How can we warm public perceptions to air source heat pumps in rural Scotland?
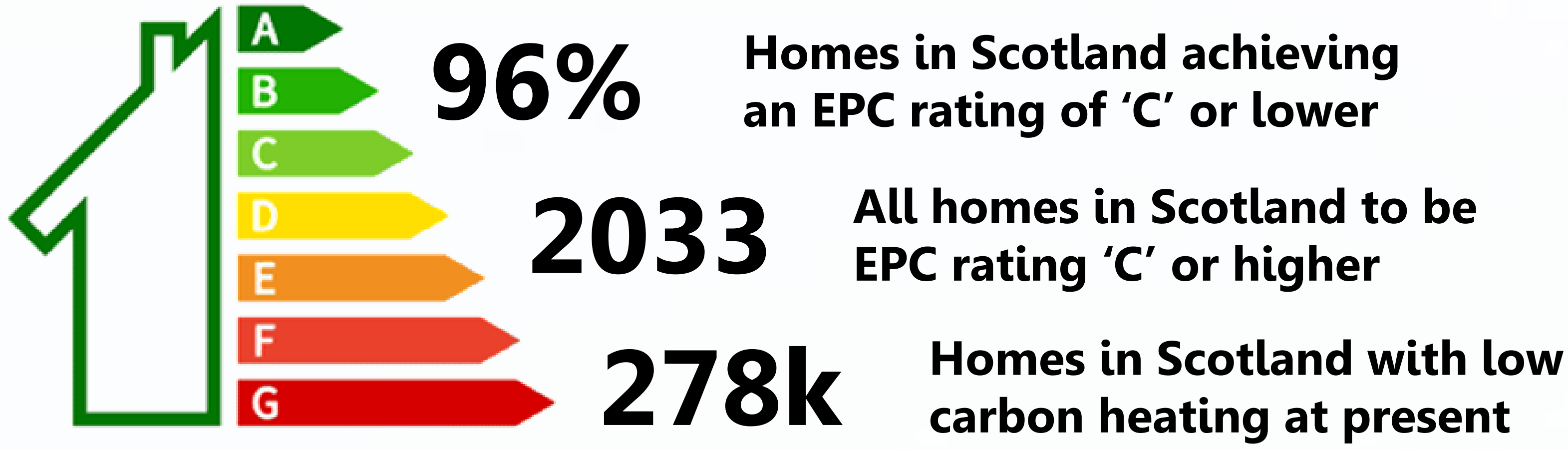
George F. Gunn[1,2]

[1] University of the Highlands and Islands, Inverness, Scotland
[2] Moray Council, Elgin, Scotland

Introduction

With an ambitious net zero carbon emissions date of 2045, the Scottish Government aims to tackle heat-related emissions, which currently account for a fifth of the country's carbon output[1].

96% Homes in Scotland achieving an EPC rating of 'C' or lower

2033 All homes in Scotland to be EPC rating 'C' or higher

278k Homes in Scotland with low carbon heating at present

The pace of change must increase...

Enhancing the rollout of low carbon heating systems - principally air source heat pumps - is key to achieving government decarbonisation targets[2].

Compared to other European countries, Scotland is lagging behind in this area, and limited research has been undertaken to understand this position.

What do we know so far?

Negative public perceptions of net zero interventions has been highlighted as a key challenge to achieving the Scottish Government's decarbonisation challenge[3].

Local authorities and other social landlords are employing a mixed approach to advancing housing decarbonisation across Scotland[4].

Successful roll-out and positive tenant feedback stem from good practices, though progress appears to depend on funding and individual professional perspectives on low carbon technologies[4].

