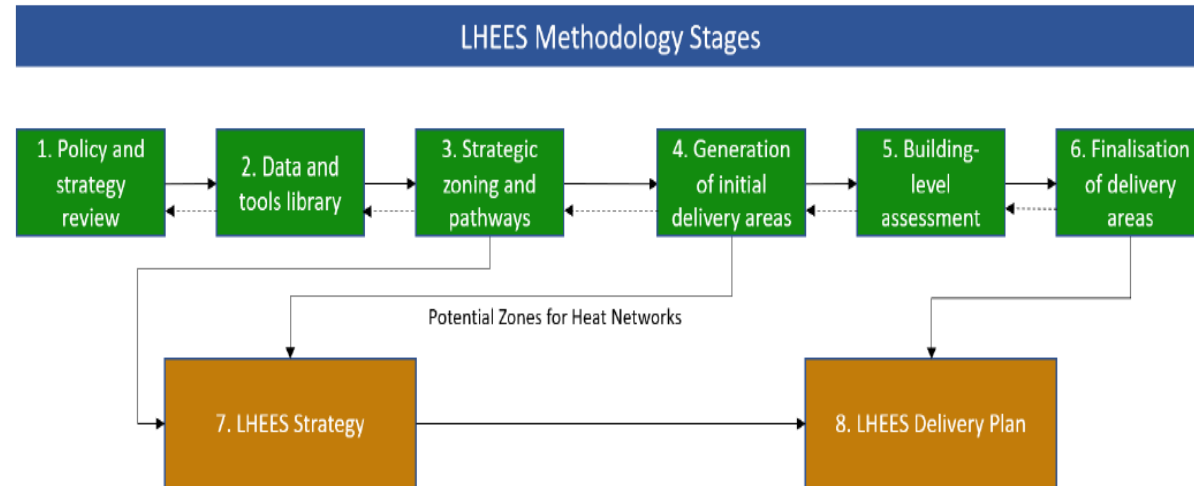


Section 1: What is an LHEES?

A Local Heat and Energy Efficiency strategy outlines the long-term plan to reduce carbon emissions produced by heating our homes and businesses while also addressing fuel poverty.

The LHEES consists of eight stages leading to the creation of two documents.



The Delivery Plan

The Delivery Plan explains how the strategy will be implemented and will be updated regularly.

The Council cannot do this alone. We will need help from many different stakeholders.

Section 2: Why have we developed an LHEES?

Local authorities have a statutory obligation to produce a Local Heat and Energy Efficiency Strategy and Delivery Plan.

The strategy outlines the changes we need to make in how we heat our homes and buildings to enable us to achieve Scotland's goal of net zero greenhouse gas emissions by 2045 and ensure no household in Scotland is in fuel poverty by 2040.

What are the aims of Argyll and Bute's LHEES?

The Argyll and Bute LHEES aims to:

1. Improve energy efficiency.
2. Reduce greenhouse gas emissions from heating buildings.
3. Address fuel poverty.
4. Advocate for a just transition to low or no carbon heating for homes and non-domestic buildings.

Find out more about the LHEES – [See pages 4-14 of the LHEES Strategy.](#)

Section 3: Argyll and Bute's LHEES priorities

To achieve the aims, Argyll and Bute's LHEES has eight priorities which are:

- Addressing limitations in the electricity grid capacity
- Building sustainable and energy-resilient communities
- Address the supply chain constraints and shortage of skills
- Improve education and awareness of decarbonisation requirements and solutions
- Tackle fuel poverty
- Ensure a “Just transition” to net zero.
- Decarbonise heat sources
- Energy efficiency, a fabric-first approach and getting buildings heat pump-ready



Section 4: LHEES Considerations

The LHEES looks at different options or “considerations” as outlined in the table.

	No.	LHEES Consideration	Description
Heat decarbonisation	1	Off-gas grid buildings	Transitioning from heating oil and LPG in off-gas areas
	2	On-gas grid buildings	On-gas grid heat decarbonisation
	3	Heat networks	Decarbonisation with heat networks
Energy efficiency and other outcomes	4	Poor building energy efficiency	Poor building energy efficiency
	5	Poor building energy efficiency as a driver for fuel poverty	Poor building energy efficiency as a driver for fuel poverty
	6	Mixed-tenure, mixed-use and historic buildings	Mixed-tenure, mixed-use buildings, listed buildings, and buildings in conservation areas

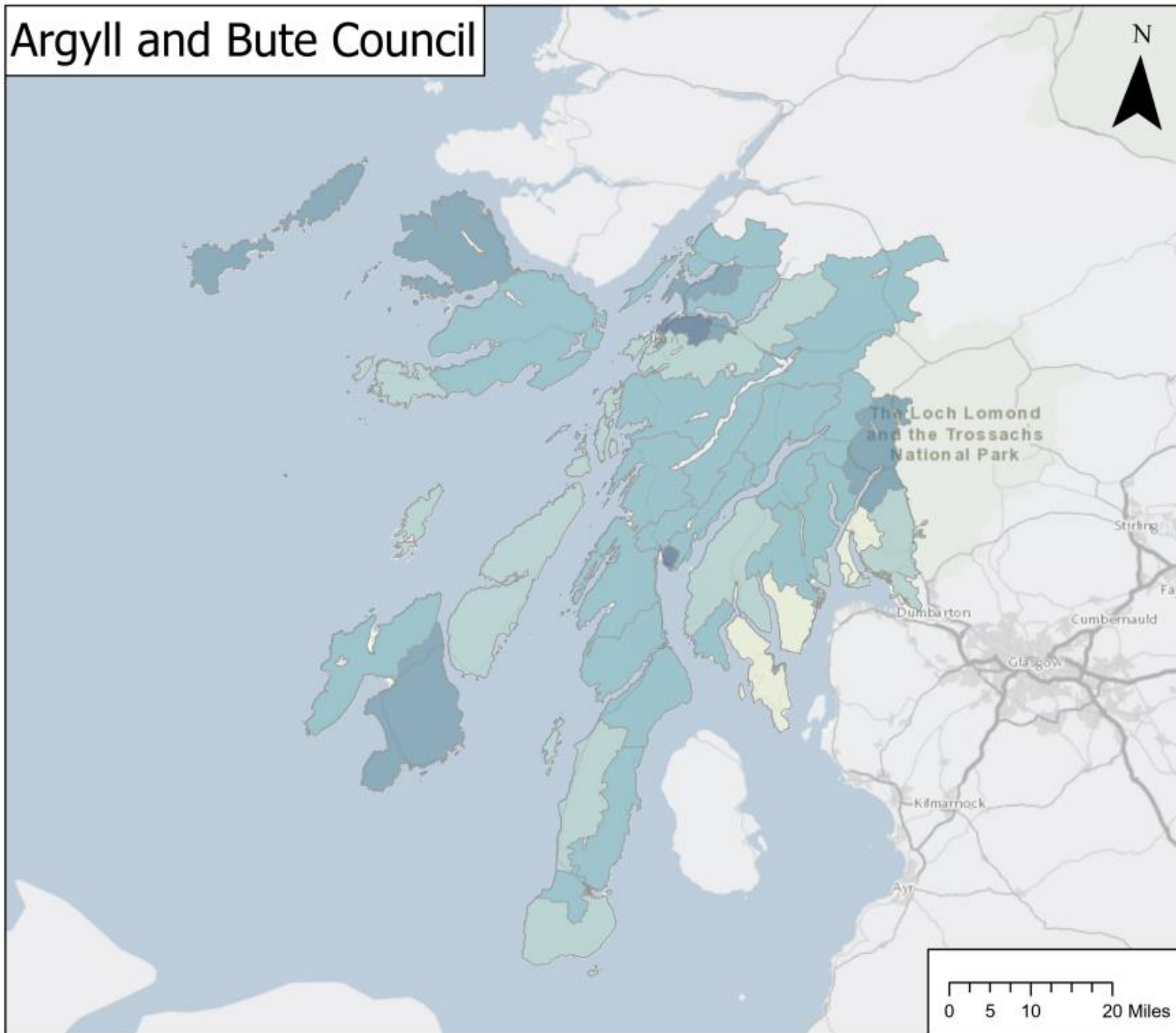
Consideration 1 : Off-gas grid

The LHEES considers how well-suited areas on and off the gas grid are for installing heat pumps.

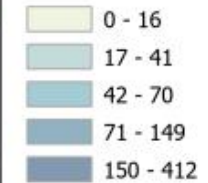
Whether an area is well suited to heat pumps depends on the types of buildings within it and their concentrations. The table below shows how the LHEES categorises buildings.

Building category	Description
Category 0	Currently, there is a low or zero direct emissions heating system or heat network connection.
Category 1	<p>“Heat pump ready” buildings are well-suited to heat retrofit with minimal other changes.</p> <p>Category 1 buildings are ones which</p> <ul style="list-style-type: none">• Do not already have a heat pump• Are not in a listed building or in a conservation area• Have insulated walls and double or triple-glazed windows• Have at least 100mm of loft insulation (If the property has a loft)• Are likely to have a wet heating system (i.e. mains gas, LPG, Oil or Biomass/solid fuels)
Category 2	<p>Some upgrades are required to the building to be heat pump-ready.</p> <p>Category 2 buildings have</p> <ul style="list-style-type: none">• cavity walls (either insulated or uninsulated) if uninsulated, have no risk of a narrow cavity OR• any other construction type as long as the walls are insulated
Category 3	Significant upgrades are required to be heat pump-ready. Those less suited to heat pumps should consider direct electrical heating or biomass as the most viable decarbonisation pathway.

Argyll and Bute Council



Off Gas Grid Category 0 (count of dwellings)

