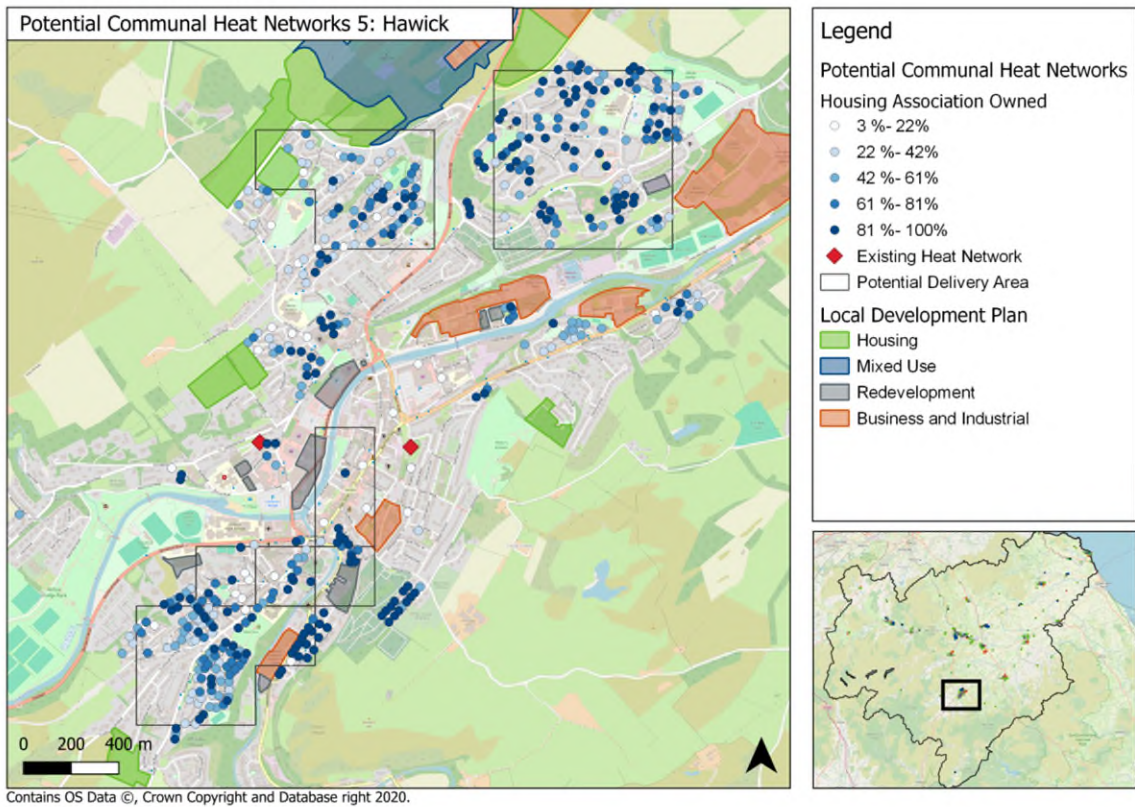
Detailed maps of potential communal heating system opportunities are presented below with each blue dot representing one system and coloured based on the proportion of social housing properties.