Intended outcomes

- **Comprehensive insights into public perceptions towards air source heat pumps**
- **Guidance to inform local and national policies/strategies for improved low carbon heating system roll-out**
- **Constructive insights for installers and manufacturers to optimise products and services**
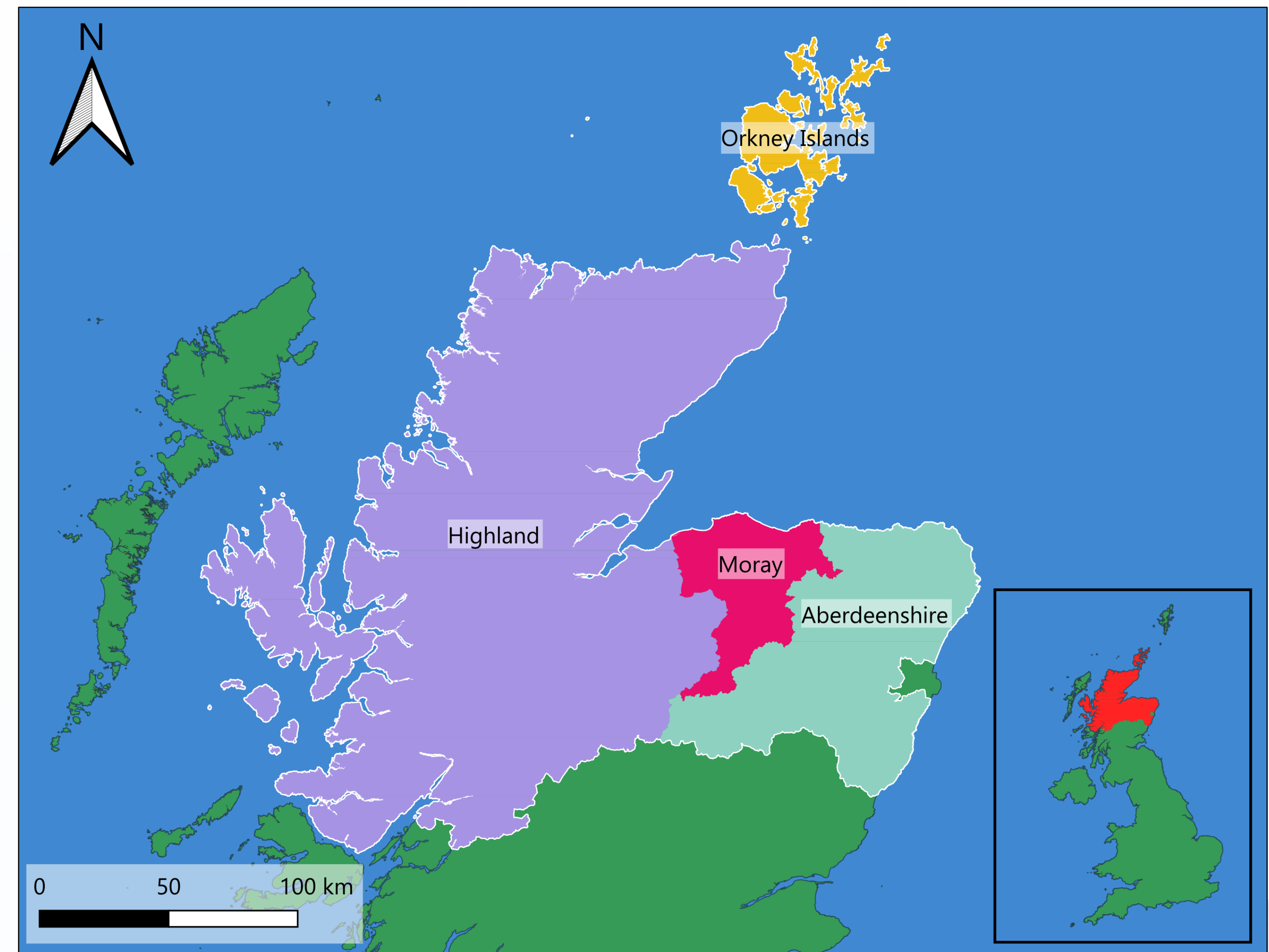
Study area

