Heat in Buildings Strategy

Island Communities Impact Assessment

November 2021

Scottish Government
Riaghaltas na h-Alba
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Introduction

1. Under the Islands (Scotland) Act 2018[1], Scottish Ministers and other relevant authorities, including a number of public authorities, must complete an Island Communities Impact Assessment (ICIA) and take account of island issues when developing any new policy, strategy or service.

2. Section 13 of the 2018 Act states that an ICIA must:

    - describe the likely significantly different effect of the legislation;
    - assess the extent to which the Scottish Ministers consider that the legislation can be developed in such a manner as to improve or mitigate, for island communities, the outcomes resulting from the legislation; and
    - set out the financial implications of steps taken under this subsection to mitigate, for island communities, the outcomes resulting from the legislation.

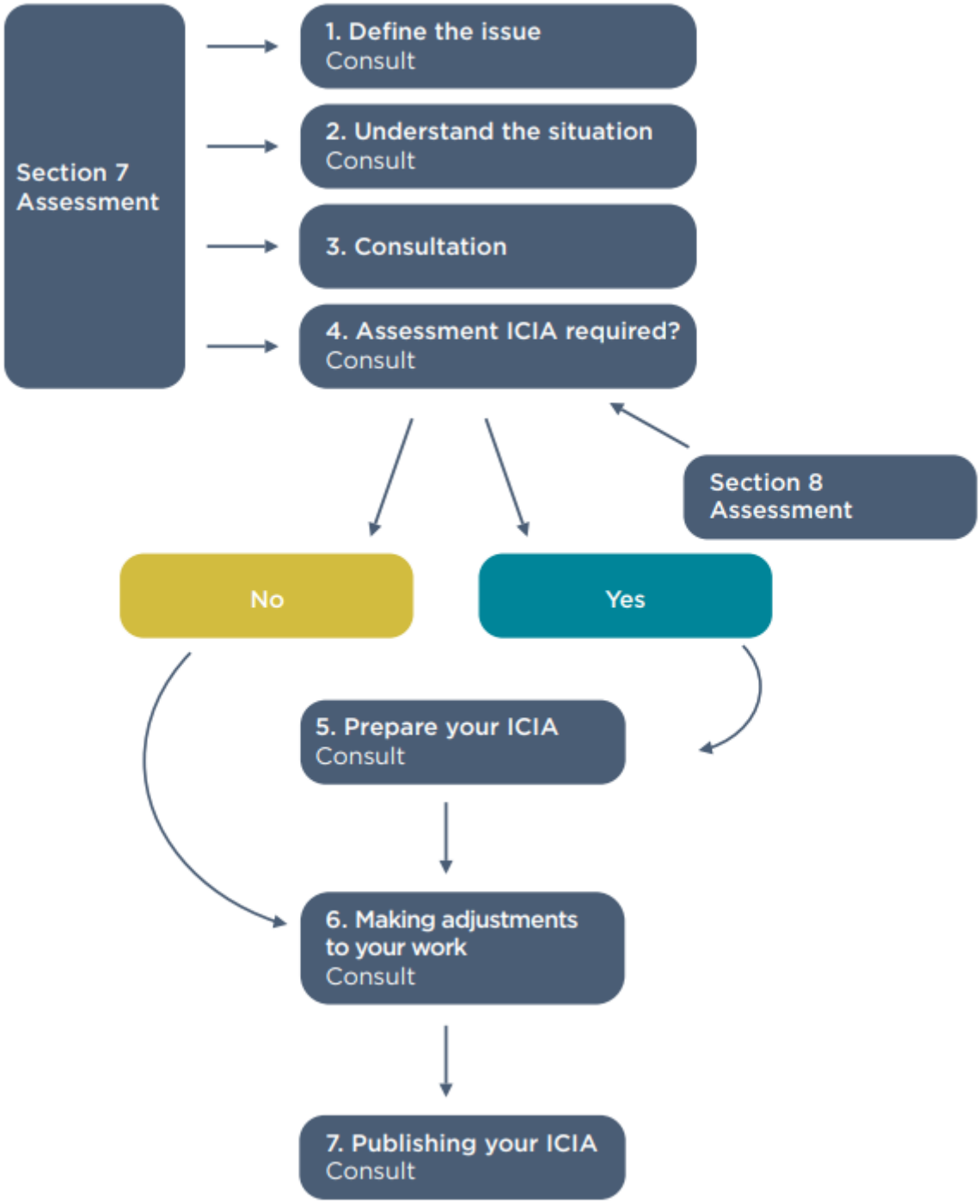
3. The Islands (Scotland) Act 2018 defines an island community as a community that consists of two or more individuals, all of whom permanently inhabit an island (whether or not the same island), and is based on common interest, identity or geography (including in relation to any uninhabited islands whose natural environment and terrestrial, marine and associated ecosystems contribute to the natural or cultural heritage or economy of an inhabited island).

4. Island rurality can exacerbate inequality already experienced on account of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation. These characteristics are known as “protected characteristics” as defined in the Equality Act 2010. Issues which impact on all islanders to some extent, such as those relating to access to transport or adequate housing for example, may be acutely felt by some groups more than others and require targeted measures in order to redress the inequality experienced. We are publishing a separate Equalities Impact Assessment.

5. The Island Communities Impact Assessments: Guidance And Toolkit[2] sets out an approach for undertaking an ICIA (see diagram below). There is an initial screening stage (‘Section 7 assessment’), followed by an additional impact assessment stage (‘Section 8 assessment’) if required following screening. The third stage is the publication of relevant documents. This document constitutes the ICIA and incorporates screening (A) and impact assessment (B), and it completes the process by being published.

[1] **Islands (Scotland) Act 2018,** the Scottish Parliament, 30 May 2018.

[2] **Island Communities Impact Assessments: guidance and toolkit,** the Scottish Government, 23 December 2020.



6. **This ICIA is for the Heat in Buildings Strategy published on 7 October 2021**.

7. As we take forward the actions within the Heat in Buildings Strategy we will ensure that the issues highlighted here are considered in the design of delivery programmes and development of further policy and regulation. Where further policy development takes place, additional ICIAs will be considered.

8. The 2021-22 Programme For Government contains a commitment to support Carbon Neutral Islands (including pilots for islands to run on 100% renewable energy, with at least 6 islands over this Parliament enabled to become fully carbon neutral by 2040, as forerunners to a net zero Scotland by 2045).

9. We will also publish an Islands Energy Strategy in 2022 with a focus on resilience and sustainability of island energy systems for the future, and on supporting islands' transition to net zero emissions.

A) Screening (Section 7 Assessment)

Step One – Develop a clear understanding of your objectives

10. Section 7 of the 2018 Act states that a relevant authority must have regard to island communities in carrying out its functions. Guidance states that first step should be to develop a clear understanding of the objectives and intended outcomes of a strategy and then, more specifically, **identify if there are explicit island needs or any potential direct or indirect impacts for island communities.**

Heat in Buildings Strategy

11. Following the passage of the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, Scotland has set a statutory target for net-zero greenhouse gas emissions by 2045, with interim emissions reductions of 75% (by 2030) and 90% (by 2040).

12. This followed the First Minister's recognition of a global climate emergency. In response, the Scottish Government set out the initial action it would take, as part of the Programme for Government 2019-2020.

13. The Scottish Government committed to publishing a draft Heat Decarbonisation Policy Statement, providing an update to the 2015 Heat Policy Statement in the summer of 2020, but due to the ongoing Covid-19 pandemic this was delayed until the winter of 2020/21.

14. Scottish Ministers then took the action to merge the Statement with an update to the Energy Efficiency Route Map creating the Heat in Buildings Strategy, a single policy framework to eliminate emissions from buildings by 2045.

15. In December 2020, the Scottish Government published a Climate Change Plan update[3], which set out that to meet our emissions reduction targets, emissions from buildings must fall 68% by 2030 against 2020 levels.

[3] Securing a green recovery on a path to net zero: climate change plan 2018–2032 – update, The Scottish Government, 16 Dec 2020.

16. The draft Heat in Buildings Strategy was published in February 2021. Following consultation, and analysis of responses, the Scottish Government has now published a final Heat in Buildings Strategy.

Summary of aims and desired outcomes of the Heat in Buildings Strategy

17. This final Heat in Buildings Strategy sets out a pathway to zero emissions buildings by 2045 and details a series of near-term actions to put us on a clear path towards this, as well as a range of further, longer-term commitments to accelerate the transformation of the nation's building stock. It sets out the principles we will apply to ensure our zero emissions heat delivery programmes support our fuel poverty objectives.

18. The Strategy sets out a vision for over 1 million homes in Scotland to convert to zero emissions heating by 2030 and the equivalent of 50,000 non-domestic buildings. Emissions will have to fall by 68% by 2030 as compared to 2020 and to maintain progress towards our statutory emissions reduction targets, heating installations must scale up to provide at least 124,000 systems installed between 2021 and 2026. The installation rate will need to peak at over 200,000 new systems per annum in the late 2020's which is above the natural replacement rate for boilers.

19. In terms of energy efficiency, the Strategy sets out that where technically and legally feasible and cost-effective, by 2030 a large majority of buildings should achieve a good level of energy efficiency, which for homes is at least equivalent to an EPC Band C, with all homes meeting at least this standard by 2033.

Phasing out the need to install new or replacement fossil fuel boilers

20. In the Heat in Buildings Strategy, the Scottish Government has committed to phasing out the need to install new or replacement fossil fuel boilers (in off-gas grid areas from 2025, and in on-gas areas from 2030) subject to technological developments and decisions by the UK Government on reserved matters.

21. We will consult in further detail on this issue during 2022. Should any legislation be required subsequently, it will be subject to a range of impact assessments to allow the Scottish Parliament the opportunity to fully scrutinise the impacts.

22. In our effort to remove emissions from heating buildings, the Scottish Government has separately undertaken a zero emissions first approach in our delivery programmes and will phase out funding for fossil fuel heating systems by 2024 (where it is not detrimental to our fuel poverty objectives).

23. We have already phased out oil and LPG boilers from Warmer Homes Scotland, Area Based Schemes and Home Energy Scotland Loans. No households have had their replacement oil or LPG boilers or heating systems cancelled as a result. All committed offers for oil or LPG systems signed prior to 6 September 2021, for either replacement oil/LPG boilers or heating systems, will have these honoured and will receive their installations/loans.

24. The Strategy is aligned with wider Scottish Government policy on housing, energy, and climate change. The actions it sets out are reflected in our Housing to 2040 Strategy, which also presents further details on how our housing can support achievement of Scotland's net zero ambitions, whilst also delivering against wider objectives.

25. We envisage that the delivery of our Heat in Buildings Strategy will secure a wider set of outcomes that will benefit Scotland's people and places. These Heat in Buildings outcomes are aligned with our National Performance Framework, and will guide our decision making and support the development of a holistic, people-centred approach to the transition ahead. They are:
    1. Heating our homes and buildings no longer contributes to climate change
    2. The cost of heating our homes and business is affordable and those occupying them have a high comfort level
    3. We have reduced our demand for heat and poor energy efficiency is no longer a driver of fuel poverty
    4. The systems we use are smart and resilient and provide us with a reliable source of heat
    5. We have a secure supply chain with high value, local, sustainable jobs across Scotland and people have been helped to transition to new, secure jobs as part of a just transition
    6. Our indoor and outdoor spaces are filled with cleaner air
    7. Our heating systems enable and efficiently use Scotland's renewable energy resources
    8. Electricity and non- electrical fuels are produced from sustainable sources in a way which is consistent with net zero emissions and biodiversity targets
    9. Our heating systems enable the flexible and stable operation of our energy networks

26. The Heat in Buildings Strategy forms the foundation of our ongoing work, which will build on the insight and evidence generated by the consultation and wider input. Next steps include:
    - We will develop our approach to heat in islands and remote rural contexts in our forthcoming Islands Energy Strategy in 2022 (which will complement the existing National Islands Plan).
    - We have separately committed to publish a refreshed Energy Strategy and have also committed to an Energy Just Transition Plan in Spring 2022. This will allow us to further refine our approach to heat in buildings, ensuring a coherent whole-system view and further embedding our evolving policies within our wider approach to delivering on a just transition.
    - We will set out our approach to eradicating fuel poverty in the Fuel Poverty Strategy by the end of 2021.
    - We will develop a bespoke Public Engagement Strategy for heat in buildings to raise awareness of the support and advisory services available and to encourage home upgrades.

- We will co-produce with the sector a Supply Chain Delivery Plan focussed on the development of energy efficiency and zero emissions heat in the buildings supply chain in Scotland.
- We will establish a Green Heat Finance Taskforce by the end of this year.

27. As we transform our homes and buildings by making them more energy efficient and installing low and zero emissions heating, we will consider our local surroundings and resources, whether in dense urban or suburban areas or smaller rural towns and villages or in our remote and island communities. As such, the transition to zero emissions buildings may look different in different communities and will require approaches tailored to place.

Island needs or potential impacts for island communities

28. The Heat in Buildings Strategy covers homes and buildings across Scotland and although not directly only aimed at islands, the Strategy applies to all homes and buildings on our Islands. We know that our island communities can face unique challenges, and opportunities, around distance, geography, connectivity and demography.

29. Our island communities are not connected to the mains gas network. Islands can be connected at the periphery of electricity networks, whilst a small number of our island communities are also not connected to electricity grids and face unique challenges in their efforts to reduce emissions.

30. The potential for reduced supply chain availability, added transport requirements, limited accommodation for contractors and potential weather disruptions means that low and zero emissions measures can cost more to install in our remote and island communities.

31. The National Islands Plan[4] acknowledges that extreme fuel poverty rates are higher for most of the island authorities. We also know that extreme fuel poverty can be particularly difficult to eliminate in island communities where building types are harder to improve to the required energy efficiency standard and opportunities to reduce fuel costs are more limited. In addition, traditionally constructed buildings and energy efficiency challenges can vary between the islands. Such issues combined with the colder climate in the islands means that some of these homes might have the heating on throughout the whole year. Higher living costs on islands, combined with higher fuel costs, for households on low incomes, can create the conditions for extreme fuel poverty.

[4] **National Islands Plan,** the Scottish Government, 27 December 2019.

32. **Heat in Buildings Delivery Programmes**

To support the delivery of the Heat in Buildings Strategy Scottish Government have committed to the following suite of delivery programmes. Details of the programmes in relation to islands is listed below:

Warmer Homes Scotland

The **Warmer Homes Scotland successor scheme** will be accessible to all households in Scotland which will include island households where they meet the eligibility requirements for the scheme. The intended outcomes for island households are the same as that for mainland households to deliver a fuel bill saving for those in fuel poverty and to decarbonise the heating system where it is not detrimental to our fuel poverty principles.

There are 6 Key Performance Indicator (KPI) regions within the existing contract and performance levels have to be reached across all regions in order for a performance linked fee to be paid. The new contract will continue to identify islands as a distinct group for measuring KPIs, ensuring the same high standard of performance is consistent across the country. The supply chain and shortage of available tradespeople to undertake the work is mitigated by a guaranteed national service which will be built into the contract.

The new scheme will support households in the transition to decarbonised heating systems including those in off gas areas. To support this, grant levels will be adjusted to account for the higher costs associated with lower emissions installations and the need for greater insulation measures than is needed to support installs of fossil fuel measures. Where possible, the new scheme will look to mitigate any electrical supply issues through the provision of micro generation technology and increasing supply capability for households where low/ zero emissions heating systems are being installed.

Heat in Buildings Area Based Schemes (ABS)

Area based schemes provide energy efficiency improvements to households in or at risk of fuel poverty living in their own home or a private rented property, leveraging Energy Company Obligation (ECO) finance and private investment. ABS is effective in delivering large numbers of improvements to mixed tenure, multi-occupancy properties (e.g. flats, terraces, council estates/projects). Over the next five years our ABS funding will continue to target areas with higher numbers of households in or at risk of fuel poverty, prioritising those in greatest need (i.e. the least energy efficient properties). We will build upon the expertise and experience of local delivery partners in delivering projects that benefit entire communities, reflecting local needs and conditions. As well as prioritising insulation measures - fabric first - we will deliver more ‘whole house’ retrofits to fuel poor households as ABS projects. We will adopt a ‘zero carbon first’ approach in improving heating systems and ensure that households continue to benefit from warmer homes, and reduced energy costs and CO2 emissions.
We also recognise that the costs of delivering energy efficiency measures are often higher in remote rural and island areas. Councils serving remote rural/island communities can now provide grant-in-aid worth up to £14,000 for those in extreme fuel poverty, up from the previous

maximum of £9,000. These councils can also apply a higher maxima of grant-in-aid for zero/low carbon heating measures of £8,000 (this uplift reflects greater delivery costs in remote areas).

Home Energy Scotland

All our current advice and support services are already open to those in rural /island locations. **Home Energy Scotland (HES) provides free, impartial advice including specialist bespoke advice on home renewables**. HES is also the gateway to loans and grants programmes from Scottish Government for energy efficiency improvements and zero emissions heating in homes in Scotland. Scottish Government has introduced a further incentive via the Home Energy Scotland (HES) Loan Scheme by offering owner occupiers up to 75% in cashback (capped at £7,500) towards the installation of renewable heating systems. This incentive makes the uptake of renewable heating more attractive. We also offer cashback on HES loans for energy efficiency measures, and have increased the rate of this incentive from 25% to 40%.

Community and Renewable Energy Support Programme (CARES)

Our **new CARES programme will focus further on supporting communities** to work together to address and champion heat decarbonisation on a local level **including dedicated support for islands and remote communities**. Through CARES we will work to understand further the models and solutions most appropriate for communities in Scotland. Building on these approaches, we will work with stakeholders to ensure there is an evidence based, tailored service for islands and remote locations, and will set out more detail in our forthcoming Islands Energy Strategy.

Through CARES, up to £5.25M has been made available for the financial year of 2020/21 to assist community groups in developing renewable energy projects, supporting the growth of community and locally owned energy in Scotland. Through CARES we have extended our support **for our most remote and islanded off-grid communities**, ensuring that security of supply is maintained and decarbonised – acting across electricity, heat and energy efficiency – helping to transition these communities to a net zero future and provide additional support for rural and island homes which require bespoke, targeted advice. Our Island Energy Strategy will support this target, complementing our existing National Islands Plan, will help set out a pathway to net zero for Scotland's island communities ensure their energy systems are resilient and can meet the changing needs of communities now and in the future. We will also explore the evidence base and options for including an islands uplift in our programmes moving forward.

Beneficial impacts

33. There are, importantly, key benefits that properly installed decarbonised heating systems can bring to island communities. Specifically, these span improved thermal comfort and health benefits, protection of the unique natural environment of Scotland's islands and rural communities through climate change mitigation, and the development of skills and jobs within island communities to deliver this change. Scotland's island

communities can also have high levels of community engagement that may be enhanced through heat decarbonisation programmes.

Step Two – Gather your data and identify your stakeholders

Desktop

34. A number of data sources were analysed drawing from:
    - The cost of remoteness - reflecting higher living costs in remote rural Scotland when measuring fuel poverty (Scottish Government, September 2021)[5]
    - A Minimum Income Standard for Remote Rural Scotland: A Policy Update (HIE, October 2016)[6]
    - Information gathered during the completion of a Scottish Government commissioned Broad Evidence Review[7] on implications of the Heat in Buildings strategy on inequality and domestic consumers (for forthcoming publication and which highlighted data from the Scottish House Conditions Survey 2019 (Scottish Government, December 2020[8])
    - Small Islands Energy System Overview (HIE, April 2020)[9]
    - Fuel Poverty Strategy Islands Communities Impact Assessment (2018)

35. A Summary of the key evidence emerging from these desktop sources are outlined in **Annex A**. Potential issues that were specific to, or more acute within, island communities were identified with regards to:
    - Cost – higher living costs, higher heating costs and higher installation costs for heating systems;
    - Higher portion of properties on restricted metering;
    - Traditionally constructed buildings and related energy efficiency challenges including challenges with PAS 2035 ventilation standards for the islands /remote rural context;
    - Stakeholder reports of limited availability of finance for crofting tenures to decarbonise their properties;
    - Greater number of larger properties and greater number of owner occupiers;
    - Supply chain and skills (availability and supply of workers, lack of accommodation for workers not resident on the islands and challenges in obtaining parts for service and maintenance);
    - Weather and climate (for example more exposed coastal locations may have a greater need for heating and potential for weather disruptions to arise which can impact project timescales and costs);

[5] **The cost of remoteness - reflecting higher living costs in remote rural Scotland when measuring fuel poverty: research report - gov.scot (www.gov.scot)** – Scottish Government, September 2021
[6] **A Minimum Income Standard for Remote Rural Scotland: A Policy Update**, Loughborough University's Centre for Research in Social Policy and Highland and Islands Enterprise (HIE), October 2016.
[7] To note: some of the islands relevant data gathered has been included in this ICIA, but may not be included in the final report owing to the broader nature of the final research publication.
[8] **Scottish house condition survey: 2019 key findings.** Scottish Government, December 2021.
[9] **Small Islands Energy System Overview**, HIE, April 2020.

- Fuel Poverty (between 2018 and 2019, rates of fuel poverty increased in remote rural areas from 33% to 43%[10]);
- In the same period, the extreme fuel poverty rate varied from 7% in East Renfrewshire to 24% in Na h-Eileanan Siar compared to the average in Scotland of 12% . Some local authorities had significantly higher extreme fuel poverty rates than the national average: Na h-Eileanan Siar (24%), Orkney Islands (22%), Shetland Islands (22%), Highland (22%), Argyll and Bute (19%).

Early engagement

36. As part of our evidence gathering exercise officials from the Scottish Government met with islands representatives from Highlands and Islands Enterprise in 2020 to discuss the development of the draft Heat in Buildings Strategy.

37. Through this discussion a number of similar potential issues were identified as below:

- Supply chain, skills and availability
  - It can be difficult to find suppliers of low and zero emission heating on some islands and given the scale and pace of roll-out there was a concern this issue may be exacerbated and could be a barrier. In addition, lead in times for resolving maintenance issues were also a concern with anecdotal reports of long waiting times before system issues were fixed.
- Costs of installation, maintenance and operation
  - Due to some increased costs of living in more rural areas, it is possible costs for installation and other measures will be greater than on the mainland.
- Traditional building stock
  - A high proportion of the building stock across island communities is older solid wall construction which presents difficulties in installing energy efficiency measures. This may mean that options for low and zero carbon heating technologies that require high levels of energy efficiency (i.e. EPC C or higher) may be more limited due to practicalities and/or cost. Research published suggests the total portion of heritage and old homes in Scotland is estimated to amount to about 21% of the housing stock (Scottish Government, 2020[11]).
- Electricity grid
  - A small number of islands are not connected to the national electricity grid, and those that are, are reliant on deep sea cables and interconnectors which can fail. It was highlighted that a switch to mainly electric powered low and zero emissions heating technologies, grid capacity and resilience would need to be considered to support the increased demand.
- Resource availability

[10] **Scottish house condition survey: 2019 key findings**, Scottish Government, December 2021.

[11] **Low carbon heating in domestic buildings - technical feasibility: report**, Scottish Government, December 2020.

- However electrification was considered a sensible option for heating buildings if there was an opportunity to link this to the high renewable energy resource availability on islands.

- Local trust and buy in for new solutions
  - Local engagement was seen as key to ensure that solutions for heat decarbonisation were trusted and adopted locally. Community organisations were highlighted as one route to support this aim due to their remit and reach.

38. The draft Strategy proposed a number of actions in response to a range of potential issues, including in regards to a supply chain action plan with an islands component, remote islands grid upgrade support, traditional buildings, prioritisation of budget to support those least able to pay, including those in fuel poverty fuel poverty, funding and finance. These were then reviewed as part of the wider consultation on the draft Strategy.

Step Three – Consultation

39. A public consultation on the draft Heat in Buildings Strategy commenced in February 2021 and ran for 12 weeks. 178 respondents submitted a response. The public consultation played a key role in gathering further evidence in relation to the Island Communities Impact Assessment. All responses to the consultation have been redacted, and 142 of these have been published[12].

40. As part of the consultation process, all local authorities that represent Island Communities were made aware of the draft Heat in Buildings Strategy. They were then invited via the consultation to provide input regarding the potential impacts on Island Communities from the Heat in Buildings Strategy.

Stakeholder feedback through draft Heat In Buildings Strategy written responses

41. In consulting on the draft Heat in Buildings Strategy the following question was specifically posed to respondents: “In your opinion, what steps can we take to ensure that policies set out in this strategy do not unfairly impact Island and other remote communities?”.

42. A total of 73 respondents (**Annex B**) provided an answer and full consultation analysis was undertaken by Craigforth[13], and published alongside the Strategy. Key themes (see **Annex C** for more detail) in these responses in regards to island-specific impacts were:
    - Costs (installation, running costs and maintenance);
    - Fuel poverty;
    - Ongoing community representation and engagement;

[12] Heat in buildings strategy - achieving net zero emissions: consultation, Citizens Space, August 2021.
[13] Heat in Buildings Strategy - Analysis of responses to the consultation, Scottish Government, October 2021.

- Supply, skills and access; and
- Traditionally constructed buildings and energy efficiency challenges.

Stakeholder feedback through Heat In Buildings Islands Workshop

43. Additionally, an **Islands specific workshop** was held online in March 2021 to enable island communities and stakeholders (**Annex D**) to share their views on the draft strategy.

44. Through this engagement, stakeholders reported the following issues that may be specific to, or more acute within, islands communities (see **Annex E** for more detail):
    - Supply chain access and availability (including skills gap, parts and maintenance)
    - Building stock suitability
    - Electricity grid capacity
    - Fuel poverty and costs
    - Resilience (the challenges of island geography, demography and economy)

45. Attendees also reported on some of the **opportunities and benefits** that the heat transition might bring about:
    - Abundant renewable energy resources (ability to generate heat locally)
    - Engaged and motivated communities and the potential to set up community projects,
    - Opportunities for more niche technologies (such as water source heat pumps and heat networks for small communities),
    - Opportunities for the local supply chain,
    - Opportunities to promote renewable tourism and local business,
    - Promoting resilience in islands building stock (by improving the fabric) for future generations.

Summary of main impacts across data gathering and consultation

46. In summary, the key areas in which possible impacts on island communities have been identified through our data gathering and consultation concern:
    - Installation and operational costs for heating systems
    - Higher living costs, heating costs and high levels of fuel poverty
        - Rural and island households spend statistically significantly more on heating than their urban equivalents (see Annex A).
        - Fuel poverty levels are higher in remote rural (43%) and remote small towns (34%) than in urban areas (24%). One reason for this is that the majority (93%) of urban dwellings are within the coverage of the gas grid, whereas almost two-thirds (65%) of those in rural areas are not. Connection to the gas grid allows households to use mains gas for heating and hot water. As mains gas is currently the cheapest of the major commercial fuels, gas grid access can be a significant determinant in the required cost of heating a home to a satisfactory temperature. The majority of households using electricity in Scotland, whether in urban or

rural settings, currently rely on traditional emitters such as storage heaters (see Annex).

- Availability of appropriate finance and funding which takes account of these challenges
- Ability of traditionally constructed buildings to accommodate standard energy efficiency measures
    - Islands and rural communities generally have a relatively larger share of stone walled, detached dwellings of a traditional build form. Maintaining an adequate indoor temperature in these type of properties can be challenging and costly due to the rate of heat loss through large, uninsulated external walls.
    - As previously mentioned (paragraph 33), Island and rural local authorities generally had the highest proportion of the least energy efficient dwellings (those rated EPC F or G) on average over 2017-19 (SAP 2012, RdSAP v9.92). Island and rural local authorities tended to have lower than average proportions of B or C rated dwellings with Shetland Islands (8%), Na h-Eileanan Siar (9%) and Orkney Islands (15%) having the lowest.
- Availability of the supply chain for installation, concerns over applicability of PAS 2035, availability of maintenance with reports of long times for maintenance where no local contractors are available.
    - Island and rural communities can face supply and access issues due to the remoteness of their locations. The flow of goods and services may be restricted or impacted, sometimes at short notice. Further, the smaller population of these locations may mean a reduced local skills based, placing greater demand on qualified work such as the installation of low and zero carbon heating systems. We also recognise the opportunities that employment in low and zero emissions could present on islands, providing essential job opportunities.
- Longer project realisation times recognising constraints on accommodation for incoming workers as well as weather and travel disruption to remote areas.
- Infrastructure and resilience.
    - Our islands face particular challenges around distance, topography, weather and connectivity. These can lead to infrastructural and logistical challenges and costs (such as in regards to electric grid connectivity and access to remote locations) not encountered by other communities, and require additional support to ensure ongoing resilience.
    - Resilience of electrified heat systems in areas with no national electricity grid connection was raised
    - Potential for more remote areas to have higher incidences of single phase electricity distribution network which may impact technology selection in remote areas.
    - Concern over resilience level of remote areas that are reliant on one fuel for heating – where there has been traditionally a mix of fuels available
- Ongoing community representation and engagement was considered a key requirement to develop trust and buy in for Strategy actions.

- Our island communities are unique and face challenges specific to their location. To address specific contextual island issues continuing engagement and reflection is required. Ongoing appropriate representation and engagement is central to ensuring our transition to net zero supports and benefits islands communities by providing a dialogue to shape and direct delivery.

Step Four – Assessment

47. The above evidence gathering and consultation constituted a screening exercise to identify if an Island Communities Impact Assessment would be required. As it could be determined that there were a number of unique impacts, potential barriers, and wider impacts which would have a direct effect on Island Communities, it was therefore decided **that a full Island Communities Impact Assessment should be undertaken**.

48. The following section assesses the extent to which the Heat in Buildings Strategy can be delivered in such a manner as to improve or mitigate, for island communities, the outcomes resulting from it.

B) The ICIA (Section 8 Assessment)

49. The Islands (Scotland) Act 2018 requires an ICIA to:

- describe the likely significantly different effect of the legislation;
- assess the extent to which the Scottish Ministers consider that the legislation can be developed in such a manner as to improve or mitigate, for island communities, the outcomes resulting from the legislation; and
- set out the financial implications of steps taken under this subsection to mitigate, for island communities, the outcomes resulting from the legislation.

The following table sets out the key issues in this impact assessment and the mitigations in place.

Issue	**Key mitigation**
Potential for higher installation and operational costs for low and heating systems, recognising impact of accommodation constraints, weather and travel disruption) and availability of appropriate funding and finance which takes account of these challenges	• Many of our existing Scottish Government Heat in Buildings Delivery Programmes such as Warmer Homes Scotland, Area Based Schemes, Home Energy Scotland Loans, and CARES provide advice and support to island households and communities. (**See paragraph 32**) • Where not already in place, and as part of our forthcoming Islands Energy Strategy, we will review the evidence base and options for an ‘islands uplift’ across our delivery programmes as part of our commitment to

	provide additional support for rural and island homes for heat and energy efficiency. • We will ensure that the remit of the forthcoming Green Heat Finance Taskforce will consider challenges to securing investment across islands communities. • We will recognise the additional time taken to develop projects in islands settings and ensure that this is given consideration in project and financial planning.
Higher heating costs and high levels of fuel poverty	• We commit to ensuring that supporting those least able to pay remains a strategic priority for the allocation of capital funding during this Parliamentary term, of which £465 million will be provided to schemes targeted at fuel poverty. • As set out in the Strategy, we will maintain our 'fabric first' approach with energy efficiency measures being identified as a strategic, no regrets, technology to help support ongoing reduction in energy demand across Scotland's building stock. Our Strategy sets out the ambition for all fuel poor households to benefit from an energy efficiency rating equivalent to EPC C by 2030 and equivalent to EPC B by 2040. • As set out in the Strategy, where the actions within the Strategy have the potential to impact on fuel poverty we will undertake an assessment to understand what those impacts will be. We will only take forward actions where they are found to have no detrimental impact on fuel poverty rates, unless additional mitigating measures can also be put in place. To do this, we will be guided by the 8 principles outlined within the strategy (see: **Annex F**). • We are establishing a statutory Scottish Fuel Poverty Advisory Panel to undertake the statutory duties to monitor, advise on and challenge our progress on ending fuel poverty, and to advise on the impacts of actions by others on fuel poverty and extreme fuel poverty across Scotland. • We will ensure ongoing regard for The National Islands Plan (Objective 5 - to reduce levels of fuel poverty; and Objective 9 - work towards creating net zero emission islands and providing global climate change leadership). • As set out in the Strategy we will work with the Energy Consumers Commission, Consumer Scotland and a range of Scottish consumer representative organisations to ensure that issues of consumer detriment are identified and addressed, focussing on consumer

	understanding, accessibility, costs, redress, and support for vulnerable consumers. • We will continue to press the UK Government to rebalance prices across electricity and gas to better incentivise take up of zero emissions heat and help ensure a just and fair distribution of costs.
Whole house retrofit and the suitability of standard energy efficiency measures and requirements for traditionally constructed buildings	• We will ensure that islands communities have access to the range of guidance provided by Historic Environment Scotland to help with potential options for the installation of micro-renewables technologies, energy efficiency measures and climate change adaptations in listed buildings, traditional homes and buildings in conservation areas. • We will ensure that forthcoming Scottish Government energy efficiency regulations will include exemptions as appropriate based on cost effectiveness and technical feasibility, and will be subject to further consultation. • We believe that there is broad consensus about moving to a whole house approach to retrofit – as set out in PAS 2035 – most people agree it is a better way to improve people's homes. However we recognise that Scottish stakeholders remain concerned about some aspects of the PAS 2035 standard and the changes to the technical standards for energy efficiency measures (PAS 2030). The Scottish Government agrees that the new standards don't properly reflect differences in climate, geography and construction type in Scotland. In response and as proposed by SG officials, BSI has agreed that it would be helpful to engage with Scottish stakeholders. They have agreed in principle to set up a separate technical sub-group of the BSI Retrofit Standards Task Group for Scotland. • We have also proposed holding a workshop with members of the BSI Retrofit Standards Task Group during November. We have asked Area Based Schemes partners to help identify the evidence for costs/benefits in terms of Scottish build types and specific aspects of the new standards (e.g. cold bridging or removal of gas boxes for EWI installations). • We plan to publish our Quality Assurance Policy Statement later in 2021 outlining our requirements for QA including quality marks, standards, skills and consumer protection for heat and energy efficiency installation work.

	• We are in discussion with TrustMark about setting up a separate pathway that reflects the requirements of Scottish Government schemes. Similar pathways exist for the UK Government managed schemes in England. In principle this would also enable some adjustment to how scheme providers apply PAS 2035 in Scotland.
Availability of the required level of skilled supply chain for installation, and maintenance for low and zero emissions heat	• As set out in the Strategy we will develop a new 'Heat in Buildings Supply Chain Delivery Plan' by Summer 2022, which will Include a specific focus on developing local supply chains, attracting inward investment, and securing local jobs, training and skills, particularly in our islands and remote communities. • The Climate Emergency Skills Action Plan (CESAP), published in December 2020 identifies construction, including building retrofit as a priority area for the net zero transition, and proposes immediate and longer-term actions to support people to reskill, retrain and access the growing number of good, green jobs. We will continue to drive delivery of skills and jobs through the CESAP delivery, including the new Green Jobs Workforce Academy and the Green Jobs Skills Hub and ensure that this work identifies islands challenges in relation to skills and jobs as a key area of focus.
Consideration of local infrastructure in the roll out of low and zero emissions heat including availability of national electricity grid and resilience	• We will consider local infrastructure in the roll out of actions in the Strategy. Our CARES programme has supported some of Scotland's most remote and rural off-grid communities to upgrade their energy systems, making them more resilient and sustainable for the future. We have made £3M available this financial year against a range of projects and will commit to the development of a further forthcoming call under CARES to support the ongoing journey of these remote communities towards net zero. • As set out in our Heat in Buildings Strategy, we will continue our Heat Electrification Strategic Partnership with Scotland's electricity network operators, and use this forum to ensure that the upgrades required are delivered when and where they are needed and that the Local Heat and Energy Efficiency Strategies (LHEES) framework can inform this. This will include supply to islands and rural communities. • We will ensure the planning system enables and encourages the deployment of low and zero emissions heating, including the networks they require. We will make it a requirement for Local Development Plans to take into account LHEES and identify new and existing heat networks and associated ancillary infrastructure.

	• We continue to work with Ofgem in line with the jointly agreed principles for development of Scotland's electricity networks to ensure that Scottish Government targets and ambitions as set out in the Strategy are fully considered as part of decisions on network investment.
Ongoing community engagement	• Our national CARES programme will continue to support communities to work together to address, and champion, heat decarbonisation. Through this we are working to understand further the models and solutions most appropriate for communities in Scotland. • Local Heat & Energy Efficiency Strategies (LHEES) will provide a long-term framework for taking an area-based approach to planning and delivery of the heat transition. LHEES will enable a locally-tailored approach, taking into account the unique characteristics of islands. These Strategies also form a basis for local public engagement and will be in place for all local authority areas by the end of 2023. • We will continue to draw advice from stakeholders and advisors through a variety of channels, building on our productive Heat Decarbonisation External Advisory Group. This group will be adapted as part of our revised governance arrangements for the Heat in Buildings Strategy and we will ensure that remote, islands and rural communities are represented in this process. • We will ensure that challenges and opportunities in different communities across Scotland are recognised through the development of our Public Engagement Strategy for Heat in Buildings. The forthcoming National Public Energy Agency will provide leadership and coordination to deliver on our heat decarbonisation targets, which will include public engagement across Scotland to ensure that people are aware of and understand the changes that are necessary, and can access the right support at the right time to meet their needs. The Public Engagement Strategy will provide the framework to guide how the Agency can best achieve this in practice. Further details will be set out in due course.

Supporting positive impacts

The mitigating actions outlined above will not only help address identified issues and challenges, but enhance the positive impacts heat decarbonisation will bring to islands communities including the following:

• Abundant renewable energy resources (ability to generate heat locally), • Opportunities for engaged and motivated communities to be part of the heat transition, • Enhanced island community engagement and sense of community.	• Through CARES we will continue to support and champion the opportunities for communities to engage with heat decarbonisation project models. • Through the Islands Energy Strategy we will support opportunities for island communities to engage with the heat transition in a direct and meaningful way. • We will deliver against the commitment in the 2021-22 PfG to support Carbon Neutral Islands (including pilots for islands to run on 100% renewable energy, with at least 6 islands over this Parliament to enabled to become fully carbon neutral by 2040, as forerunners to a net zero Scotland by 2045).
• Opportunities for more niche technologies (such as water source heat pumps and heat networks for small communities).	• Overall we recognise some properties may be more constrained in terms of technology options available, limited by location and property type, proximity to the gas network, impact on the fabric of historic buildings, space constraints, and capacity of the electricity grid. In 2022 we will set out our position on the role of bioenergy for islands and remote areas.
• Opportunities for the local supply chain, • Harness the opportunity for development of skills and jobs within island communities to deliver change.	• We will publish a Heat in Buildings Supply Chain Delivery Plan by Summer 2022 and will co-produce this with industry, ensuring it sets out the opportunities for local islands supply chains.
• Opportunities to promote renewable tourism and local business.	• Will we will work with the Scottish Government Islands Team to ensure that renewable and heat decarbonisation projects are linked in with opportunities to promote local business and projects as part wider tourism strategies and plans.
• Promoting resilience in islands building stock (by improving the fabric) for future generations, • Opportunities for increased thermal comfort and health.	• We will continue to prioritise action on energy efficiency to deliver regulations to support the installation of energy efficiency first improvements in all buildings (e.g. roof, windows, wall and floor insulation, both the retrofit of existing buildings and increased energy performance of new buildings.
• protection of the unique natural environment of Scotland's islands and	• We will continue to deliver on the actions set out in the Strategy in order to achieve our ambition to

rural communities through climate change mitigation.	remove emissions from the way we heat our homes and buildings.