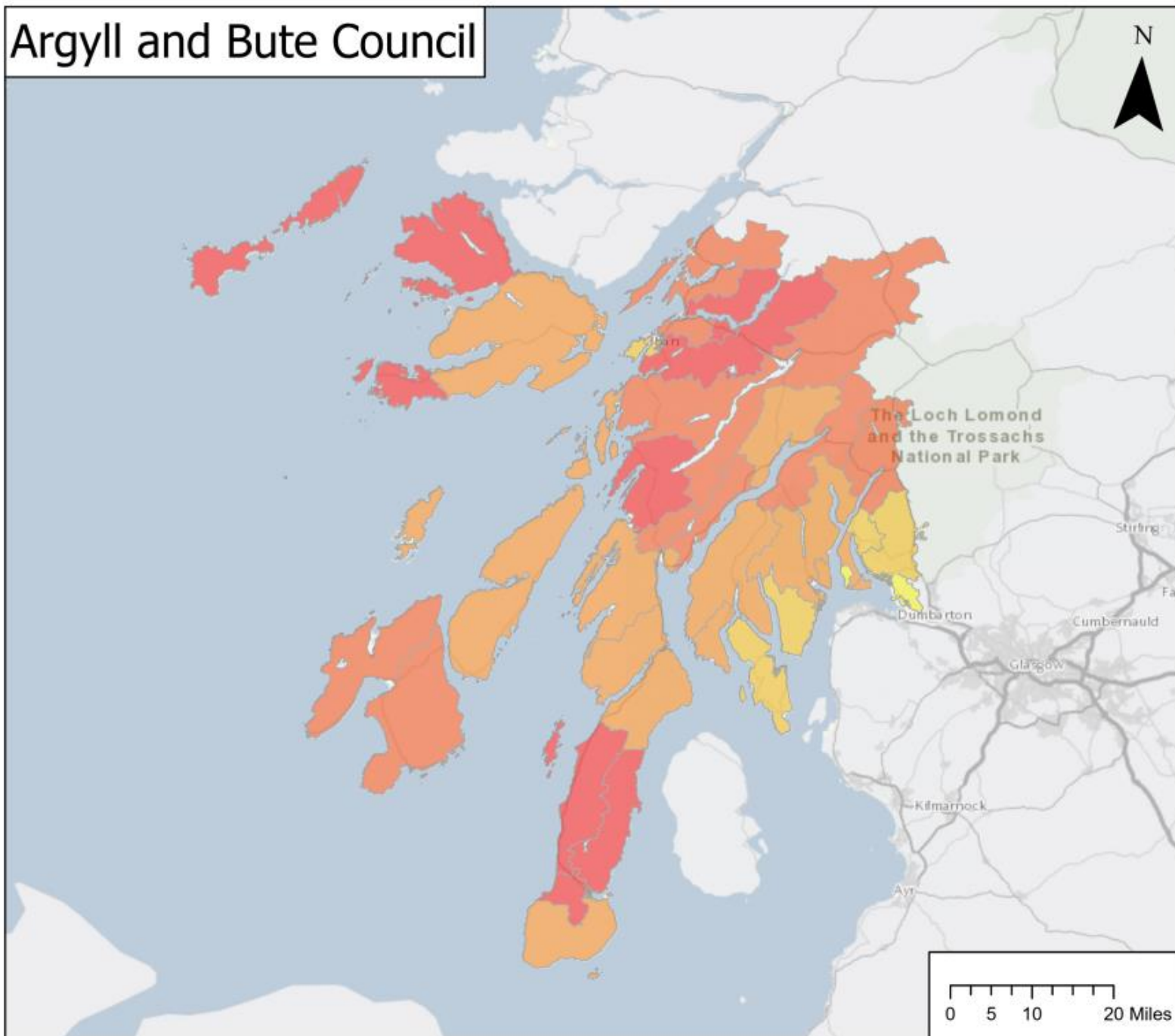


This map spatially displays results from the Stage 3 analysis at Data Zone Level for the different LHEES Considerations. This map shows the total property counts from Section 2 of the LHEES Baseline Tool.

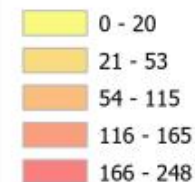
Note: Data zones are a statistical geography that are designed to meet constraints on population thresholds (between 500 and 1,000 household residents), to nest within Intermediate Zones, and to build up from aggregates of Census Output Areas.

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Off Gas Grid Category 1 (count of dwellings)



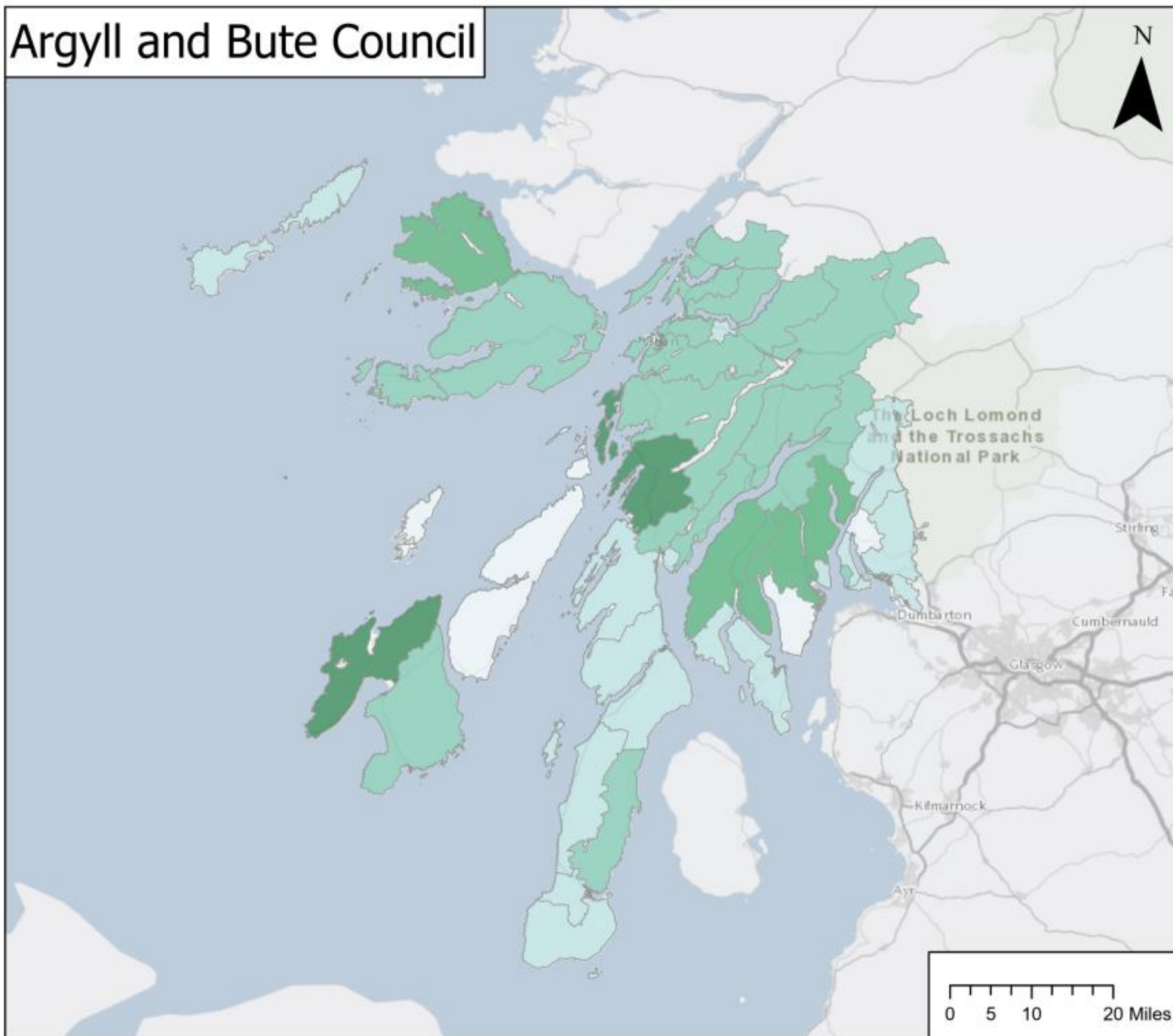
This map spatially displays results from the Stage 3 analysis at Data Zone Level for the different LHEES Considerations. This map shows the total property counts from Section 2 of the LHEES Baseline Tool.

100% weight is given to the wall insulation status of the properties (i.e. glazing and loft insulation status were not included) in this map, and the oil/LPG constraint of selecting properties with wet systems was removed

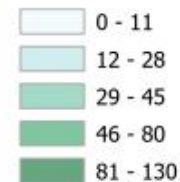
Note: Data zones are a statistical geography that are designed to meet constraints on population thresholds (between 500 and 1,000 household residents), to nest within Intermediate Zones, and to build up from aggregates of Census Output Areas.

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Off Gas Grid Category 2 (count of dwellings)

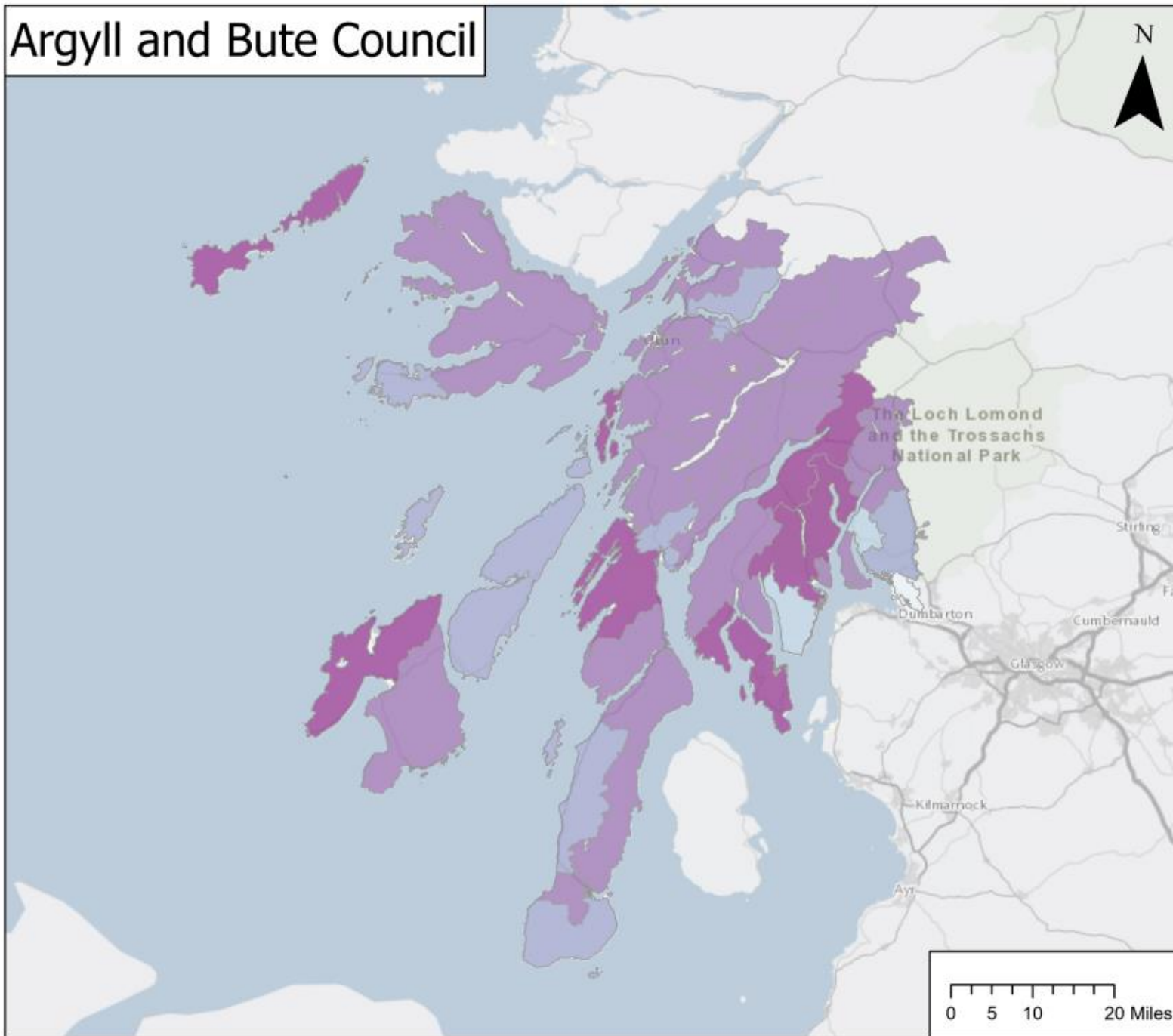


This map spatially displays results from the Stage 3 analysis at Data Zone Level for the different LHEES Considerations. This map shows the total property counts from Section 2 of the LHEES Baseline Tool.

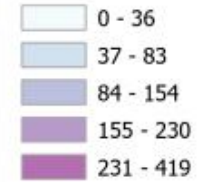
Note: Data zones are a statistical geography that are designed to meet constraints on population thresholds (between 500 and 1,000 household residents), to nest within Intermediate Zones, and to build up from aggregates of Census Output Areas.

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Off Gas Grid Category 3 (count of dwellings)



This map spatially displays results from the Stage 3 analysis at Data Zone Level for the different LHEES Considerations. This map shows the total property counts from Section 2 of the LHEES Baseline Tool.

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Consideration 2: On-gas grid

The LHEES considers how well-suited areas on and off the gas grid are for installing heat pumps.