Figure 1. Location of study area and inset the study area within the UK. Created using data from the ONS (2024)[5].
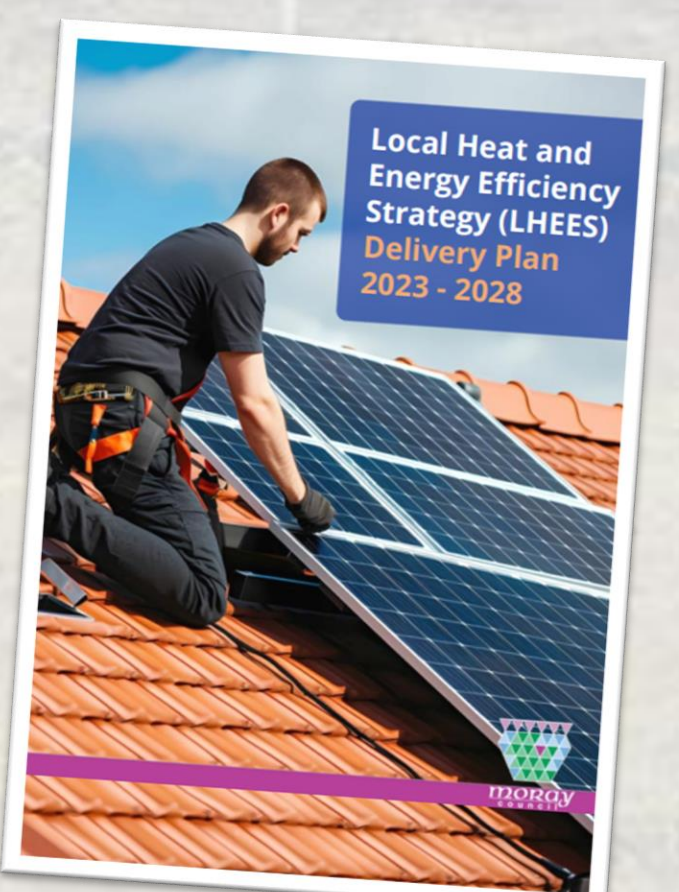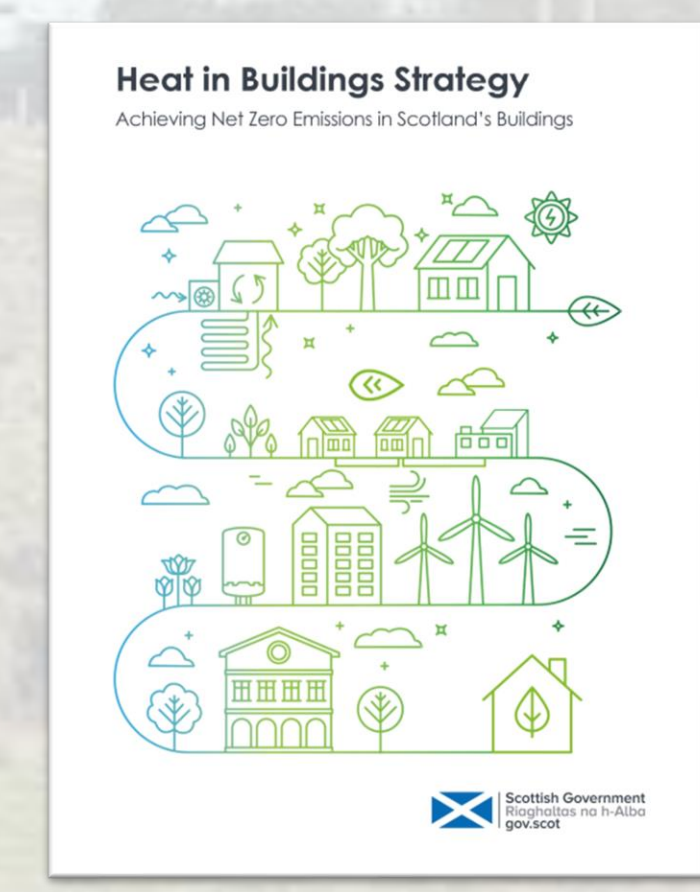