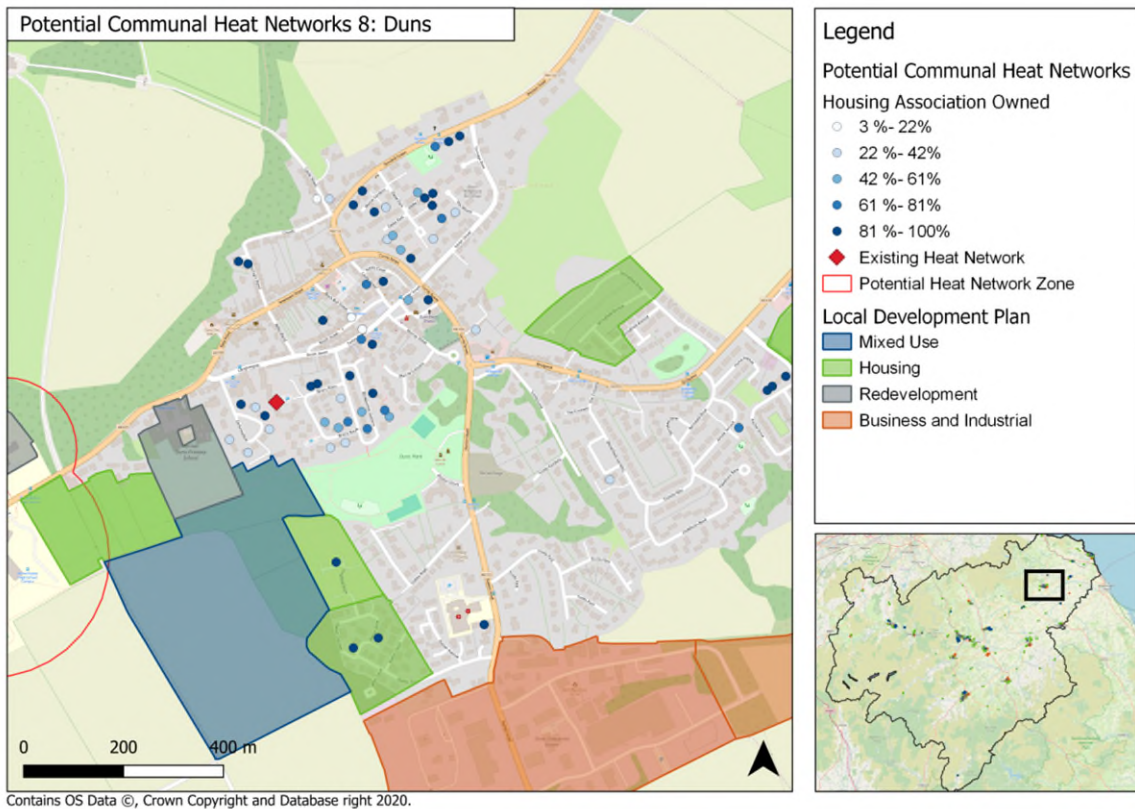
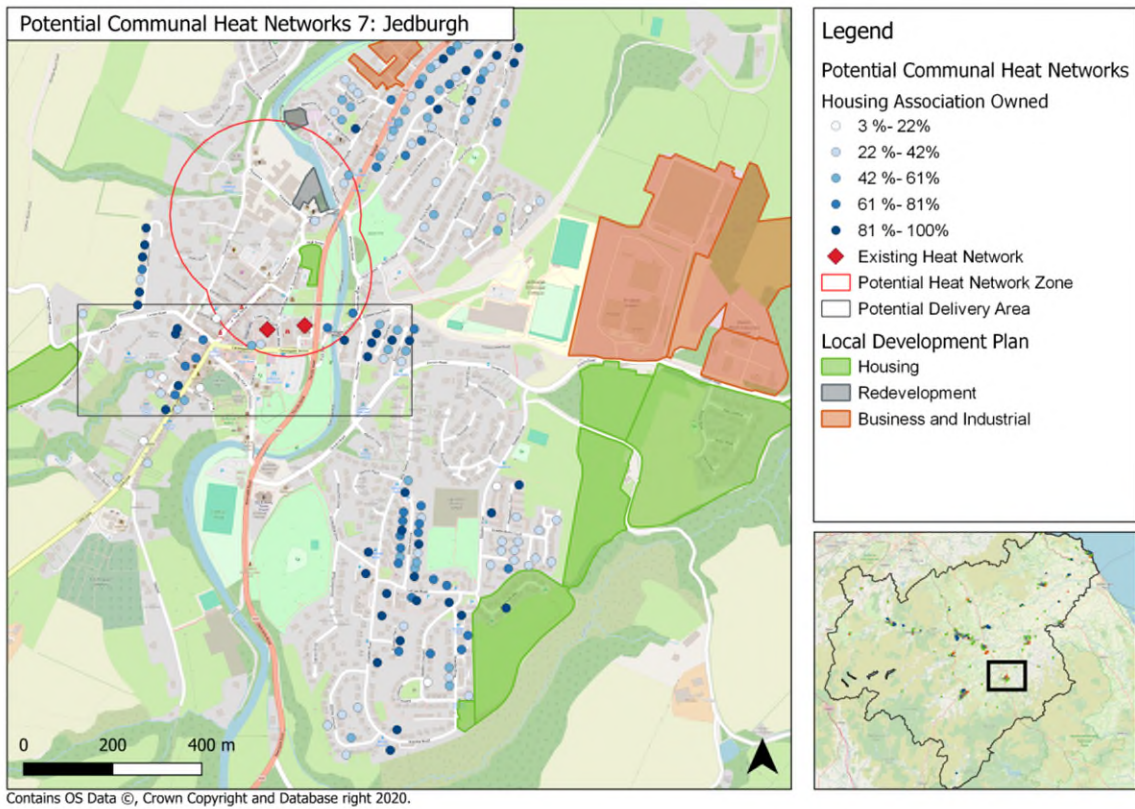