Consideration 3: Heat networks

The LHEES identifies areas where it is potentially viable to build a heat network. The map identified five areas in Argyll and Bute that could be suitable.

The heat network map also shows the following:

- Areas where there is a large demand for heat (more than 50kWh/m²/yr)
- Waste heat sources such as landfill sites.
- Buildings with large heat demands.


Lochgilhead



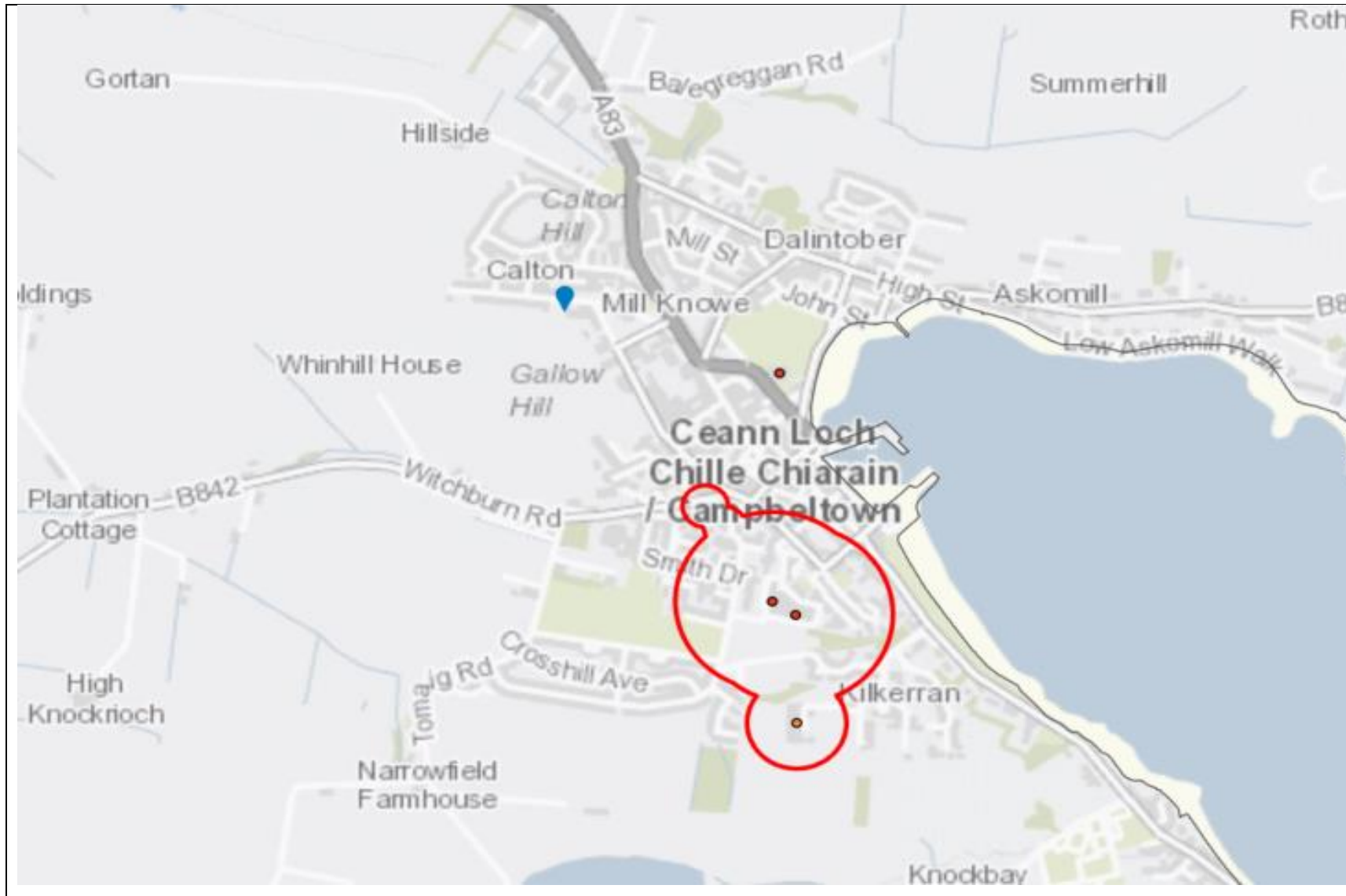
Key:

Waste heat sources such as landfill sites. These sites are depicted by a  -

Potential heat networks  -


Buildings which could be the anchors for the network 


Campbeltown



Key:

Waste heat sources such as landfill sites. These sites are

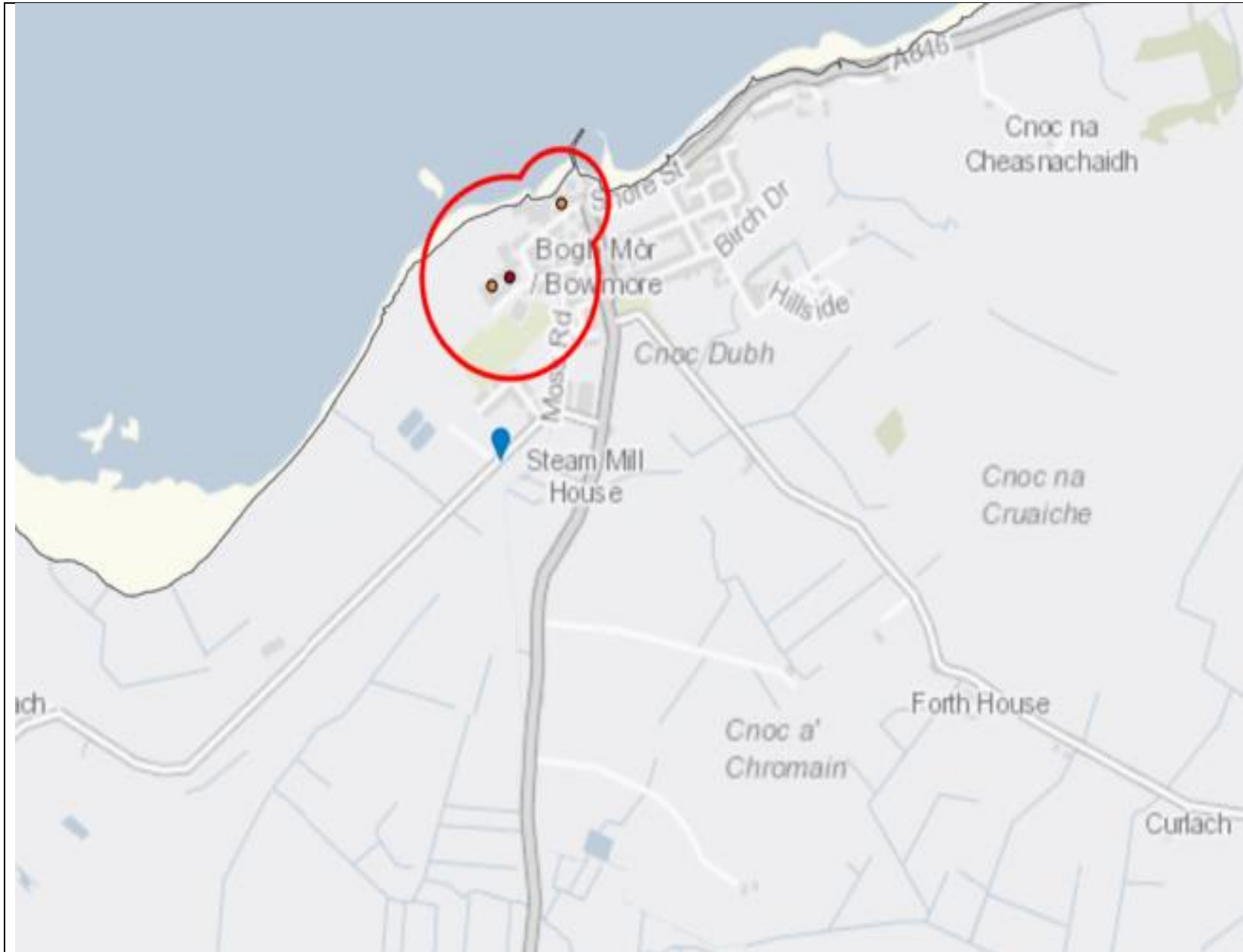
depicted by a  - Potential heat

networks 

Buildings which could be the anchors for the

network 

Bowmore



Key:

Waste heat sources such as landfill sites. These sites are

depicted by a



- Potential heat

networks



Buildings which could be the anchors for the

network



Rothesay



Key:

Waste heat sources such as landfill sites. These sites are depicted



by a - Potential heat networks



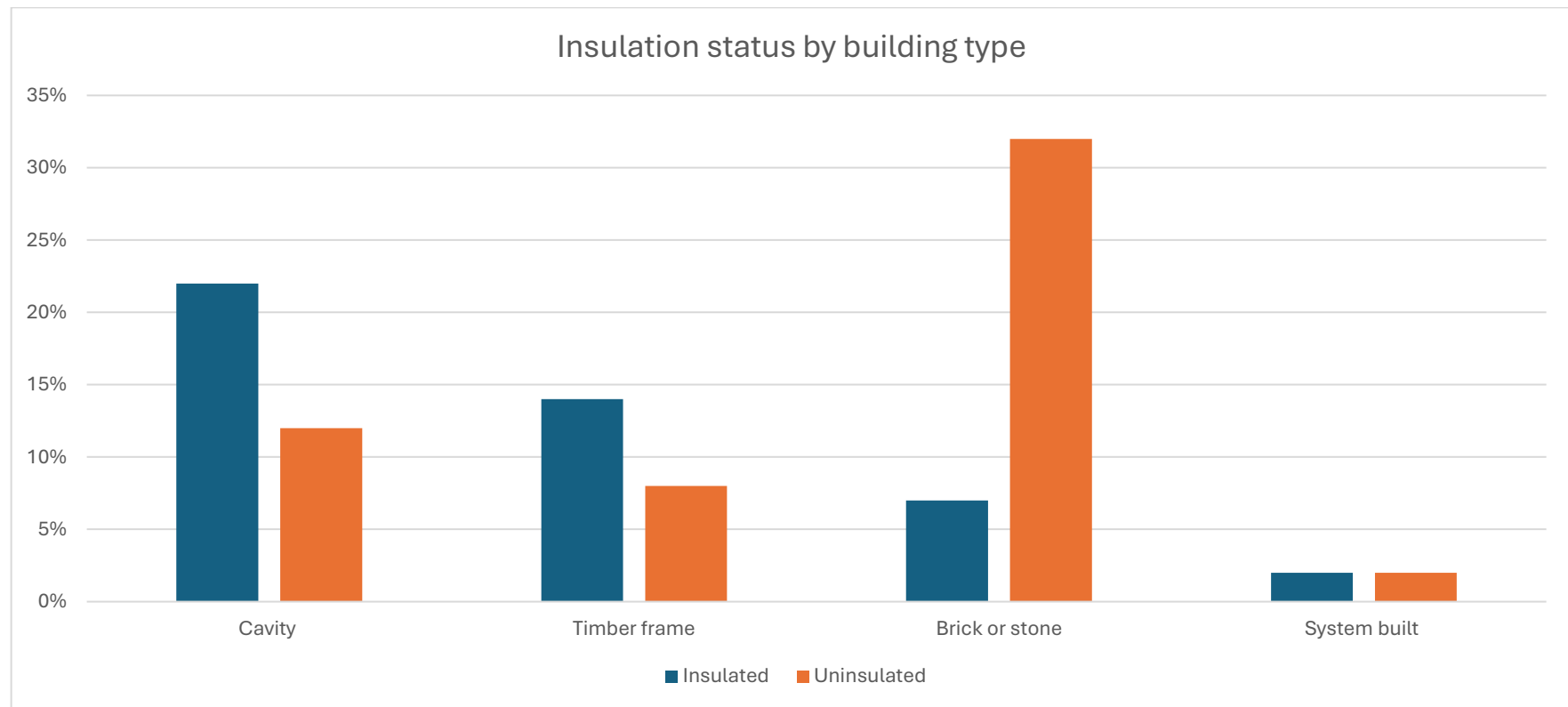
Buildings which could be the anchors for the network



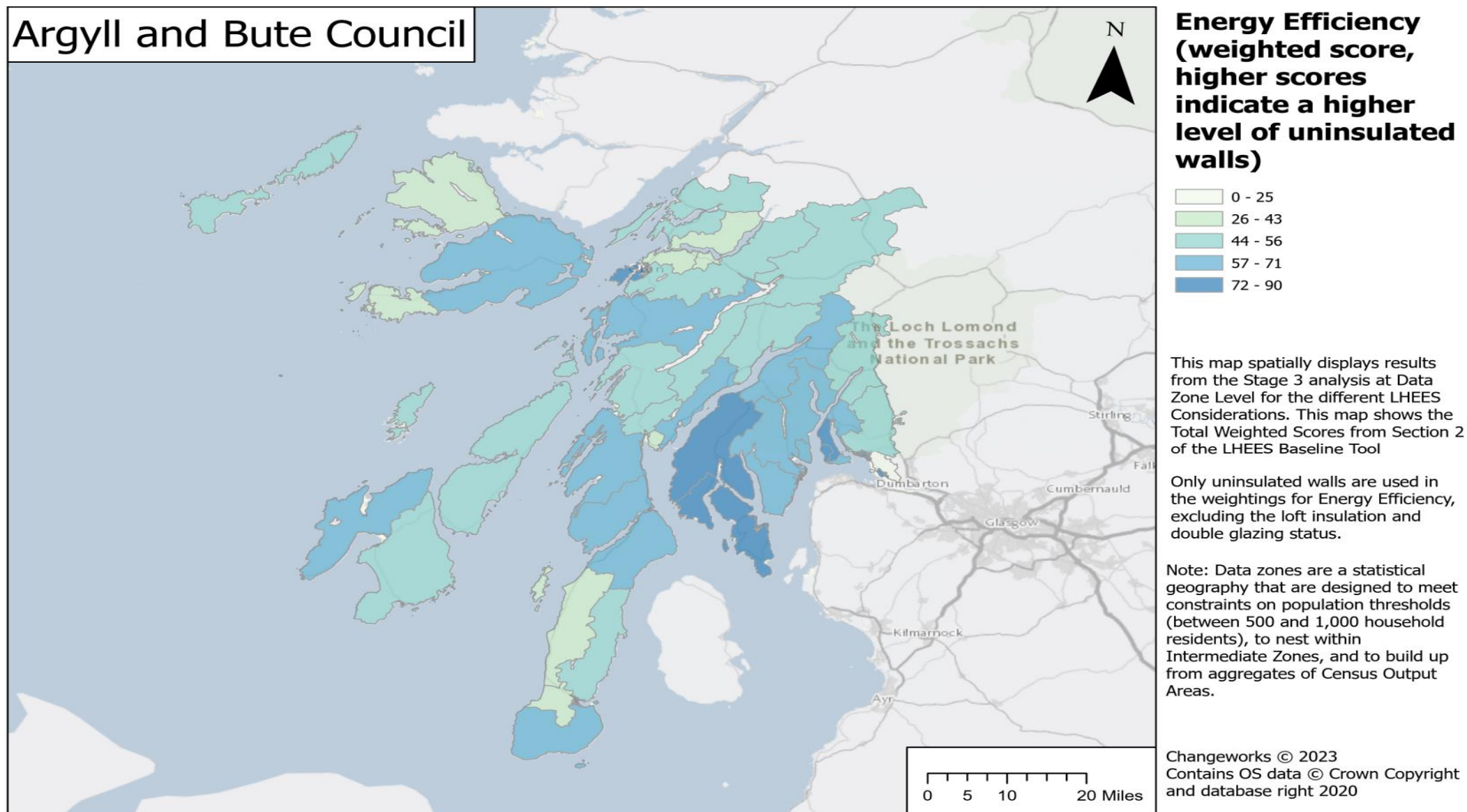
Consideration 4: Poor Energy Efficiency

The LHEES seeks to tackle buildings with poor energy efficiency as they require more heat to be comfortable. If these buildings use fossil fuels for heating, it leads to higher carbon emissions. The LHEES also considers the impact of poor energy inefficiency on fuel poverty,

The graph below shows more than half the buildings in Argyll and Bute are uninsulated.

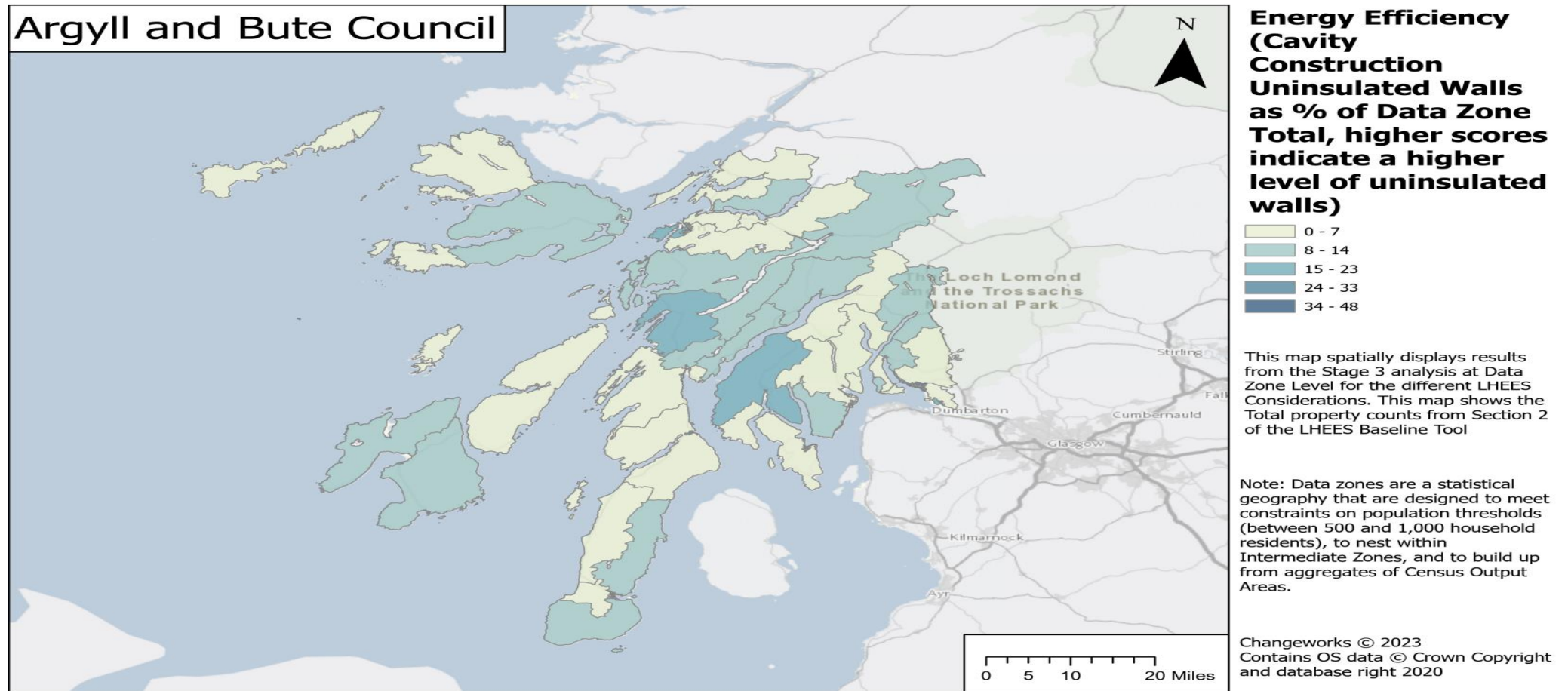


The map shows the areas where there are higher concentrations of uninsulated buildings.



Cavity Walls

The map below shows areas with higher concentrations of buildings with uninsulated cavity walls.

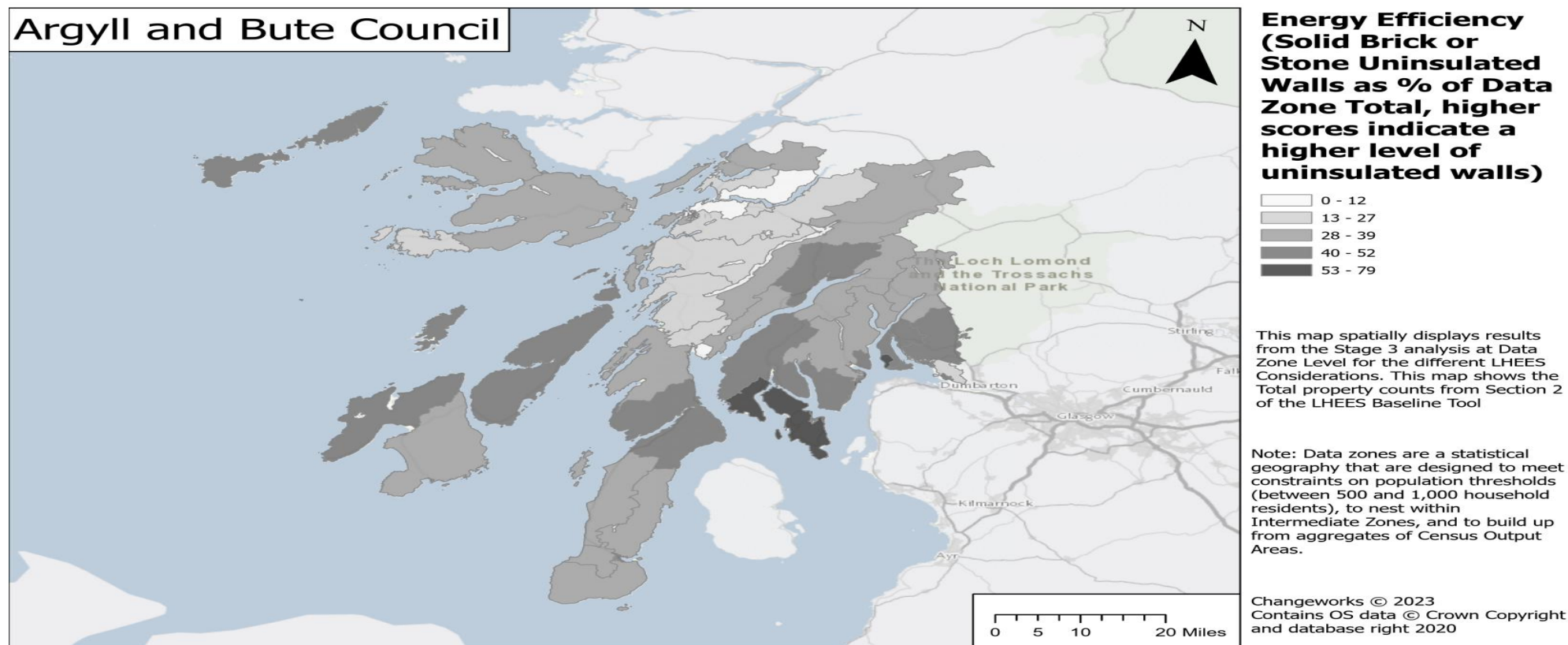


The table below lists the data zones with the highest percentages of uninsulated cavity walls.

Data zone name	Data zone name	Data zone name	Data zone name
Helensburgh West and Rhu	Lomond Shore	Oban South	Garelochhead
Helensburgh East	Helensburgh North	Helensburgh Centre	

Solid Walls

Solid wall insulation is more expensive than cavity wall insulation and can be considerably more disruptive if installed on the interior of the building rather than on the exterior. The map shows the data zones with the highest percentage of uninsulated solid wall buildings.

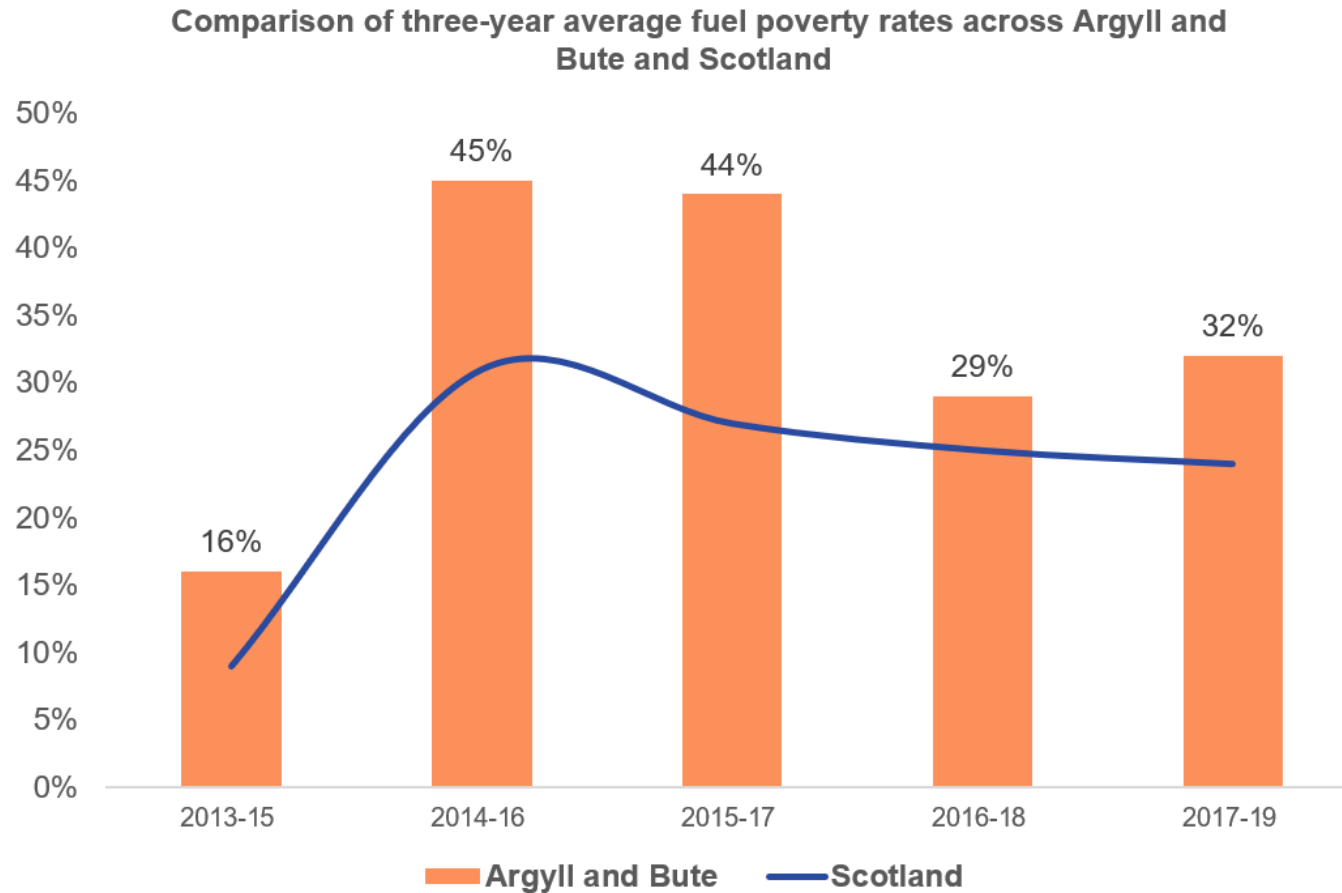


The table below lists the data zones with the highest percentages of uninsulated solid walls.

Oban North	Greater Lochgilphead	Kintyre Trail	Helensburgh West and Rhu
Oban South	Helensburgh East	Loch Awe	Cowal North
Helensburgh Centre	Mid Argyll	Benderloch Trail	

Consideration 5: Poor Energy Efficiency as a driver of fuel poverty

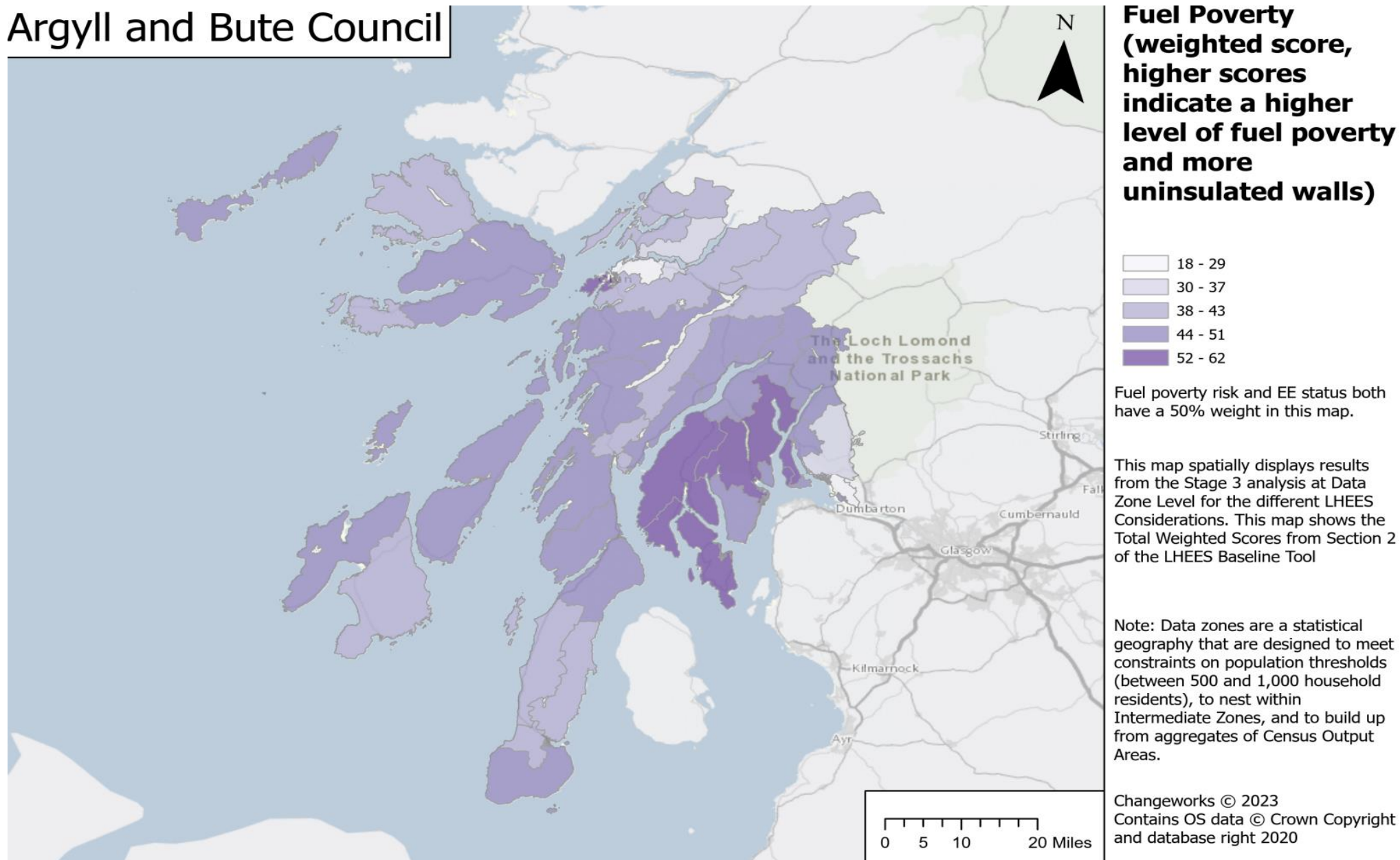
Fuel poverty rates are higher in Argyll and Bute than they are nationally. This is most likely due to Argyll and Bute having a higher percentage of older housing stock with solid walls, most of which are uninsulated. Also, more than half of our housing stock is off the gas grid.



Source: Scottish Housing Condition Survey (SHCS). (Due to the Covid-19 Pandemic, these are the most up-to-date local authority figures published by the (SHCS)

The map shows the areas where energy inefficiency is a driver for fuel poverty and extreme fuel poverty. [Link to map 4](#)

Argyll and Bute Council



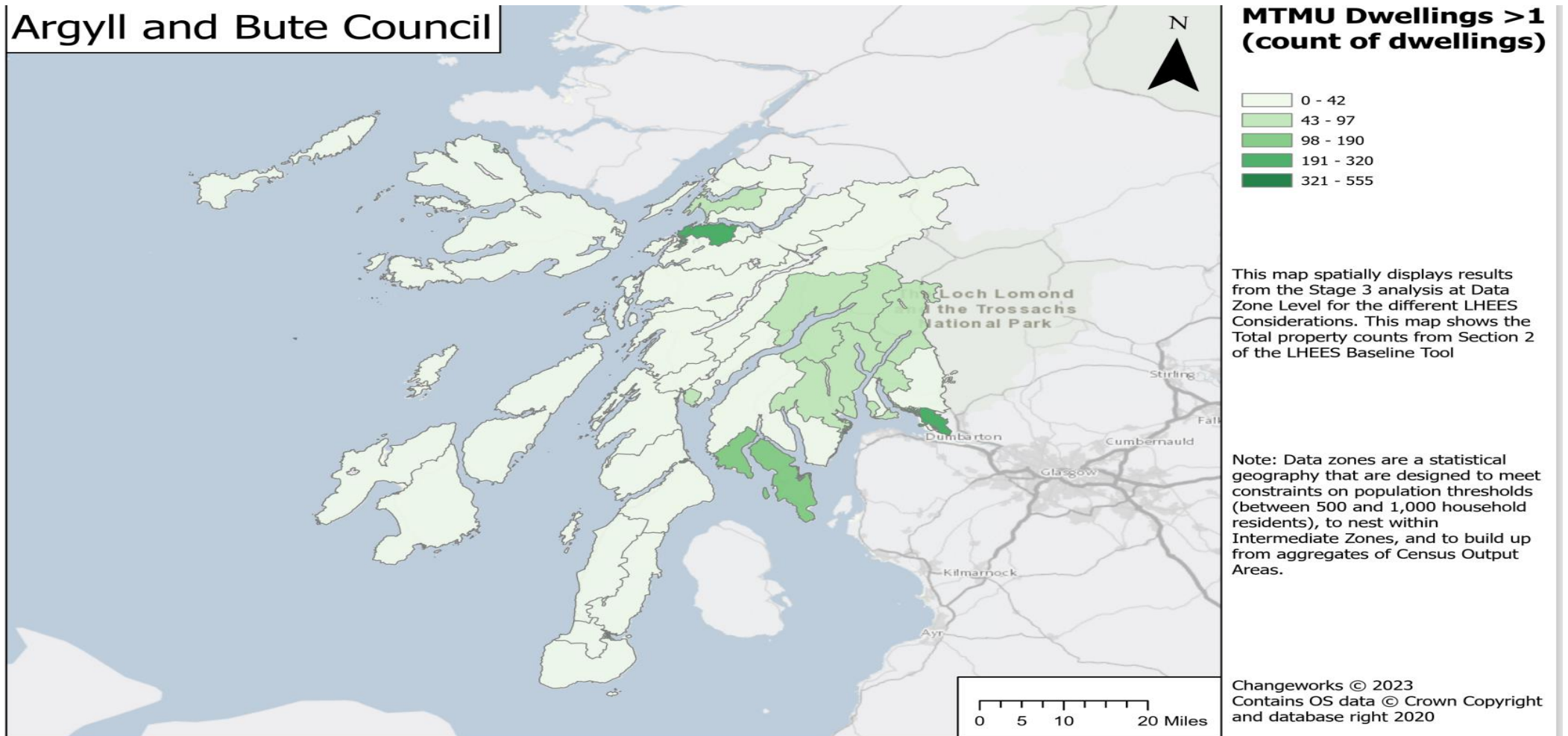
Consideration 6: Mixed Tenure, Mixed Use and Historic buildings

Decarbonising mixed tenure, mixed-use buildings or historic buildings is often more challenging. The map depicts the concentration of

- Listed buildings
- Mixed-use buildings
- Mixed tenure buildings
- Buildings in conservation areas

Mixed-use buildings

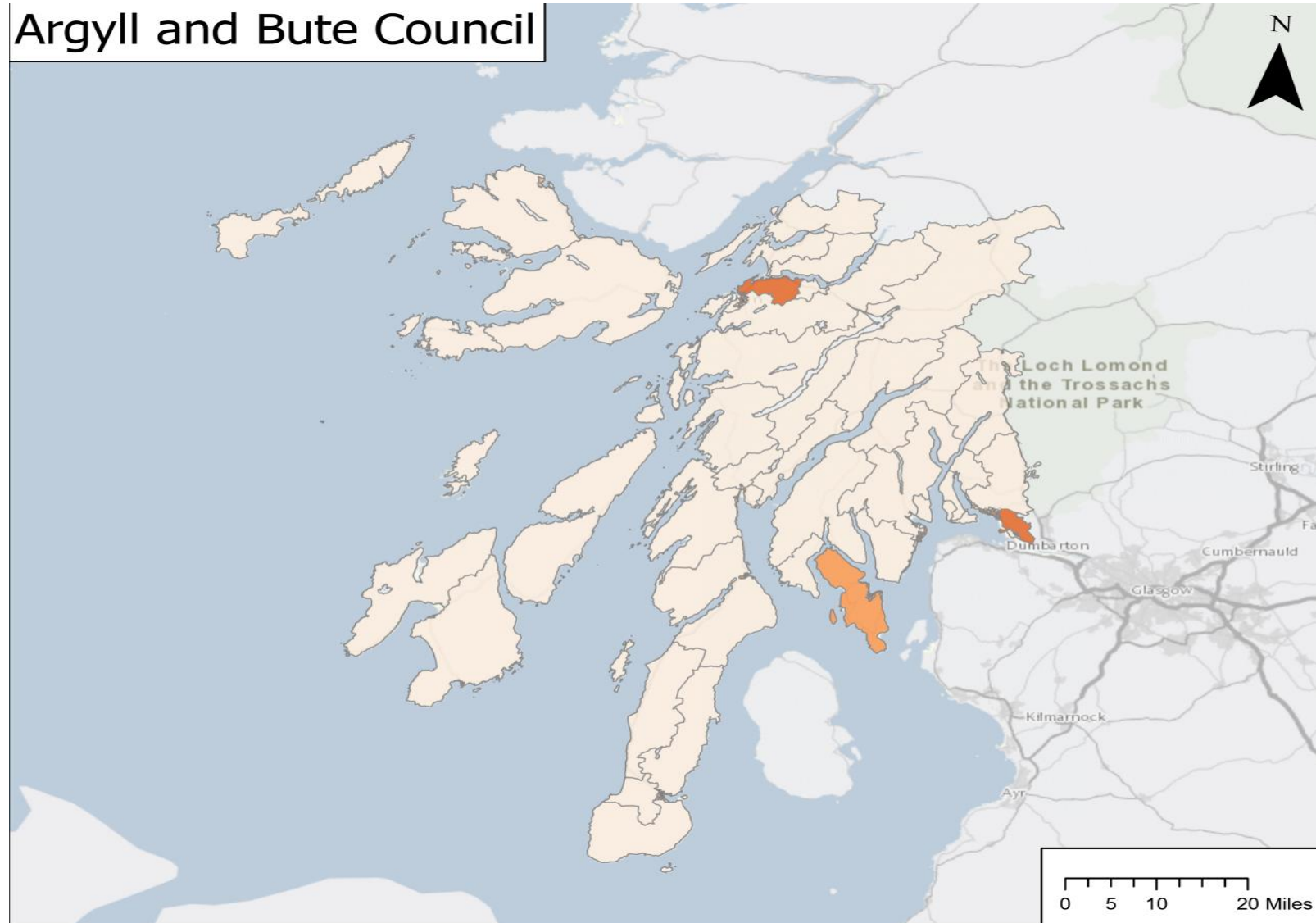
The map shows the concentration of mixed-use buildings.



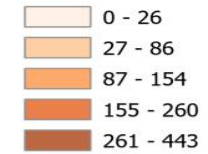
Mixed tenure buildings

The map shows the concentration of mixed-tenure buildings.

Argyll and Bute Council



Mixed-tenure (count of dwellings)



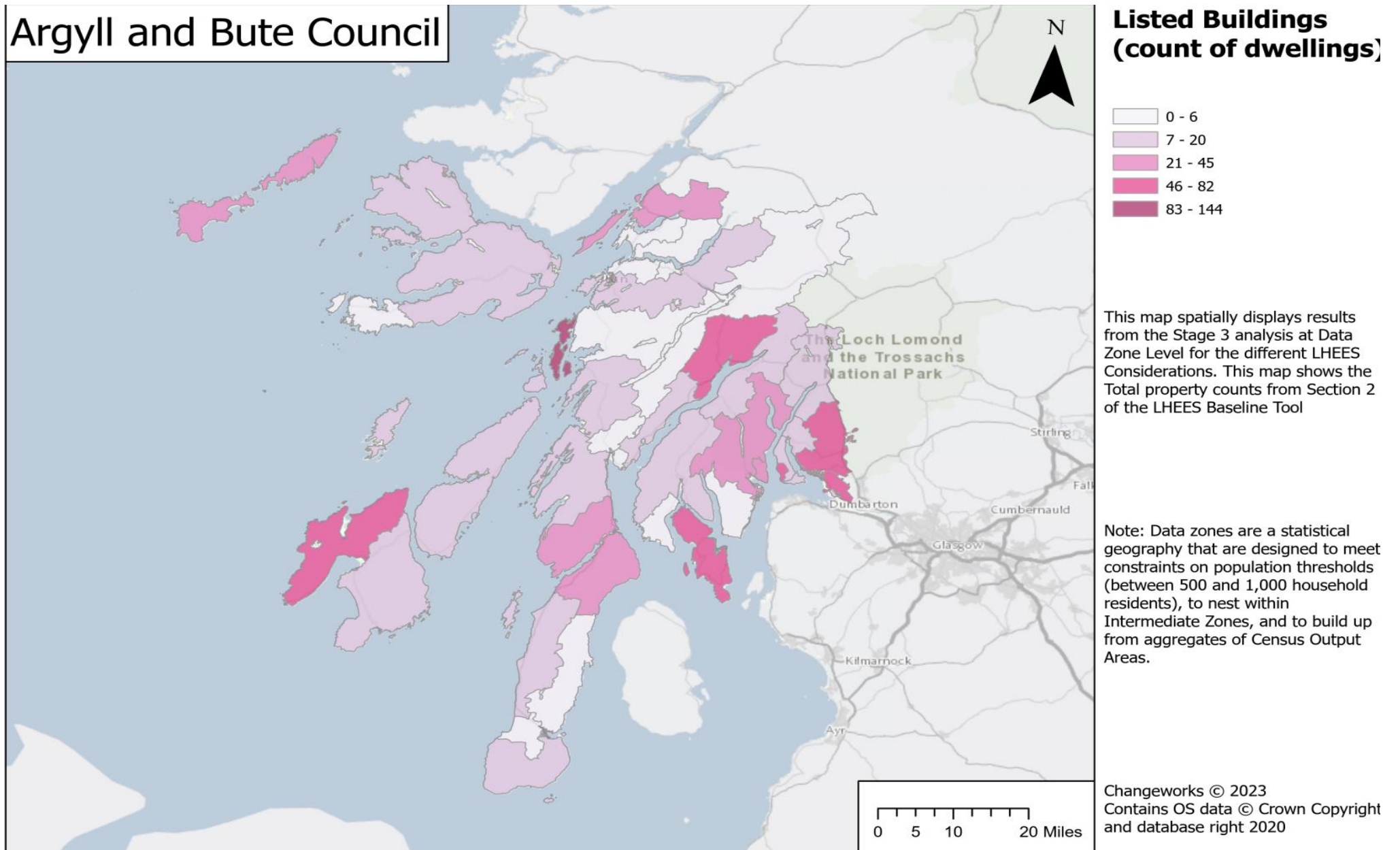
This map spatially displays results from the Stage 3 analysis at Data Zone Level for the different LHEES Considerations. This map shows the Total property counts from Section 2 of the LHEES Baseline Tool

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Listed buildings

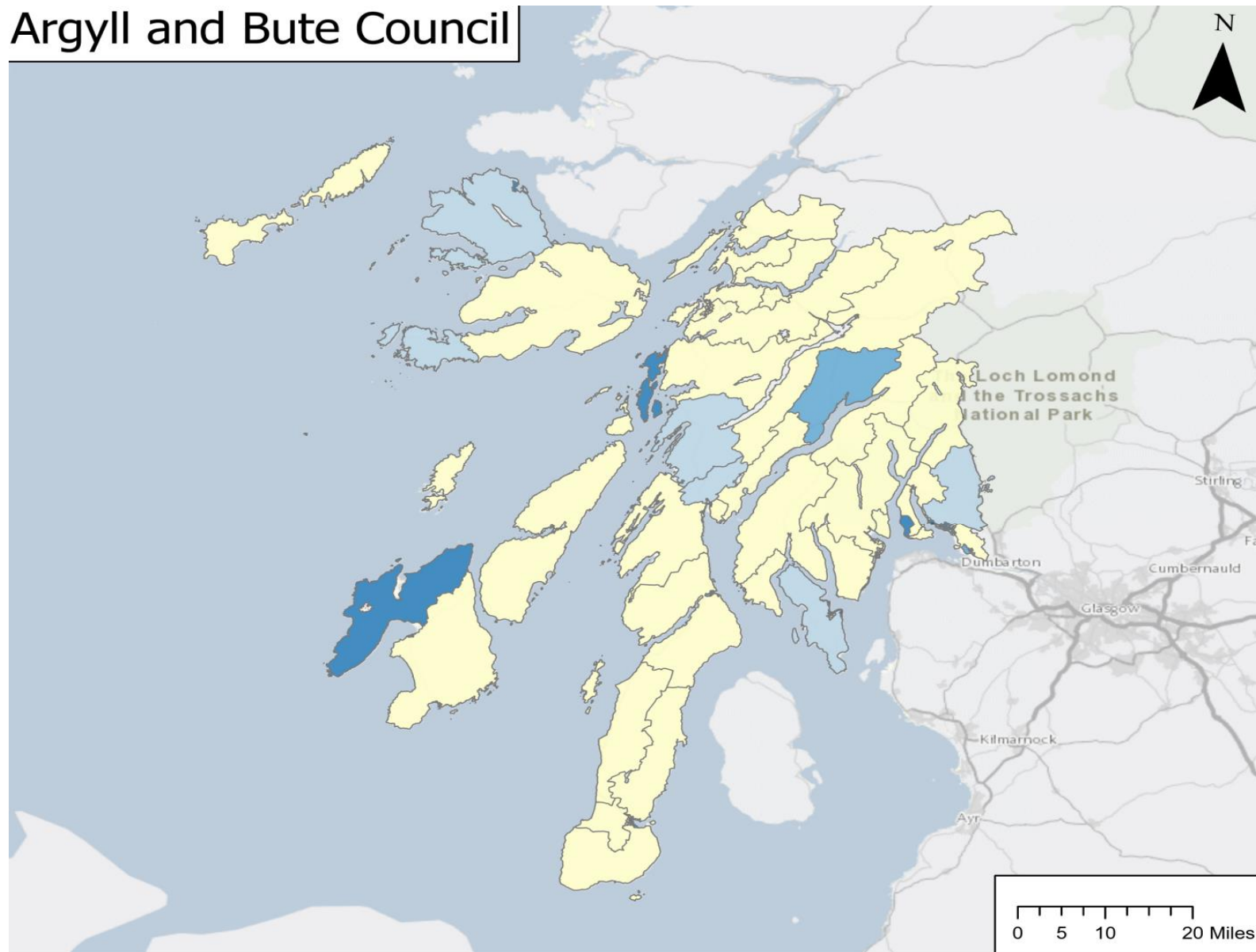
The map shows the concentration of listed buildings.



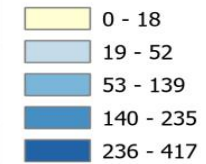
Buildings in conservation areas

The map shows the concentration of buildings in conservation areas.

Argyll and Bute Council



Conservation area (count of dwellings)



This map spatially displays results from the Stage 3 analysis at Data Zone Level for the different LHEES Considerations. This map shows the Total property counts from Section 2 of the LHEES Baseline Tool

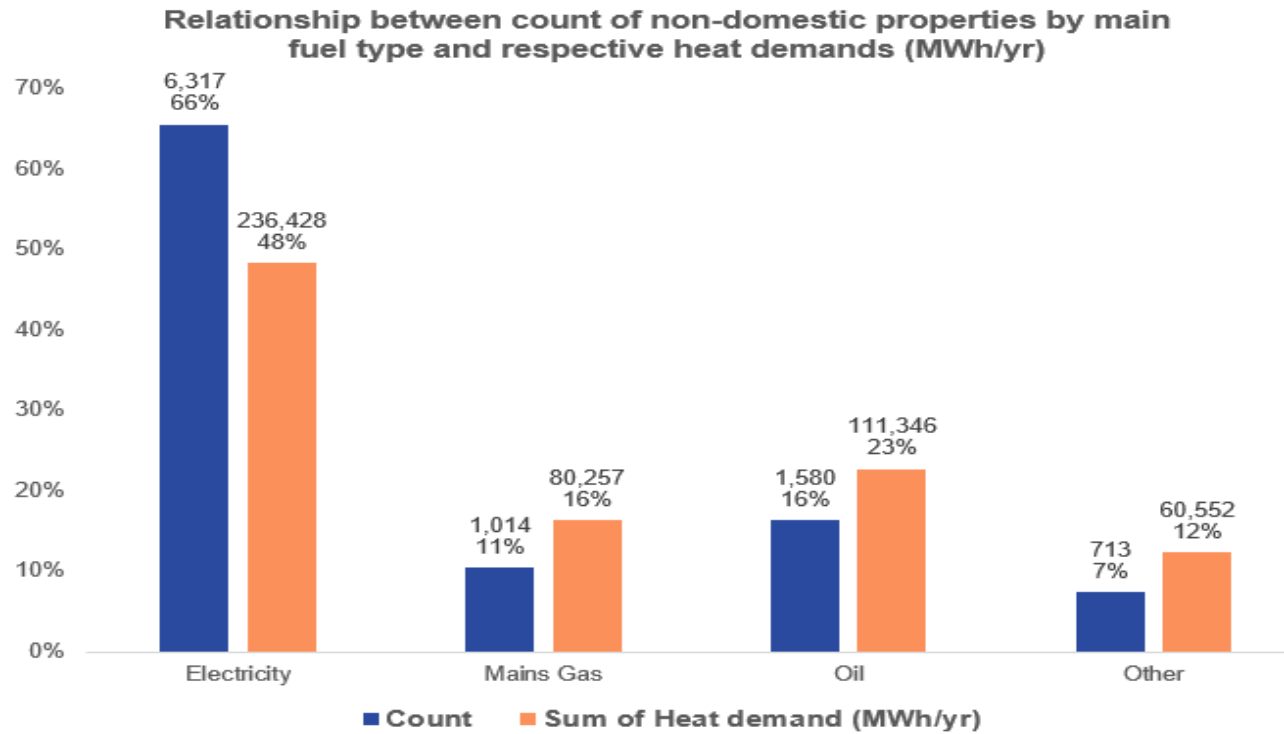
Note: Data zones are a statistical geography that are designed to meet constraints on population thresholds (between 500 and 1,000 household residents), to nest within Intermediate Zones, and to build up from aggregates of Census Output Areas.

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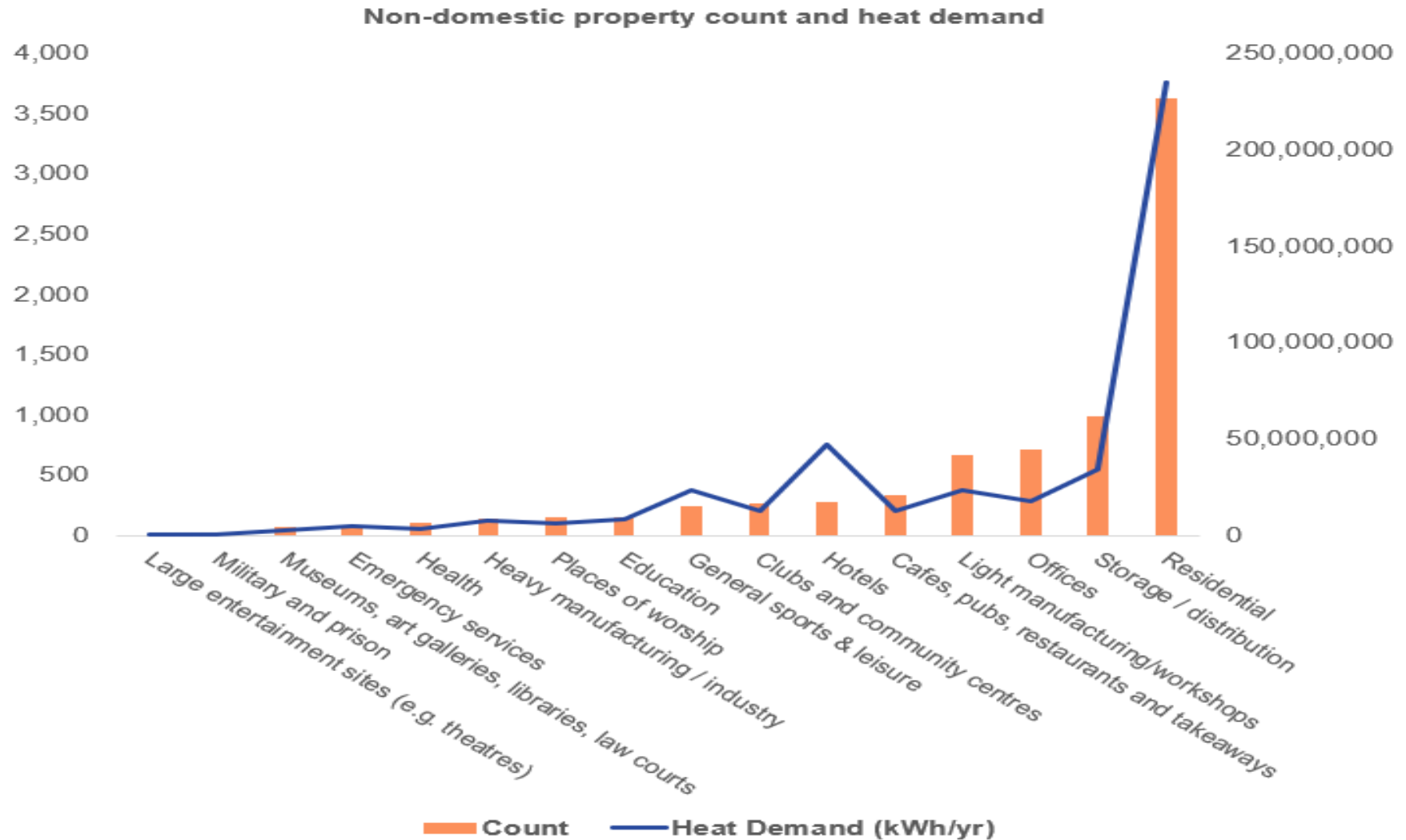
Section 5: Non-domestic buildings

Only 17% of the total building stock in Argyll and Bute is non-domestic, and the majority (90%) are privately owned.

Electricity meets 66% of the total heat demand for non-domestic properties in Argyll and Bute, providing 236,428 MWh/year of heat.



Non-domestic residential properties, including care homes, sheltered housing and short-term/holiday lets, are the most common type of non-domestic properties in Argyll and Bute, with proportionally high heat demand.



Section 6: Delivery Areas

Decarbonising heat in Argyll and Bute will be an enormous challenge, and not all areas can be tackled at once. The Argyll and Bute LHEES proposes focusing on delivering decarbonisation in:

1. Domestic properties.
2. Properties where energy efficiency is a driver for fuel poverty
3. Areas which are potentially suitable for heat networks
4. Areas which are off the gas grid and have ONE or more of the following
 - have a high number of category 1 and 2 properties
 - have adequate grid capacity to enable mass installations of heat pumps
 - have higher levels of private rented sector or owner-occupied properties

Why did we choose these delivery areas?

Delivering in domestic rather than non-domestic buildings

The reason for focusing on domestic rather than non-domestic buildings is that 66% of non-domestic properties' heat demand is supplied from zero-emissions heating. This is considerably higher than that of domestic properties, so we propose focusing on decarbonising domestic properties.

Delivering in Off gas grid areas

The price of gas is significantly lower than that of Oil, LPG, and Electricity, so heating costs are more likely to be higher in areas without gas (off-gas grid). The Argyll and Bute LHEES proposes focusing on delivering in off-gas grid areas to address this unfairness. Installing heat pumps in off-gas grid areas could reduce heating costs if the building is well insulated.

Also, higher fuel costs can be a driver of fuel poverty.

Delivering in areas where there is sufficient electricity grid capacity

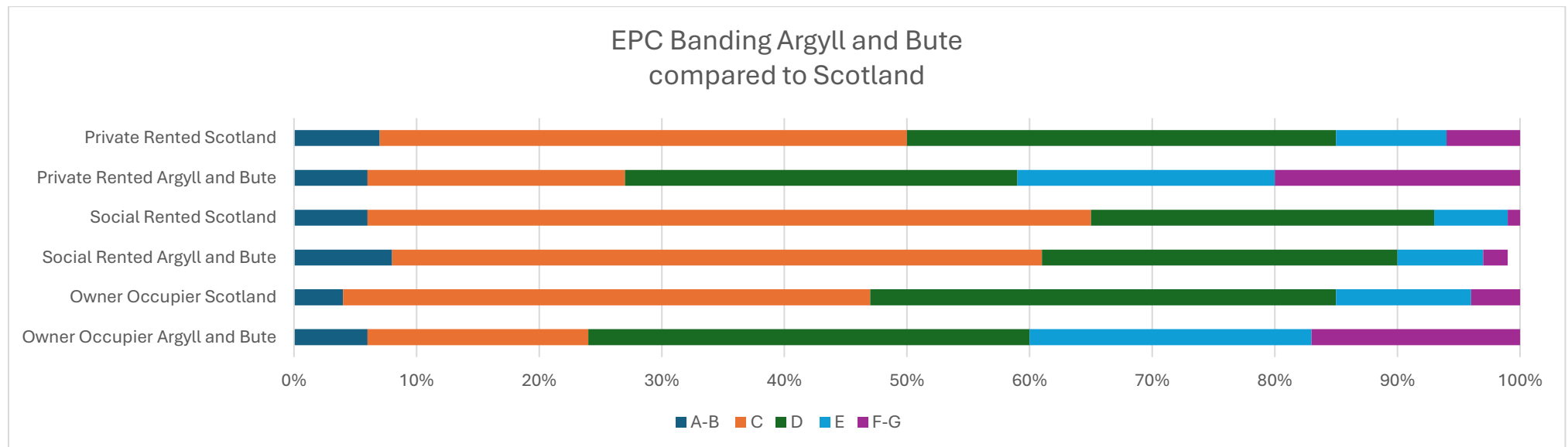
Although the electricity network is being upgraded, more upgrading is required to enable mass transition to electric heating. The Argyll and Bute LHEES proposes that we focus on areas which can transition now as this decreases our carbon emissions most quickly.

Focusing on areas that are potentially suitable for a heat network

Heat networks can connect to a low-carbon heat source at no cost or a low cost, reducing the financial burden on homeowners and enabling large-scale decarbonisation.

Delivering in Private Rented and Owner Occupier Properties

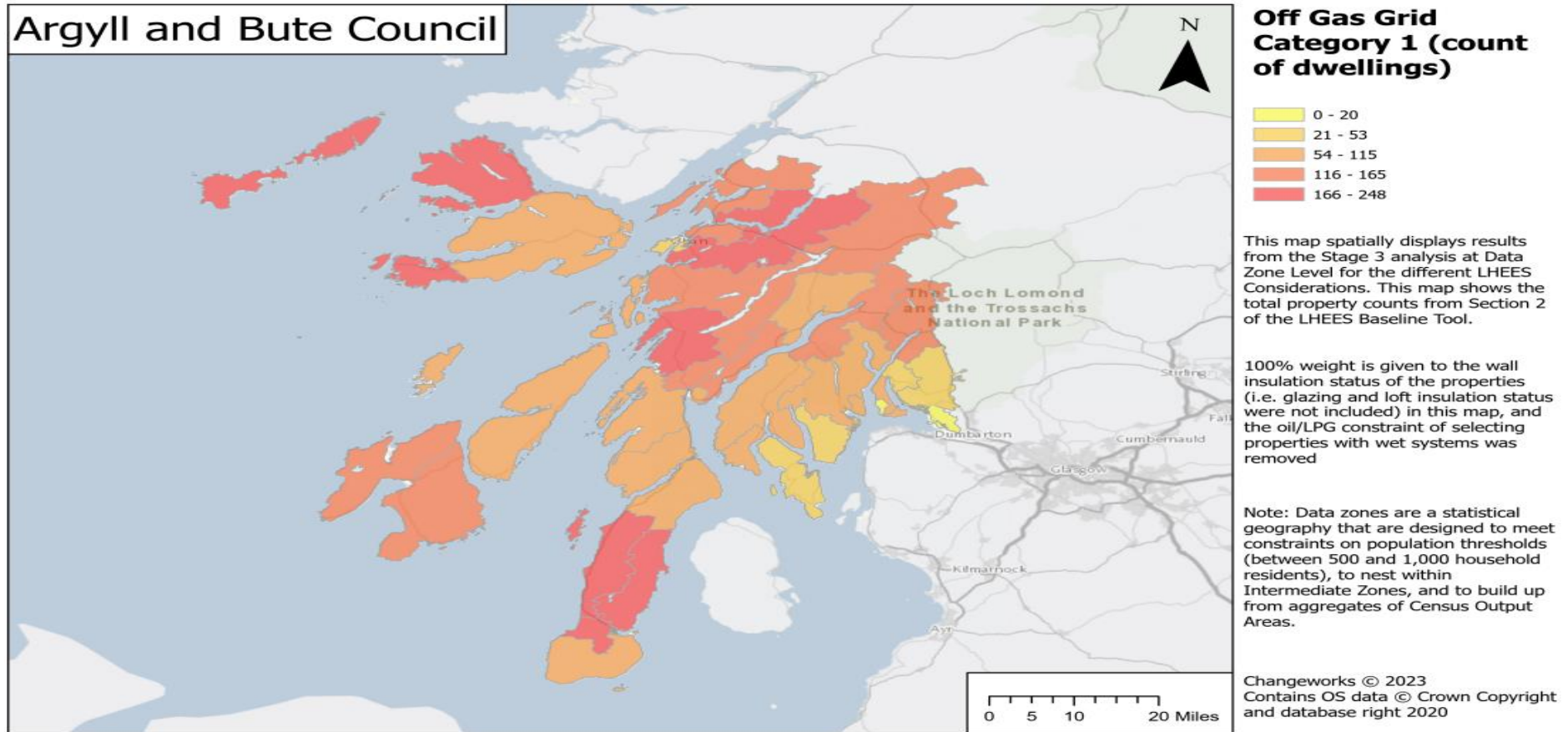
The figure below shows that Social Housing in Argyll and Bute has only marginally more homes with poorer energy efficiency ratings than nationally. However, a considerably higher percentage of Private Rented and Owner-Occupied homes have poorer energy efficiency ratings than nationally. Consequently, the Argyll and Bute LHEES proposes focusing delivery on Private Rented and Owner Occupier properties.



Delivering in areas with high concentrations of Category 1 and 2 Buildings

It is important to reduce our carbon emissions as quickly as possible by transitioning to electrical heating systems. Category 1 Buildings are “Heat pump ready” and well-suited to heat retrofit, while Category 2 buildings are suitable for heat pumps with some building upgrades.

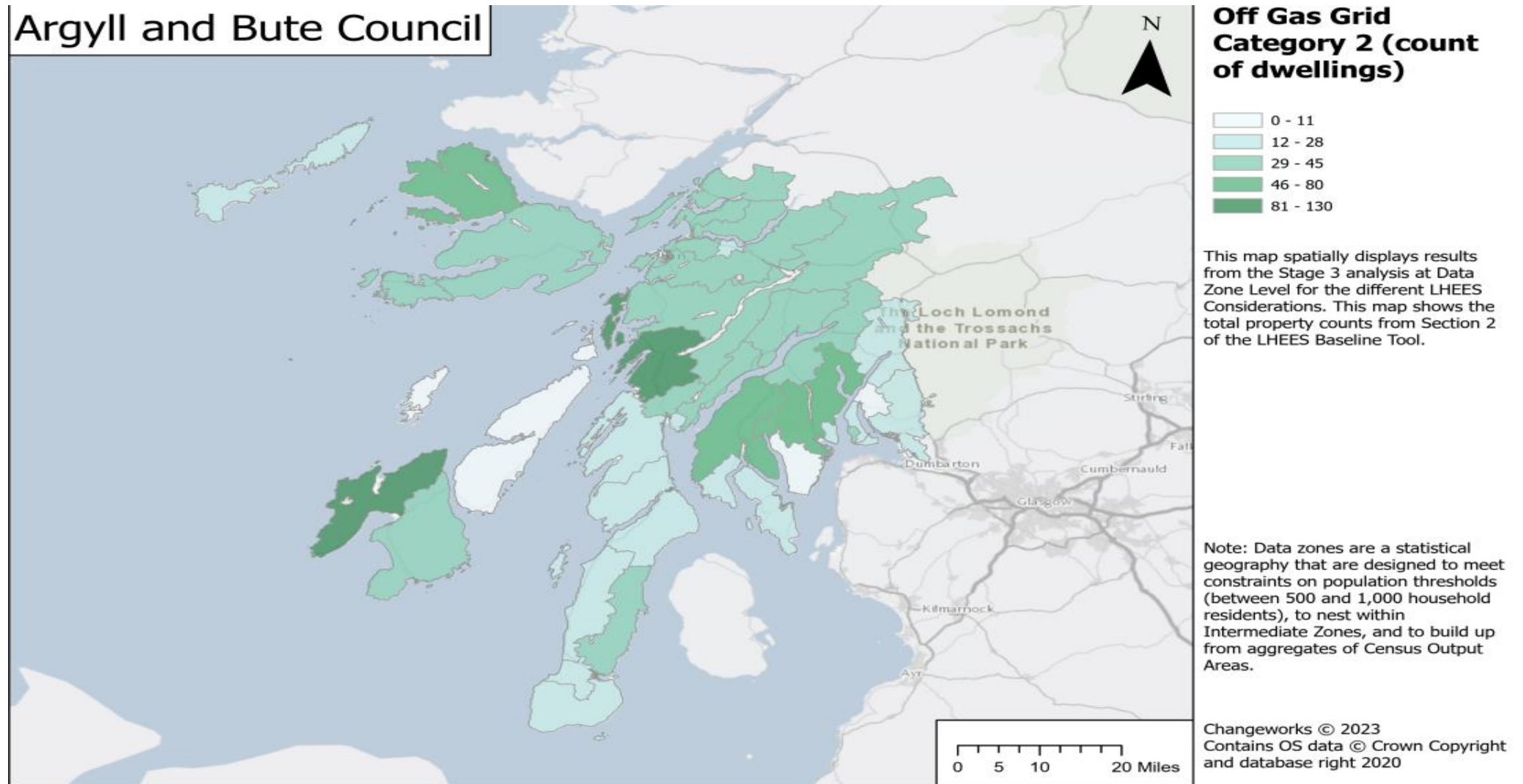
The map shows the number of Category 1 buildings in off-gas grid areas.



Off-gas grid areas that have more than 166 Category 1 buildings are as follows:

- | | | | | |
|---------------|------------------|----------------------|--------------|----------------------------|
| Kintyre Trail | Mid Argyll | Kintyre Trail | Whisky Isles | Mull, Iona, Coll and Tiree |
| Garelochhead | Benderloch Trail | Greater Lochgilphead | Oban South | |

The map shows the number of Category 2 buildings in off-gas grid areas.



Off-gas grid areas that have more than 81 Category 2 buildings are as follows:

Loch Awe

Oban South

Whisky Isles

Mid Argyll

Mull, Iona, Coll and Tiree

Greater Lochgililhead

Section 7: What's next

Please complete the survey to let us know your views. The survey is open until the 13th October 2024.

LHEES SURVEY FORM LINK

<https://forms.office.com/Pages/ResponsePage.aspx?id=WUBEioxNcEm0LCmfnDkQ4CVw5MblRi1CppVr1pzBjt9UMEc2WUpMMzA4Sk9ISkpRTkJOOUs5NjJZMi4u>

DIVERSITY MONITORING FORM LINK

<https://forms.office.com/Pages/ResponsePage.aspx?id=WUBEioxNcEm0LCmfnDkQ4CVw5MblRi1CppVr1pzBjt9UQ0kzRFczODM3MEtUWkRUREFJOVA3VjlxMi4u>

The feedback from the public consultation exercise will inform the final LHEES Strategy and Delivery Plan, both of which will be approved by Council and published.