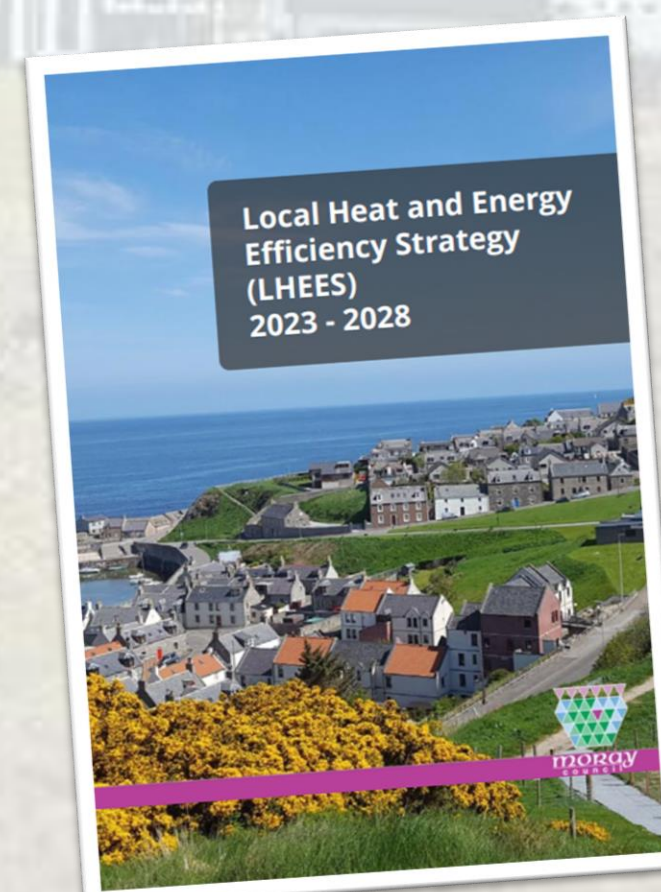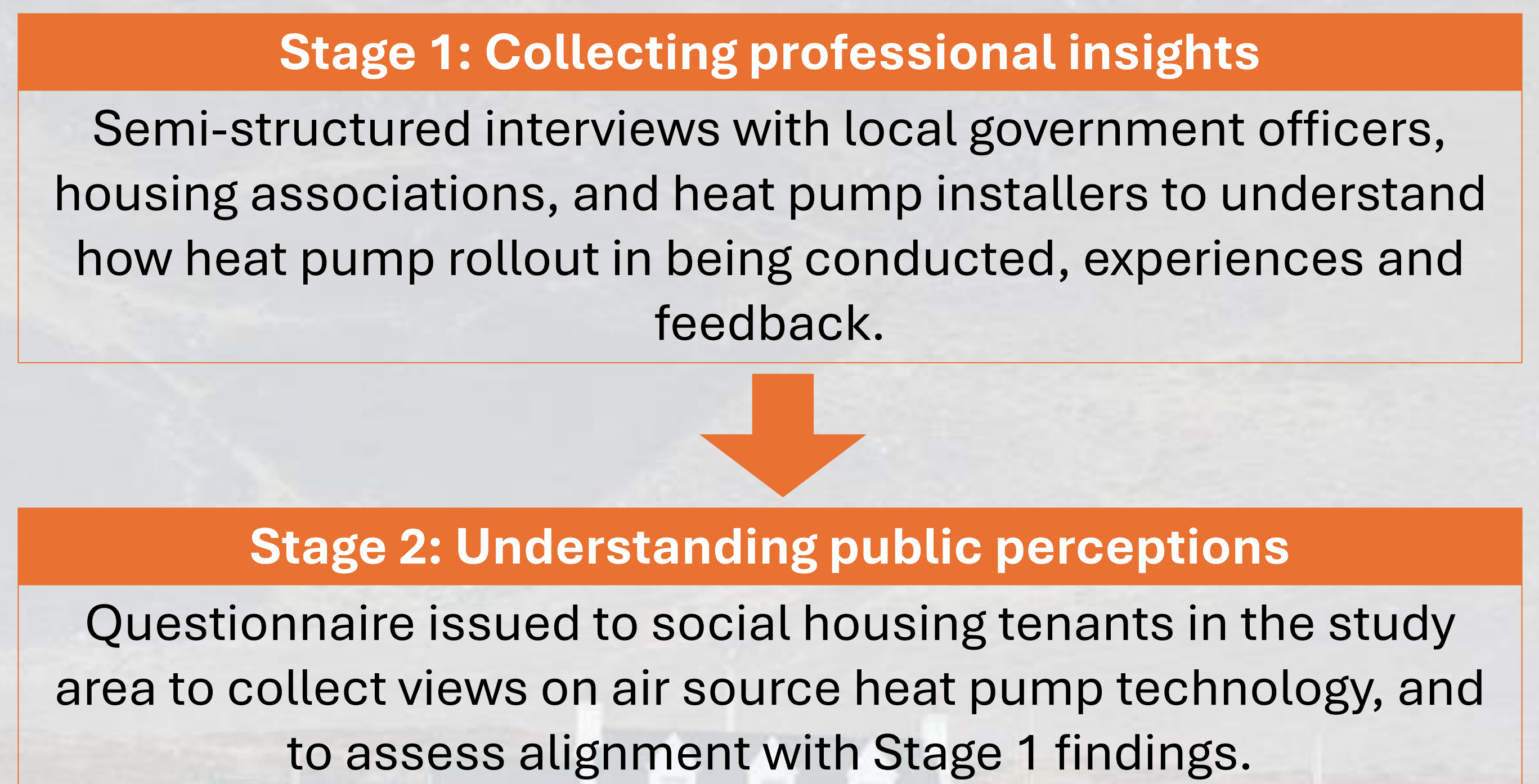
The study area includes the Scottish local authority areas of Highland, Moray, Aberdeenshire, and the Orkney Islands.