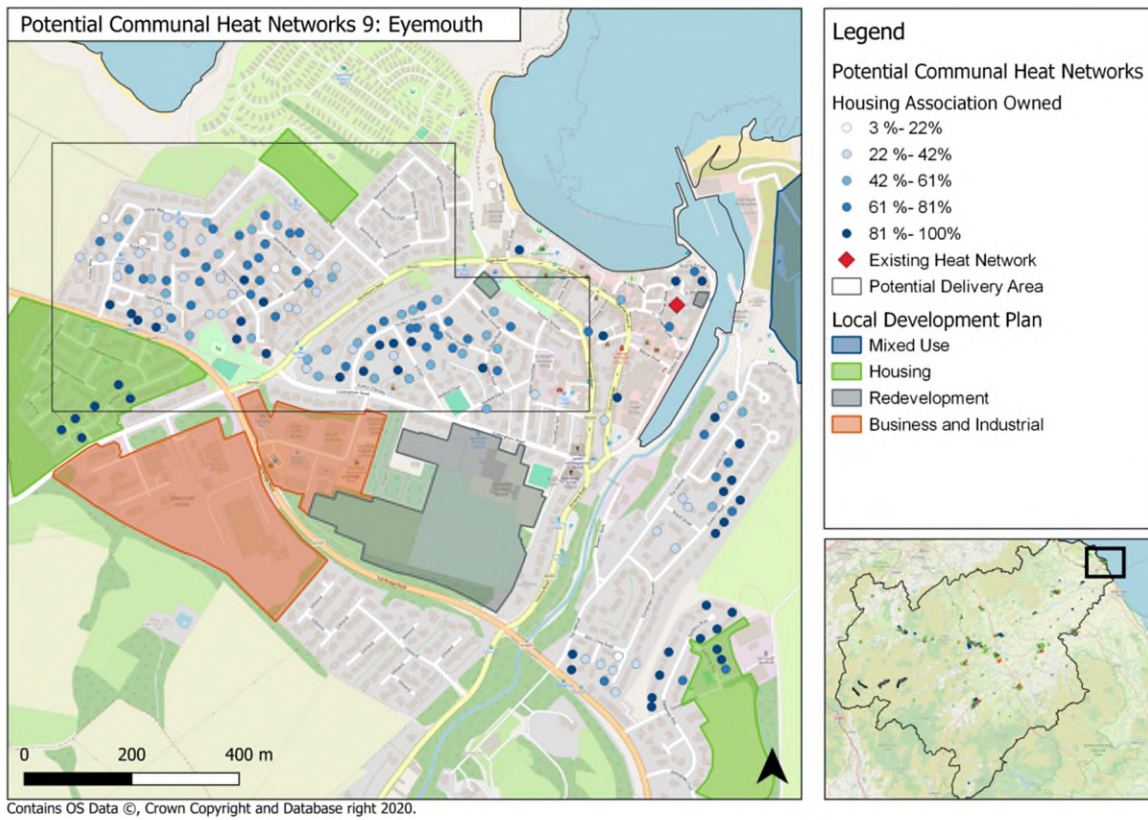












### 3 Monitoring and reporting

#### 3.1 Data for reporting and monitoring

The success of the LHEES will be measured through the ability to deliver the LHEES Vision and priorities set out in section 3. The LHEES will be monitored and evaluated annually against the national and the local targets for energy efficiency and heat decarbonisation, set out in the LHEES. The process will be undertaken by the Principal LHEES Officer, who will also ensure that the learning outcomes from initial stages are adopted and used to refine the longer-term plans and actions in the LHEES.

#### 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.

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#### HOUSING STRATEGY, POLICY & DEVELOPMENT

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