Financial implications of the transition to zero emissions heat for Scotland

50. We estimate that the total building investment required to transform all homes and buildings in Scotland to zero emissions by 2045 is likely to be in excess of £33 billion.

51. The Scottish Government will kick start this transition with at least £1.8 billion of capital funding during the next five years. We will expand existing delivery programmes to focus on accelerating deployment over the next 5 years against the following four strategic priorities: (1) those least able to pay, (2) investing in strategic technologies in low or no regrets areas, (3) showcasing Net Zero Leadership and share learning through early adoption in key areas of focus and (4) investing in innovation and demonstration to drive forward competitive advantage. We know that this cost cannot be borne by the public sector alone and are establishing a new Green Heat Finance Taskforce to identify innovative ways to maximise private sector investment and find new ways to help individuals and organisations spread the upfront cost of investing and making their properties warmer, greener and more efficient.

52. Costs for mitigating actions are outlined below where known. However for the islands uplift, commitment to enhancing support available for rural and remote households and future CARES programme calls will be developed as part of the development of the Islands Energy Strategy 2022.

Conclusion

53. In the lead up to publication of the Heat in Buildings Strategy, the Scottish Government consulted extensively - on the draft Strategy through public consultation and through continued engagement with key stakeholders including in the Heat Decarbonisation External Advisory Group.

54. Desktop evidence gathering, consultation with island communities, local authorities and other relevant stakeholders have provided an understanding of the unique island issues in relation to the Strategy and the potential impacts the Strategy may have on these communities.

55. Specifically, the Scottish Government will undertake the mitigating actions outlined within this ICIA, and in noting the high-level nature of the Heat in Buildings Strategy, will **require subsequent delivery programmes and regulatory legislation to have regard to island communities and undertake additional ICIAs as relevant** under the Islands (Scotland) Act 2018.

Annex A

Summary of evidence from data gathering exercise

The cost of remoteness – reflecting higher living costs in remote rural Scotland when measuring fuel poverty[14]

1. The Fuel Poverty (Targets, Definitions and Strategy) (Scotland Act) 2019 adopted 90% of Minimum Income Standard (MIS), excluding housing, childcare, council tax and domestic fuel costs, as the benchmark for determining whether, a household would have insufficient remaining net income, after deducting these costs and any benefits received for a care need or disability , to maintain an acceptable standard of living. The Act also provided that the remaining net income required would be adjusted in light of additional costs for households in remote rural areas, remote towns and island areas.

2. Loughborough University was commissioned to calculate these additional costs and to estimate the amount that should be added to the equivalent UK 90% of MIS in remote rural, remote small town and island areas in Scotland for fuel poverty purposes, with a distinct uplift for island areas.

3. For fuel poverty purposes, additional minimum living costs for households in remote rural Scotland typically add 15-30% to a household budget, compared to urban areas of the UK. These comparisons are on the basis of MIS with notional costs deducted for housing, council tax and water rates, fuel and childcare since these elements are not required in the fuel poverty definition.

4. Percentage additional MIS costs in remote rural Scotland, 2021 (Table 16, page 37): note only the highlighted average uplifts will be applied in the calculation of fuel poverty for 3 broad household types, but the table also shows how these averages were derived from single and couple households without children.

Mainland	Mainland	Island
Couple+2	16.2%	15.5%
Family with children, rounded uplift (based on couple+2 case)	**16%**	**15%**
Single working age	20.0%	13.6%
Couple working age	20.6%	13.8%
Working age rounded uplift (based on average of single and couple)	**20%**	**14%**
Single pensioner	30.5%	37.1%
Couple pensioner	20.7%	29.1%
Pensioner rounded uplift (based on average of single and couple)	**26%**	**33%**

5. The report provides details of additional costs by category and for each of the different household types. It also summarises the percentage uplift required for remote rural, remote small town and island areas for fuel poverty purposes.

[14] **The cost of remoteness - reflecting higher living costs in remote rural Scotland when measuring fuel poverty: research report - gov.scot (www.gov.scot)** – Scottish Government, September 2021

6. Significant additional costs have been identified across a range of spending categories, including food, clothing, household goods and holidays. However, most of these are relatively small compared to the dominant extra cost identified, the cost of travel.

A Minimum Income Standard for Remote Rural Scotland: A Policy Update[15]

7. Highland and Islands Enterprise (HIE), along with Scottish Enterprise (SE) and the Rural and Islands Housing Association Forum (RIHAF), commissioned Loughborough University's Centre for Research in Social Policy to update research into a minimum income standard for remote rural Scotland. The updated report was published in 2016 and some of the key findings were:

    - In 2016 it was estimated a tenth to a third more household spending was required in remote rural Scotland to a achieve a minimum acceptable standard of living, as compared to urban areas in the UK;
    - The 2016 update report showed the gap between rural and urban areas had reduced slightly, from between 10% and 40%, since the previous report in 2013.
    - The cost of heating in remote rural Scotland was far higher than in other parts of the UK due to restricted fuel choice (i.e. lack of access to mains gas), low thermal efficiency, climate and in some cases tariff levels. For example comparing the least extreme case in remote rural Scotland – someone living in social housing in a mainland rural town – with the equivalent in England, there is a high premium, with a single person paying £22 rather than £12 a week for domestic fuel;
    - There appeared to be limited competition between energy providers, impacting tariffs. This was partly due to the incidence of metering systems, that cannot necessarily or easily be switched to another company;
    - Furthermore, remote rural communities were subject to a premium related to additional distribution costs;
    - The climate of remote rural Scotland adds to heating costs, particularly in the Northern Isles where wind chill and rainfall tend to be greater;
    - Low-cost and standardised methods of improving energy efficiency (such as cavity wall and loft insulation) are often not appropriate for homes in remote rural Scotland e.g. because they have not been built with cavity walls and roof spaces are often part of the living area;
    - Options for improving such homes (such as external wall cladding) tend to be significantly more expensive;
    - Furthermore, the diversity of construction limits the potential for economies of scale, while there is often a shortage of local suppliers to complete works.

[15] **A Minimum Income Standard for Remote Rural Scotland: A Policy Update**, Loughborough University's Centre for Research in Social Policy and Highland and Islands Enterprise (HIE), October 2016.

Broad Evidence Review

8. The Scottish Government commissioned an additional Broad Evidence review on implications of the strategy on inequality on domestic consumers. During the evidence review process some information relevant to this ICIA was found and a summary of these findings are as follows (these may not appear in the final report owing to the broader nature of the final research publication):

- **Heating Costs**
  - Rural and island households spend statistically significantly more on heating than their urban equivalents (Baker et al., 2016).

  - In a study in the Western Isles, the cost of heating was found to be significantly higher than on the UK mainland, indicating that participants paid a premium for their remoteness (Sherriff et al 2019).

  - Baker et al. (2016) report higher than average costs for households in Orkney using solid fuels as their main space heating type, and lower than average costs for those using air and air to water source heat pumps.

- **Fuel Poverty**
  - Between 2018 and 2019, rates of fuel poverty increased in remote rural areas (from 33% to 43%), increasing the gap when comparing overall urban (24%) to overall rural areas (29%) (Scottish House Conditions Survey 2019).

  - In the period 2017-2019 (see table below), the fuel poverty rate varied from 13% in East Renfrewshire to 40% in Na h-Eileanan Siar compared to the average in Scotland of 24%. Seven local authorities had significantly higher fuel poverty rates than the national average, these were: Na h-Eileanan Siar (40%), Highland (33%), Argyll and Bute (32%), Moray (32%), Dundee City (31%), Shetland Islands (31%) and Orkney Islands (31%). Five local authorities had significantly lower fuel poverty rates than the national average, these were: East Renfrewshire (13%), West Lothian (18%), Midlothian (19%), North Lanarkshire (20%) and City of Edinburgh (21%) (Scottish House Conditions Survey 2019).

  - In the same period (see table below), the extreme fuel poverty rate varied from 7% in East Renfrewshire to 24% in Na h-Eileanan Siar compared to the average in Scotland of 12% . Seven local authorities had significantly higher extreme fuel poverty rates than the national average, these were: Na h-Eileanan Siar (24%), Orkney Islands (22%), Shetland Islands (22%), Highland (22%), Argyll and Bute (19%), Moray (19%) and Perth and Kinross (18%). All of these local authorities also had a greater prevalence than average of lower energy efficient properties. Four local authorities had significantly lower extreme fuel poverty rates than the national average, these were: East Renfrewshire (7%), Midlothian (7%), North Lanarkshire (7%) and East Dunbartonshire (8%). Midlothian and North Lanarkshire have a higher prevalence of higher energy efficient homes compared

to the national average. East Renfrewshire and East Dunbartonshire have a similar prevalence of higher energy efficient homes compared to the national average (Scottish House Conditions Survey 2019).

- In the period 2017-2019, both the median fuel poverty gap and the median gap adjusted for 2015 prices were generally higher in island and rural local authorities:

Local authority	Fuel Poverty rate	Extreme Fuel Poverty rate	Fuel Poverty gap – median	Fuel Poverty gap – median (adjusted for 2015 prices)
Argyll and Bute	32%	19%	£1,100	£1,040
Highland	33%	22%	£1,260	£1,180
Na h-Eileanan Siar	40%	24%	£1,430	£1,350
North Ayrshire	28%	10%	£470	£460
Orkney Islands	31%	22%	£1,640	£1,580
Shetland Islands	31%	22%	£1,500	£1,420
Scotland	**24%**	**12%**	**£690**	**£650**

Table 1: Fuel poverty, extreme fuel poverty and fuel poverty gap data for island local authorities, 2017-19

- Households who are not income poor but do experience fuel poverty have a higher likelihood of living in rural areas, living in low energy efficiency properties and use electricity for their heating compared to fuel poor and income poor households and Scotland overall. (Scottish House Conditions Survey 2019).
- In fuel poverty study of Skye households, Baker et al. (2016) found anecdotal evidence of households self-limiting their energy use. In Orkney the found that 44% of households reported spending more than 10% of their income on their total energy costs, and 12% spending more than 20%.

- **Weather climate and impact on heating regimes**
  - Although research on energy use often focusses on winter as the heating season, one study that focused on households with electric heating in high-rise flats in Edinburgh exposed to severe weather conditions due to proximity to the North Sea, found that keeping warm in a cold home was a problem not just in winter but also in summer (De Haro & Koslowski, 2013). This finding may be relevant for heating requirements in island communities as they are exposed to the Atlantic Ocean and North Sea. Coping with the weather and the impact it has on rural living was mentioned in a fuel poverty study in Golspie by Baker et al. (2016).

- **Energy Performance of Housing Stock**
  - Island and rural local authorities generally had the highest proportion of the least energy efficient dwellings (those rated EPC F or G) on average over 2017-19 (SAP 2012, RdSAP v9.92). A total of eleven local authorities had rates above the national average (4%), with the highest being Na h-Eileanan Siar (18%), Orkney Islands (17%), Dumfries & Galloway (15%), Shetland Islands (14%). These local authorities also had the lowest proportions of properties in the highest efficiency bands. Island and rural local authorities tended to have lower than average proportions of B or C rated dwellings with Shetland Islands (8%), Na h-Eileanan Siar (9%) and Orkney Islands (15%) having the lowest.

  - In contrast for urban local authorities, Glasgow City (1%), Aberdeen City (1%), Renfrewshire (2%), South Ayrshire (2%) and Fife (3%) had the lowest average shares of F or G rated dwellings and were statistically different from the national average. Correspondingly, Glasgow City and Renfrewshire also had higher than average proportions of B or C rated dwellings. West Lothian had the highest proportion of B or C rated dwellings (61%) compared to 45% in Scotland overall (Scottish House Conditions Survey 2019).

  - Primary heating fuel is a key determinant of the energy efficiency of the dwelling. Properties heated by mains gas have an average rating of 67.5 and 50% are in band C or better. Dwellings heated by other fuels (including electric and oil) have considerably lower ratings. The average energy efficiency rating for oil heated properties is 49.2 (making the average dwelling in this group E rated) and only 8% are in band C or better.

  - Proximity to the gas grid has a similar effect on the energy efficiency rating (average SAP rating 66.3 for dwellings near the gas grid, higher than the 58.1 for other dwellings). Rural and Island properties are less likely to be on the gas grid.
  - As dwelling characteristics associated with lower energy efficiency are disproportionately represented in rural areas, the average energy efficiency profile of rural properties is lower than that for urban: mean SAP 2012 rating is 66.7 for dwellings in urban areas, higher than the 56.2 for dwellings in rural areas.
  - 17% of rural households live in EER Band FG (Scottish House Condition Survey 2019) compared to 2% of urban households.

- **Community Participation**
  - A higher proportion of people who live in remote rural areas either feel ‘very strongly’ that they belong to their immediate neighbourhood than either people in accessible rural areas or the rest of Scotland (Scottish Household Survey 2019).
  - In rural Scotland, a higher proportion of people give up their time to help as an organiser or a volunteer than in the rest of Scotland. Around 32% compared to 25% – Scottish Household Survey 2019

- Rates of formal volunteering increase with degree of rurality and there are higher number of registered charities per head in rural areas (cited in Markantoni & Woolvin, 2015).

- **Skills and supply chain**
  - As of 28 October 2021 the Scottish Government is aware of four companies based in the Highlands and Islands who are currently approved to carry out insulation work to the BSI retrofit standards.
  - These companies are certified to install insulation as per the British Standards Institution (BSI) Publically Available Specification (PAS) 2030. There are a larger number of companies accredited to BSI standards to install insulation that operate in the Highlands and Islands. For our example, our national fuel poverty scheme, Warmer Homes Scotland has 12 approved sub-contractors covering the Highlands and Islands.

Small Islands Energy System Overview[16]

9. Highlands and Islands Enterprise commissioned research to look at the status of energy systems across 49 of the region's islands. It provides an overview of island energy generation and demand; issues relating to the islanders such as proximity to services, population, security of supply and fuel poverty; insights into the electrical infrastructure; and opportunities to address some of the challenges facing island energy systems.

10. Notable findings include:
    - A large proportion of the island properties meet their heat demand via direct electric, electric storage heating or oil which pushes energy costs up.
    - The additional electricity demand required for meeting heat loads, at a higher cost in the North of Scotland, than the rest of the UK, increase the likelihood of islanders experience fuel poverty.
    - The building stock was found to be generally EPC D or lower, both of which suggests that energy efficiency projects would be beneficial to all island communities.
    - Low and zero emission heating projects could help tackle fuel poverty, if they can be achieved at a lower unit cost of heat than the existing higher carbon options (e.g. oil).
    - Energy system solutions should be tailored in a way that fits not only with the energy needs of the island but the ability for the community to facilitate, deliver and engage with it.
    - A standardised methodology could allow each island/community to establish their own energy system requirements, challenges to be tackled and the steps required to write a development plan.

[16] **Small Islands Energy System Overview**, HIE, April 2020.

- Decarbonising heat: High levels of energy demand and fuel poverty across the study islands can be viewed as an opportunity to promote efficiency upgrades as a low-cost improvement method. In addition, the energy demand could be supplied more efficiently, at a lower cost and carbon intensity if new, low carbon heating options (such as heat pumps) are promoted.

Annex B

List of organisational respondents to the draft Heat in Buildings Strategy consultation Islands question

Aberdeenshire Council
Age Scotland
Architects Climate Action Network (ACAN) Scotland
Argyll and Bute Council
Balcas Timber Limited
Barra and Vatersay Community Ltd
Calor Gas
Changeworks
Citizens Advice Scotland
Comhairle Nan Eilean Siar
Community Energy Scotland
Connected Response Ltd
E.ON UK
East Lothian Council
Energy Action Scotland
Energy Saving Trust
European Marine Energy Centre Ltd (EMEC)
Existing Homes Alliance Scotland
Federation of Small Businesses
Fife Council
Greenspace Scotland
Heat Pump Association
Hebridean Housing Partnership
Highlands and Islands Enterprise
Integrated Environmental Solutions Ltd (IES)
Iona Renewables
Isle of Luing Community Trust
Keep Scotland Beautiful
Kingspan Insulation Ltd
Knoydart Renewables Limited
Link Group
Lochalsh & Skye Housing Association
MCS Charitable Foundation and MCS (Service Company) LTD
National Insulation Association (NIA)
NeoTerra Energy
North Lanarkshire Council
Ombudsman Services
Orkney Renewable Energy Forum
Perth & Kinross Council
Richmonds Plumbing & Heating Merchants Ltd
Royal Town Planning Institute
Rural and Islands Housing Association Forum

Scottish Borders Council
Scottish Enterprise
Scottish Federation of Housing Associations
Scottish Government Regional Network
Scottish Land and Estates
Scottish Power
Scottish Renewables
Shetland Heat Energy and Power Ltd
Shetland Islands Council
SOSE
South Lanarkshire Council
SPEN
Star Renewable Energy
Stirling Tenants Assembly
Sunamp Ltd
The National Trust for Scotland
The Royal Incorporation of Architects in Scotland (RIAS)
Tighean Innse Gall
Troup Bywaters + Anders
TrustMark (2005) Limited
Tweeddale Energy Efficiency Supply Chain Development Project c/o Southern Upland Partnership (SUP)
Warmworks Scotland
West Dunbartonshire Council
West Lothian Council

Annex C

Stakeholder feedback through draft Heat In Buildings Strategy written responses - summary

1. It was noted that island and other remote communities typically have high levels of **fuel poverty**. A high proportion of homes were reported to be detached and traditionally constructed. Many properties were suggested to be in a poor state of repair, to have minimal insulation, inefficient heating and poor energy efficiency ratings, to be off-gas grid and not likely to participate in heat networks.

2. It was also noted that some low and zero emission heat alternatives may only be suited to those homes that have already had fabric repairs and upgrades to insulation, and the importance of adopting a **whole house approach** to improved energy efficiency was highlighted.

3. Higher **construction costs and limited supply chains** in island and remote areas were reported to increase the cost of installing energy efficiency measures and higher costs for repairs and maintenance were also highlighted.

4. The **importance of early engagement and of bottom-up engagement** were highlighted - listening to rural and island communities and engaging in genuine partnership working. In contrast, some recent experience was felt to reflect a more directive, top-down approach. Some respondents expressed a feeling that geographically distant decision makers have poor understanding of local issues, or that island proofing may be ignored in a centralised policy delivery. Using local advice organisations for tailored engagement with their own communities was proposed. Also in relation to working with communities, continued availability of and work through CARES was requested.

Annex D

List of attendees at the draft Heat in Buildings Strategy consultation Islands workshop

BEIS
Changeworks - Local Energy Scotland
Citizens Advice Scotland
Climate Change Fund
Community Energy Scotland (Orkney)
EMEC Orkney
Energy Mutual Ltd
Energy Saving Trust
Fair Isle Electricity Company
Highlands & Islands Enterprise
Hjatland Housing association
Isle of Skye Advice Service
Isle of Skye Council
Lerwick District Heating Scheme Consultant
Lewis Citizen's Advice Bureau
Local Energy Scotland
Orkney Council - Affordable Warmth
Scotland Excel
Scottish and Southern Electricity Networks
Scottish Energy Consumers Commission
Shapinsay Development Trust
Shetland Heat Energy and Power
Shetland Islands Council
West Highland Housing Association

Annex E

Stakeholder feedback through Heat In Buildings Islands Workshop - summary

1. On-line consultation events on the draft Heat in Buildings Strategy were held with 38 island-specific stakeholders, including representatives from Orkney Council, Local Energy Scotland, Highlands & Islands Enterprise, Lewis Citizen's Advice Bureau, EMEC Orkney, Isle of Skye Advice Service, Fair Isle Electricity Company, Foula Electricity, and West Highland Housing Association.

2. Specific questions asked at the workshop were:
    - Do you agree with the main areas for consideration in regards to potential impact to islands of the heat transition (i.e. electricity grid, buildings type, supply chain availability)?
    - Will the proposed solutions help to mitigate those impacts - are there others that can be taken forwards by us or other parties?
    - Are there any opportunities that the islands can capitalise on from the Heat in Buildings Strategy - how can these opportunities be supported?
    - How can we further engage island communities in the Heat transition?

3. Several **issues** were raised by attendees, broadly these spanned:

    - **Supply chain, skills and cost**
      - Getting skills and materials to the islands for installation and for maintenance (both costs and times due to islands locations and connectivity),
      - Limited accommodation provision for contractors,
      - Islands may not have adequate skills among local contractors (nuanced comments included: most training opportunities are only available on the mainland, local firms have been unable to tender for work as they are too small),
      - Fuel poverty rates on islands,
      - Resource is needed to develop local LHEES.

    - **Building Stock**
      - The diversity of the building stock on islands was presented as a specific challenge
      - SAP ratings were identified as challenging for islands (which in-turn relates to difficulties with EPC ratings and energy efficiency measures.

    - **Electricity Grid**
      - The capacity of island electricity networks could be problematic and not fit for purpose (for example a 1950s oil-fired power station is used on the Western Isles, and the many off-grid microgrids),
      - Seasonal peaks in heat demand (i.e. winter/tourist season).

    - **Consumer protection**
    - - Consumer protection and quality assurance may be harder to ensure for island communities.

- **Just Transition**
  - Potential concerns that islands communities may be ‘left behind’.

- **Financing**
  - Financial mechanisms can be challenging to navigate, especially if unique island contexts need to be considered.

4. In addition, proposed **solutions** to help mitigate any impacts we also highlighted by attendees:

   <u>Supply chain challenges:</u>
   - Targeted support for smaller companies/supply chain to access the market through enterprise agencies,
   - Ensure that installer accreditation and training is available on the islands (not just mainland),
   - Warmer Homes Scotland was highlighted as a key programme to showcase and exemplify good installations and might help others in the supply chain get involved.

   <u>Bespoke Islands energy planning</u>
   - Islands energy plans provide a clear opportunity for developing and delivering island-based solutions, with an opportunity to draw upon LHEES,
   - Islands could have alternative requirements or roll-out compared to the mainland, linked to local plans
   - Ensuring that islands are part of the ongoing public engagement
   - Potential further exploration of water source heat pumps and connections with existing island renewable energy generation as a way of lowering costs.

   <u>Financing</u>
   - A previous loan application process for Electric Vehicles was good and could be replicated to support costs of low and zero-carbon heating systems.

Annex F

Guiding principles to ensure alignment with fuel poverty objectives

1. We are committed to ensuring that poor energy efficiency is removed as a driver of fuel poverty. As such, improving the fabric of buildings will be central to how we decarbonise heat.

2. We recognise that heat decarbonisation is essential to address the climate emergency, and that in decarbonising our homes we must not make fuel poverty worse. We commit to delivering measures to help those in fuel poverty to manage their running costs. As such, it is essential that, whenever possible, measures that both promote decarbonisation and lower fuel costs are supported.

3. We will assess our heat in buildings capital delivery programmes for their impact on those households experiencing fuel poverty– both at installation and throughout their lifespan. This assessment should be proportionate to the expected impacts.

4. Where an intervention can lower running costs, fuel poor consumers should be targeted for support as soon as possible, including support for the up-front installation costs of these measures. Factors affecting the ability of consumers experiencing fuel poverty to take up these measures should be considered as part of this process, as should the provision of advice and support to ensure that households in fuel poverty derive the maximum benefit from new measures.

5. We will develop mitigation measures to be deployed across our capital funding programmes where there are demonstrable cost increases on those in or at risk of fuel poverty. Success of these measures should be regularly assessed and, if appropriate, these measures should be adjusted to better meet the needs of these households.

6. In cases when zero emissions heat interventions are assessed as likely to increase energy costs even after mitigation measures are put in place, government supported measures should be focused on consumers who are not at risk of fuel poverty.

7. In some cases, wider change will be needed for decarbonisation measures to become suitable for those in fuel poverty, including areas that are reserved to the UK Government. We will continue to urge the UK Government to take necessary action in reserved areas and will use the research and practical experience gained through our decarbonisation schemes to support us in building appropriate evidence and pushing for systemic improvements.

8. Communications should be presented in formats accessible to a wide range of consumers, taking into account differing circumstances and accessibility needs.

This publication is available at **www.gov.scot**

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