Studying these regions will enable insights from a diverse range of rural geographies including upland, coastal and island environments to ensure understanding of the challenges and opportunities in different rural settings.

The research will engage with social housing tenants and associated professionals operating in these regions.

Research methods

A two-stage, mixed methods data collection approach is being used to integrate professional insights with public perceptions collected from social housing tenants.

Stage 1: Collecting professional insights

Semi-structured interviews with local government officers, housing associations, and heat pump installers to understand how heat pump rollout in being conducted, experiences and feedback.

Stage 2: Understanding public perceptions

Questionnaire issued to social housing tenants in the study area to collect views on air source heat pump technology, and to assess alignment with Stage 1 findings.

References

[1] Scottish Government (2021) *Heat in Buildings Strategy - achieving net zero emissions in Scotland's buildings.*

[2] Climate Change Committee (2025) *The Seventh Carbon Budget Report: Advice to the UK Government.*

[3] Scottish Futures Trust (2025) *Financing and funding the decarbonisation of Scotland's social housing.*

[4] Gunn, G.F. (2025) [Series of interviews with local authorities and housing association professionals], March 2025

[5] ONS (2024) ONS (2024) *Local Authority Districts (May 2024) Boundaries UK BFE* [online]. Available from <https://geoportal.statistics.gov.uk/datasets/ons::local-authority-districts-may-2024-boundaries-uk-bfe-2/about> [12 March 2025]

For further information or to express interest in this research, please scan the QR code or e-mail **george.gunn@uhi.ac.uk**

Connect with George on: