

Agenda – Climate Change, Environment, and Infrastructure Committee

Meeting Venue:	For further information contact:
Hybrid: Committee room 4 Tŷ Hywel and video Conference via Zoom	Marc Wyn Jones Committee Clerk
Meeting date: 5 October 2022	0300 200 6565
Meeting time: 09.30	SeneddClimate@senedd.wales

Private pre-meeting (09.15–09.30)

Public meeting (09.30–12.00)

1 Introductions, apologies, substitutions, and declarations of interest

(09.30)

2 Decarbonising the private housing sector – evidence session 1

(09.30–10.45)

(Pages 1 – 65)

Dr Donal Brown, Sustainability Director – Sustainable Design Collective Ltd

Rhiannon Hardiman, Change Maker, (Climate, Nature, Decarbonisation),

Office of the Future Generations Commissioner for Wales

Christopher Jofeh, Chair – Welsh Government’s Independent Implementation

Group on the Decarbonisation of Existing Housing

Attached Documents:

Research brief

Paper – Christopher Jofeh

Break (10.45–11.00)



3 Decarbonising the private housing sector – evidence session 2

(11.00–12.00)

(Pages 66 – 101)

Catherine May, Tyfu Tai Cymru Manager – Chartered Institute of Housing Cymru

Andy Regan, Mission Manager, A Sustainable Future mission – NESTA

Attached Documents:

Paper – Chartered Institute of Housing Cymru

Paper – NESTA

4 Papers to note

(12.00)

4.1 Scrutiny of the Environmental Protection (Single–use Plastic Products) (Wales) Bill

(Pages 102 – 103)

Attached Documents:

Letter from the Chair to Y Llywydd in relation to Committee scrutiny of the Environmental Protection (Single–use Plastic Products) (Wales) Bill

4.2 Environmental Protection (Single–use Plastic Products) (Wales) Bill

(Pages 104 – 134)

Attached Documents:

Letter from the Minister for Climate Change in relation to the Environmental Protection (Single–use Plastic Products) (Wales) Bill

Presentation: Plastic bags in Wales – WRAP

4.3 Digital connectivity

(Pages 135 – 141)

Attached Documents:

Welsh Government response to the Committee's report on digital connectivity – broadband

4.4 Interim environmental protection measures

(Page 142)

Attached Documents:

Letter from the Chair to Dr Nerys Llewelyn-Jones, Interim Environmental Protection Assessor for Wales in relation to the Committee's report on operation of the interim environmental protection measures

4.5 Inter-ministerial Group (IMG) for Housing, Local Government and Communities

(Page 143)

Attached Documents:

Letter from Minister for Finance and Local Government to the Chair in relation to the Inter-ministerial Group (IMG) for Housing, Local Government and Communities

4.6 The Feminist Scorecard 2022

(Pages 144 – 145)

Attached Documents:

Letter from Oxfam Cymru and Women's Equality Network (WEN) Wales to the Chair in relation to the Feminist Scorecard 2022

5 Motion under Standing Order 17.42 (vi) and (ix) to resolve to exclude the public from the remainder of today's meeting

(12.00)

Private meeting (12.00–12.30)

6 Decarbonising the private housing sector – consideration of evidence heard under items 2 and 3

**7 Consideration of the Committee's draft report on the Draft
Environmental Protection (Single-use Plastic Products) (Wales) Bill**

8 Consideration of the Committee's Forward Work Programme

(Pages 146 – 148)

Attached Documents:

Paper – Forward Work Programme

Document is Restricted

I am grateful to the Committee for inviting me to contribute to the consultation on this important topic.

The consultation website lists six topics that the Committee will consider. My evidence is organised below under those six headings. It begins with a short summary of the evidence that follows.

Christopher Jofeh

15 August 2022

<i>Contents</i>	<i>Page</i>
Summary	2
The current approach to decarbonising housing in the private rented and owner-occupied sectors in Wales, including the effectiveness of existing programmes and support for retrofit	3
The role of sector specific retrofit targets to help drive change	10
Actions the Welsh Government should take to progress a programme of retrofit for these sectors in the short, medium and long term	14
The key challenges of delivering a programme of retrofit within these sectors, including financial, practical and behavioural, and action required from the Welsh Government (and its partners) to overcome them	23
How the right balance can be struck between influencing/incentivising homeowners and private sector landlords to retrofit their properties and regulating to increase standards to drive progress	30
How effective the Welsh Government is influencing decisions on reserved matters to support decarbonisation of these sectors	33

Summary

1. Welsh Government's current approach to decarbonising housing in the private rented and owner-occupied sectors in Wales is not effective.
2. Wales does need sector specific retrofit targets to help drive change. The use of EPCs for setting targets and measuring the progress of decarbonisation is not helpful – we need new metrics and targets that are aligned with the goal of Net Zero.
3. There are many actions that Welsh Government should take to progress a programme of retrofit for these sectors in the short, medium and long term. Some can and should be started immediately; work will be needed to determine what further actions are needed and this should begin immediately.
4. Some of the key challenges to delivering a programme of retrofit in the private rented and owner-occupied sectors in Wales are Westminster-based and there is little that Welsh Government can do to overcome them. But how Welsh Government operates is itself a blocker and internal change is required. Welsh Government is not effectively held to account and this needs to be improved.
5. To ask about striking the right balance between influencing/incentivising and regulating homeowners and private sector landlords to retrofit their properties is to miss a more fundamental point. What is needed is a systems approach that is based on an evidence-based framework for designing and delivering interventions to change behaviours at the individual, organisational, community and population levels.
6. Welsh Government cannot be effective in influencing decisions on reserved matters while Westminster does not listen.

The current approach to decarbonising housing in the private rented and owner-occupied sectors in Wales, including the effectiveness of existing programmes and support for retrofit

Homes in Wales are responsible for about one fifth of all Welsh greenhouse gas (GHG) emissions¹. That is why it is so important to decarbonise Welsh homes.

The table, image and graphs below contain some basic information about the Welsh housing stock, which are discussed in the sections that follow.

<i>Tenure of Welsh homes</i>				
Owner occupied	Privately rented	Rented from housing associations	Rented from local authorities	All dwellings (millions)
70%	14%	10%	6%	1.4

Data source: StatsWales (2020) Dwelling stock estimates by local authority and tenure

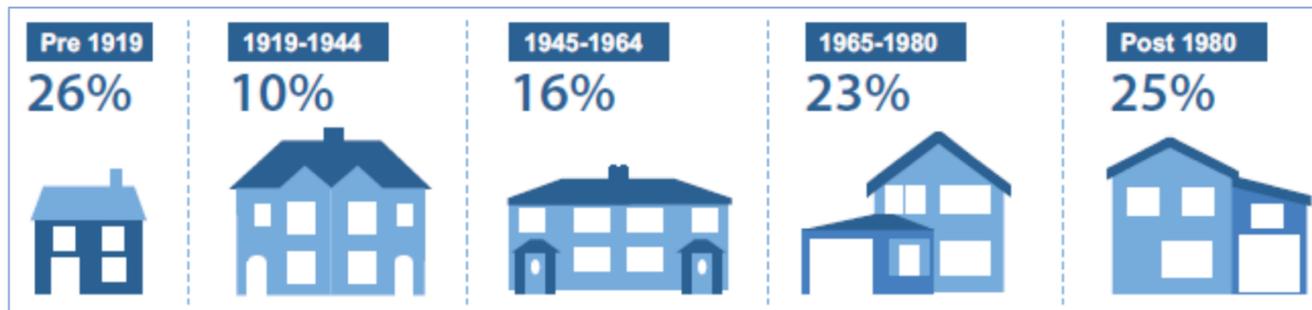
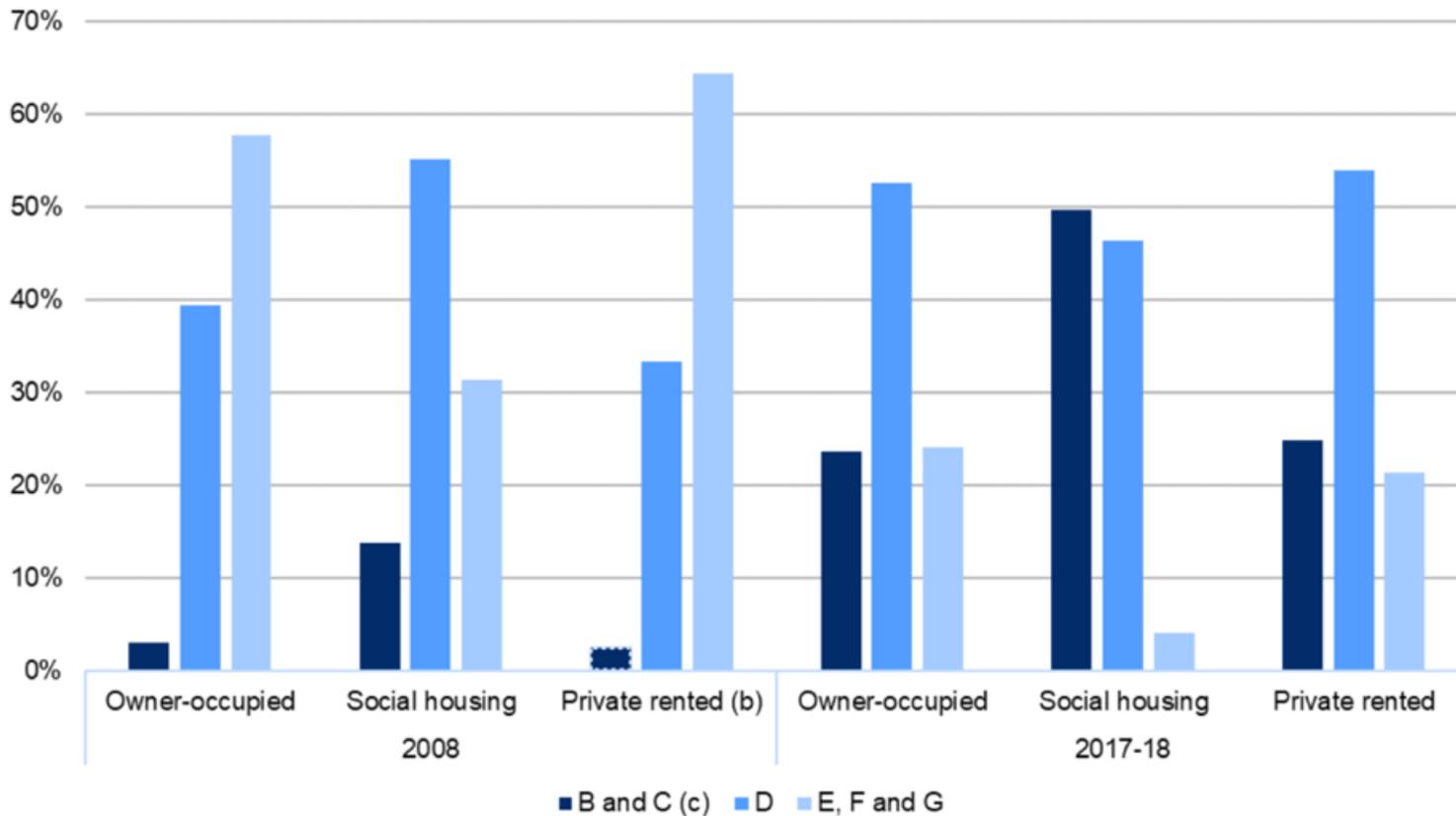


Image source: Welsh Housing Conditions Survey 2017-18: Headline Report

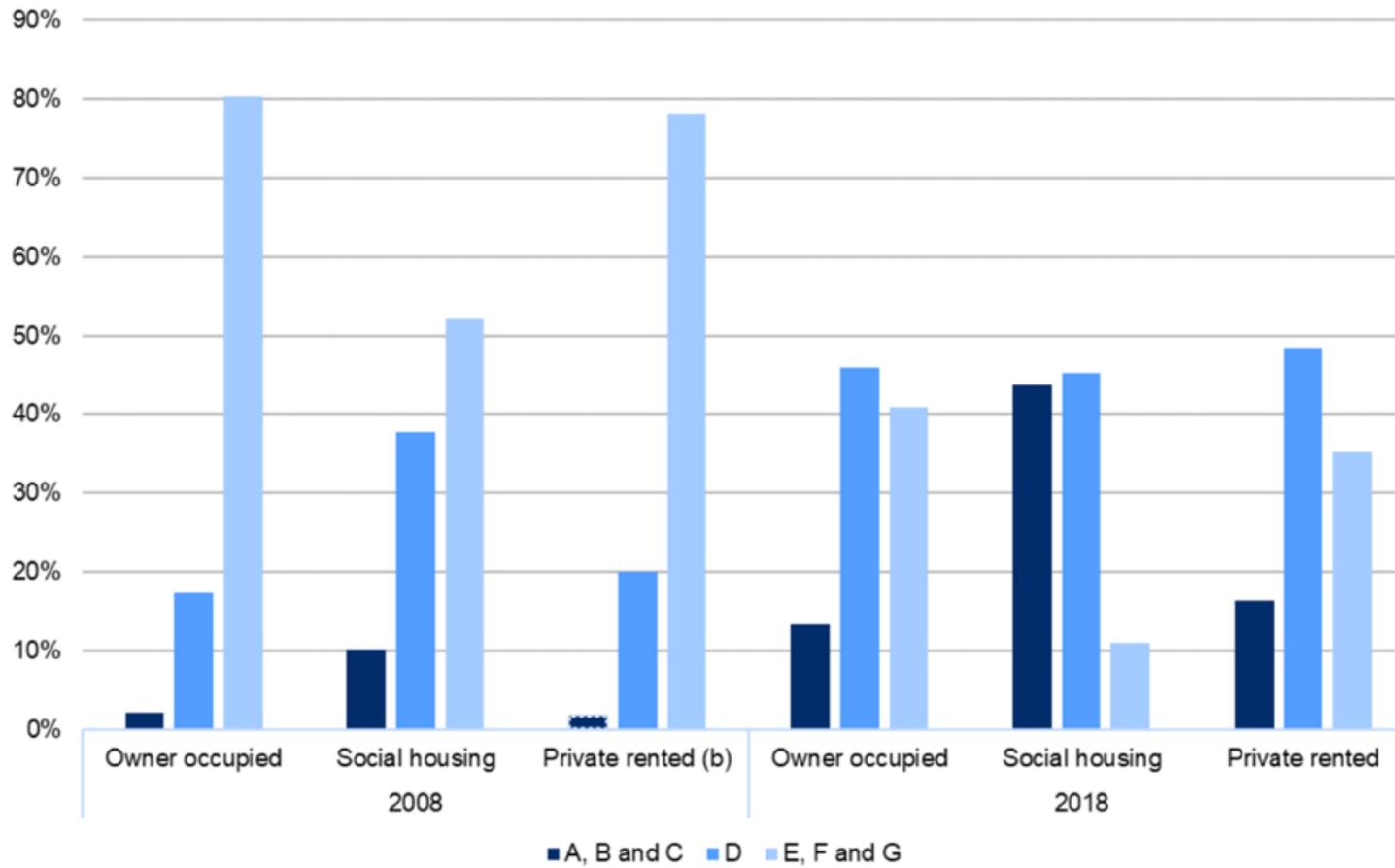
¹ National Atmospheric Emissions Inventory (2022) Devolved Administration GHG Inventory 1990-2020

Chart 2.2: EPC bands by tenure, Wales, 2008 and 2017-18 (a)



Downloaded from <https://gov.wales/sites/default/files/statistics-and-research/2019-10/welsh-housing-conditions-survey-energy-efficiency-dwellings-april-2017-march-2018-795.pdf>

Chart 2.7: Environmental Impact (EI) bands, by tenure, Wales, 2008 and 2017-18 (a)



Private Rented Sector

14% of Welsh homes are privately rented and, as the graphs above show, these are on average the lowest rated homes in Wales in terms of the cost of heating and environmental impact. The private rented sector generally has the oldest housing stock and a higher proportion of poor quality housing than other sectors (e.g. containing damp or other hazards).

Leasing Scheme Wales

Welsh Government has introduced its Leasing Scheme Wales² which offers financial incentives for property owners who lease their properties to the local authority for between 5 and 20 years. Where necessary, Welsh Government provides a grant of up to £5,000, to bring properties up to an agreed standard and/or to increase the EPC rating to level C. Additional grant funding of up to £25,000 is available for empty properties.

MEES

The energy efficiency of homes in the private rented sector in Wales is governed by the ‘MEES’ Regulations. This is shorthand for the Energy Efficiency (Private Rented Property) (England and Wales) Regulations 2015, which introduced a minimum energy efficiency standard of EPC E for the private rented sector. From 1 April 2018, private rented properties in scope of the MEES Regulations had to meet the minimum energy efficiency standard before they can be let on a new tenancy, unless a valid exemption has been registered. The MEES Regulations applied to all domestic properties in scope from 1 April 2020 and will apply to all non-domestic properties in scope from 1 April 2023.

Between September 2020 and January 2021 BEIS consulted on changes to the MEES Regulations. It seems likely that the proposed changes to the regulations will be announced at the Conservative party Conference this autumn, with a phased trajectory for achieving the improvements for new tenancies from 2025 and all tenancies from 2028. The new minimum energy efficiency standard is expected to be EPC C.

² <https://gov.wales/leasing-scheme-wales-guidance>

Rent Smart Wales

Welsh Government is constrained in what it can do until the proposed new regulations are announced. One thing it can and should do is to capture useful information about the construction of privately rented homes. All such homes must be registered every 5 years with Rent Smart Wales. A condition of registration and re-registration should be that adequate information about the construction of the homes is provided. This idea was proposed to Welsh Government before but was not acted on. Below, under *Actions the Welsh Government should take to progress a programme of retrofit for these sectors in the short, medium and long term*, I describe the importance for both policy and delivery of having comprehensive data about every home in Wales.

ORP

Requiring social landlords to decarbonise some privately rented homes in the second phase of the Optimised Retrofit Programme was discussed, but the idea was dropped. The third phase, currently being scoped, offers an opportunity to learn lessons from the involvement of private landlords. This opportunity should not be missed.

Conclusion

I am unaware of any other actions or plans by Welsh Government to decarbonise the private rented sector. This falls a long way short of what Welsh Government should be doing to progress a programme of retrofit for this sector. I list what it should be doing below under *Actions the Welsh Government should take to progress a programme of retrofit for these sectors in the short, medium and long term*.

Owner-Occupied Sector

70% of Welsh homes are owner-occupied and, as the graphs above show, these are on average worse than socially owned homes and better than privately rented homes in terms of the cost of heating and environmental impact.

I know of three schemes by Welsh Government aimed at owner occupiers, one of which supports work to improve a home's energy efficiency. Welsh Government is also sponsoring a study by the Welsh School of architecture into 'hard to treat' homes.

Owner-occupier loans

This is a Welsh Government funded scheme that offers interest free loans to help homeowners carry out repairs to their homes to make them safe, warm and secure. Both individuals and companies can apply for a loan however priority will be given to owner occupiers. The maximum loan amount will be £25,000 per property and providing there is no default on the loan, they will be interest free. Loans can be paid off by monthly instalments through to March 2029.

Leaseholder Support Scheme

This began on June 27. The new scheme will provide tailored, independent advice to leaseholders in fire safety affected homes. It is currently targeted at leaseholders who are owner occupiers and those who have become displaced.

Cost of Living Support

Welsh Government has announced that a £150 cost of living payment is to be made to all occupiers of properties that are in bands A, B, C and D, along with those that receive Council Tax Reduction (formerly known as council tax benefit), regardless of what band their property is in. The £150 is not a rebate on the council tax bill, but a payment to help with the rising cost of all utility bills.

Hard to treat homes

Welsh Government is sponsoring a study by the Welsh School of Architecture that seeks to establish whether the goals outlined in the Wellbeing of Future Generations (Wales) Act can be used to drive retrofit of the Welsh housing stock that

meets international decarbonisation targets, avoids worsening fuel poverty, and improves the quality of Welsh Housing more generally, such that it is fit for future generations.

Four case studies will explore the potential to retrofit different ‘hard to treat’ homes to meet decarbonisation targets, while improving the quality of the home more generally. The four case studies will have distinct characteristics that make them relevant for the wider Welsh housing stock, including dwelling type, form, density, context, condition and energy supply.

Conclusion

I am unaware of any other actions or plans by Welsh Government to decarbonise the owner-occupied sector. This falls a long way short of what Welsh Government should be doing to progress a programme of retrofit for this sector. I list what it should be doing below under *Actions the Welsh Government should take to progress a programme of retrofit for these sectors in the short, medium and long term.*

The role of sector specific retrofit targets to help drive change

The sustainability landscape has evolved significantly in the last decade and the risks of inadequate action are growing. The conventional targets we have used to date are no longer enough to drive the transformational change required.

The use of EPCs for setting targets and measuring progress of decarbonisation is not helpful, because EPCs were not designed for and are not well-suited for this.

As Wales has committed to achieving net zero, that should be the overarching target for homes, even though it is not practicable for every home to achieve that. The date by which homes should achieve net zero will influence costs, as I explained in my response to the Committee of 14th May 2022.

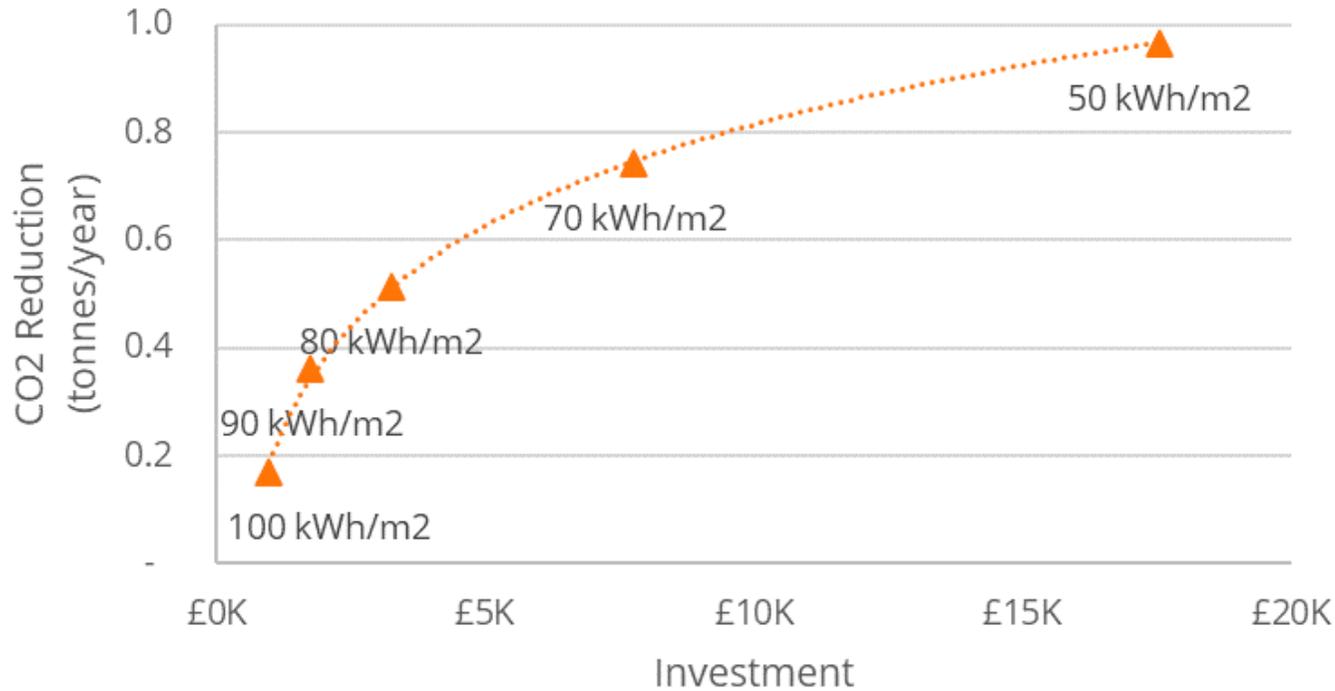
When considering what should be done to decarbonise a particular home, the first question is the extent to which its consumption of heat should be reduced. This is because space heating is responsible for almost 2/3 of all energy used in the home.

We need a minimum standard for fabric energy efficiency that ensures that homes can be heated efficiently and affordably and that mitigates the home's increased demand on the electrical supply system when the fuel used to heat the home switches from oil or gas to electricity.

The standard could be expressed in kWh/m²/year (the total amount of heat required to maintain a comfortable temperature in a home throughout the year, per square metre of the floor area of the home). An alternative approach, adopted by the Sustainable Energy Authority of Ireland, is to define a maximum rate of heat loss from the home in W/Km².

Setting the right target for heat loss needs careful consideration. There reaches a point at which it becomes disproportionately more expensive to reduce heat losses any further. I was involved in a 2020–2021 study for BEIS's City Decarbonisation Delivery Plan (CDDP) programme that investigated decarbonising homes in Leeds. We found that trying to achieve less than

about 70kWh/m²/year started to push up costs rapidly. The London Energy Transformation Initiative (LETI) found an inflexion point of about 50kWh/m²/year. The graph below shows the diminishing returns when investing in fabric improvement for one hard to decarbonise home.



Annual CO₂ reduction against investment of various retrofit packages for an example address

Source: Parity Projects (2022). Hard to decarbonise social homes.

The total costs clearly depend on the composition of the housing stock both in terms of built form (flats, detached houses, mid terrace, etc) and of construction details (for example cavity walls vs. solid walls vs. system-built walls, etc.), and on how the work is procured (individually or at scale as part of an area-based scheme).

For context, the average UK home's space heating demand is around 120kWh/m²/year, so based on the CDDP and LETI work we are looking at a reduction in annual space heating of between about 40% and 60%.

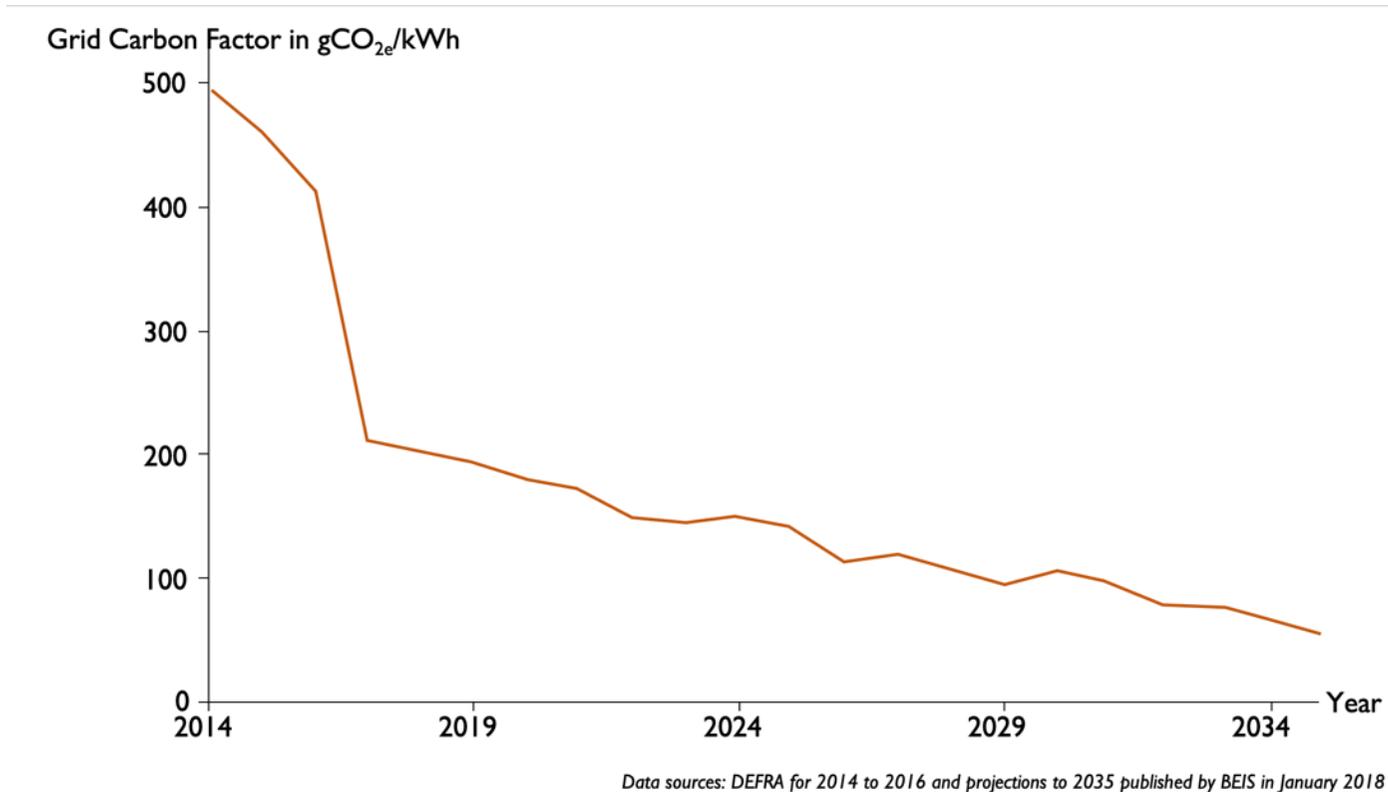
I recommend that a team be commissioned to analyse the thermal behaviour of the 14 archetypes of Welsh homes that the Welsh School of Architecture identified in earlier work, to identify the optimum %age reduction in space heating demand for each archetype. From that study it should be possible to set target reductions in annual space heating demand that are appropriate for different built forms. This information is needed urgently, so that homeowners who wish to act soon can proceed with confidence.

Once a home's space heating demand is reduced it is much easier to decarbonise the heat supply and for that home to achieve net zero by a certain date.

That suggests that the next target should be the date by which a home is net zero ready. So, for example, Welsh Government could announce the following four targets for privately-owned homes:

1. Every home to be properly surveyed and its Building Renovation Passport³ (BRP, also known as Building Renovation Plan or Home Logbook)) created by the end of this Senedd term in 2026. The BRP would define the home's pathways to zero (i.e. what measures are required, and in what order), with the goal of every home becoming net zero (or as close to it as practicable) when the electricity grid reaches a predetermined level of carbon intensity. The graph below shows historic and predicted average grid carbon intensity through to 2035.

³ <https://www.greenfinanceinstitute.co.uk/programmes/ceeb/building-renovation-plans/>



Historic and predicted average grid carbon intensity through to 2035

2. Space heating demand of every home to be no more than X-Y% of current demand by the end of the next Senedd term in 2031. (X and Y to be chosen based upon the analyses outlined above). Homes that already have acceptably low space heating demand would be exempt.
3. Every home to be net zero ready (or as close to it as practicable) by the end of the following Senedd term in 2036.
4. Every home to achieve net zero (or as close to it as practicable) by the end of the following Senedd term in 2041.

Actions the Welsh Government should take to progress a programme of retrofit for these sectors in the short, medium and long term

There are many actions that Welsh Government and others must take to ensure that owner-occupied and privately rented homes are decarbonised.

A fundamental action is for every home to be properly surveyed and its Building Renovation Passport created. This information is essential for both delivery and policy. Another is for Welsh government to have access to smart meter data about energy consumption in homes, so that progress can be monitored, lessons learned, and corrective action taken if necessary. More on both of those later.

Identification of necessary actions by Welsh Government and others needs to be undertaken, using a systems-based approach that is based on an evidence-based framework for designing and delivering interventions to change behaviours at the individual, organisational, community and population levels. I described such an approach in my response to the Committee on 14th May 2022, in a document entitled *Approach to homeowners.pdf*. The behaviours of owner-occupiers and private landlords are influenced by the actions of many other actors in the energy system, some of whom are listed in the table below.

Private homeowners are not a homogeneous group. A helpful way to segment them might be private landlords with mortgages, private landlords without mortgages, owner-occupiers with mortgages, owner-occupiers without mortgages; each of these will further subdivide according to ability to access finance for retrofit and other criteria. Welsh Government should urgently commission work to identify who needs to do what to create an environment in which every homeowner has the capability, opportunity and motivation to decarbonise their home. This would build on the behavioural work⁴ carried out under the guidance of the UCL Centre for Behaviour Change by the independent Decarbonisation Advisory Group that I chair, while preparing our policy advice⁵ to Welsh Government.

⁴ <https://ucl.scienceopen.com/hosted-document?doi=10.14324/111.444/000117.v1>.

⁵ <https://gov.wales/sites/default/files/publications/2019-07/independent-review-on-decarbonising-welsh-homes-report.pdf>

Some of the people and organizations in the broader energy system that directly or indirectly influence Welsh homeowners about residential decarbonisation

Banks and building societies	Green Construction Board	Professional trade bodies (e.g. Federation of Master Builders)
Builders	Green Finance Institute	Public Health Wales
Builders' merchants	Greenpeace	Public Services Boards
CADW	Heating engineers	Qualifications Wales
CBI Wales	Higher and Further Education colleges	Registered Social Landlords
Centre for Alternative Technology	Institute of Welsh Affairs	Religious organisations based in Wales
Citizens Advice	Insurance companies	Rent Smart Wales
City Regions	Local Authority building control departments	Retrofit Academy CIC
Climate Change Committee	Local Authority planning departments	Role models
Community Energy Wales	Local Enterprise Partnerships	Royal Welsh Agricultural Society
Community Housing Cymru	Local Partnerships LLP	RSPB Cymru
Constructing Excellence Wales	Manufacturers and suppliers	Schools
Construction Industry Training Board	National Eisteddfod of Wales	Sustainable Energy Association
Construction Leadership Council	National Energy Action	Third Sector Support Wales
Conveyancers	National Federation of Women's Institutes	Transition Network
Cynnal Cymru	National Home Improvement Council	TUC Wales
Designers (architects, engineers, quantity surveyors)	National House Building Council	UK Government departments, e.g. BEIS and DLUHC
Development Bank of Wales	National Residential Landlords Association	UK Investment Bank
Distribution Network Operators	NHS Wales	Universities
Electricians	Office of the Future Generations Commissioner	Urdd Gobaith Cymru
Energy Saving Trust	PAS 2035 duty holders	Valuers
Energy suppliers	Plumbers	Welsh Government
Estate agents	Professional design institutions (e.g. Royal Institution of Chartered Surveyors)	Welsh Local Government Association

While systematically identifying who needs to what is an essential task that will take some time, it is possible before doing that to list some urgent actions by Welsh Government that are obviously necessary, and these are listed below in alphabetical order.

Necessary and urgent actions by Welsh Government

Access to smart meter data

As stated earlier, it is essential that Welsh government and its agents have access to smart meter data about energy consumption in homes, so that progress can be monitored, lessons learned, and corrective action taken if necessary.

At present this data is held by the Data Communications Company (DCC), which is not allowed to release it without the written consent of the bill payer. Welsh Government should work with BEIS so that the DCC can make smart meter data available without bill payer consent to trusted organizations under the appropriate data confidentiality protocols.

The current system for assessing GHG emissions is that each year a report on Devolved Administration Greenhouse Gas Inventories is published on the National Atmospheric Emissions Inventory website⁶. The emissions data takes 18 months to compile. This means, for example, that the 2022 data is published in summer 2024. Access to smart meter data, combined with data about the instantaneous carbon intensity of the electricity grid, will allow a much faster, more accurate and more granular assessment to be made of residential emissions, which, as the chart in the *influencing decisions in the reserved matters* section shows, are responsible for about one fifth of all Welsh emissions.

Communications

Welsh Government needs to do better when it comes to communicating not only with the public but also with all the organisations and institutions who influence the behaviour of homeowners. It does not appear to have an underlying narrative on which to base its public utterances: for example, will we be saved by heroic technology or are we all on a learning journey?

⁶ https://naei.beis.gov.uk/reports/reports?section_id=4

Its [14th July press release](#) about the recent heat wave offered sensible advice from the Deputy Chief Medical Officer for Wales but missed the opportunity to link the extreme temperatures to climate change caused by GHG emissions. Its Summer 2022 Climate Change Bulletin, published on 4th August, makes no mention of the heatwave and its link to climate change.

When UK Government launched its Boiler Upgrade Scheme, Welsh Government was urged to respond with advice to homeowners to have a proper home assessment before deciding what to do, but it did not do so.

Development Bank of Wales

In April 2022 Welsh Government refreshed the remit of the National Infrastructure Commission for Wales to consider the climate and nature emergencies in all its work. By the same token Welsh Government needs to enhance the remit of the DBW so that it actively supports and helps accelerate residential decarbonisation. Three examples of what DBW could do are given below.

1. DBW should play a key role in supporting the development of financial support mechanisms for owner-occupiers and private landlords. The importance and urgency of tackling climate change require urgent action and some risk taking by DBW.
2. DBW should lead the trialling of variable Land Transaction Tax. The proposal to use a variable Stamp Duty Land Tax (Land Transaction Tax in Wales) based on the energy efficiency of a home at point of sale, whether based on EPC or directly on SAP, is not a novel idea. This fiscal approach has been particularly championed by the Green Task Force, as a recommendation of its 2018 *Accelerating Green Finance* report; and by UKGBC in its 2021 *A housing market catalyst to drive carbon emission reductions Low energy adjustment to Stamp Duty Land Tax* report. The *Affordable Warmth, Clean Growth* report, published by Frontier Economics in 2017, found that if implemented across the UK, a variable Stamp Duty scheme could incentivise around 16 million homes to make energy efficiency improvements by 2035. In September 2021 the Green Finance Institute wrote⁷ to the chancellor to call for an energy-adjusted Stamp Duty Land Tax to drive demand for energy efficiency works and further support the UK's green home finance market. The Energy

⁷ <https://www.greenfinanceinstitute.co.uk/news-and-insights/letter-to-chancellor-of-the-exchequer/>

Efficiency Infrastructure Group (EEIG) has led the work to identify the key elements of the idea⁸. I have introduced Welsh Government officials to the EEIG's lead on this topic, and he has shared the EEIG's latest thinking and calculator with them.

3. DBW should play a key role in developing and supporting the process for homeowners applying for financial support, which should be as straightforward as possible, and be linked to the requirement for a Building Renovation Passport.

EPCs

Too many EPCs are old and invalid. Welsh Government should make the argument to Westminster that a condition for a new mortgage is a recent (valid) EPC.

Holiday lets and second homes

Welsh Government has the power to impose MEES-like requirements on holiday lets and second homes. This is something it should seriously consider.

Homes whose decarbonisation cost is not matched by an increase in property value or whose owners cannot afford to carry out the work.

Many homes that might need to have say £20k spent on them and are worth less than say £150k are located where the expenditure will not be matched by an increase in value. Many homeowners simply cannot afford to have the work done. Welsh Government should commission work to identify those homes and hence understand the size of the problem, by combining sales data from companies such as Rightmove with data held by the recently created Wales building stock model and confidential socio-economic data. After that it will be for Welsh Government to decide how best to help decarbonise these homes. There may be lessons learned in the Leasing Scheme Wales⁹ that can be applied to owner-occupied homes.

⁸ <https://www.theeeig.co.uk/stamp-duty/>

⁹ <https://gov.wales/leasing-scheme-wales-guidance>

Planning - ASHPs

Current Welsh planning guidance¹⁰ forbids the installation of an ASHP within 3m of the boundary of a property. That will cause serious problems for a very large number of Welsh homes. The equivalent distance in English planning guidance is 1m. Welsh Government should urgently revise its planning guidance to allow ASHPs much closer to a property boundary, or an openable window, provided the appropriate acoustic criteria are met.

Planning – conservation areas and areas of distinctive local character

LETI's Climate Emergency Retrofit Guide¹¹ estimates that heritage or architectural constraints involve 25% of all UK homes. The London Borough of Islington's Local Plan 2021-22 states "As part of evolving character, protection of the historic environment must be reconciled with the environmental needs and aspirations of people." This is as true in Wales as it is in Islington, or Bath, or any area of distinctive local character.

Welsh Government should instruct and support local authority planners and conservation officers to provide guidance that tells people what they can do to decarbonise their homes in conservation areas and in areas of distinctive local character. There are precedents for this in England (Port Sunlight and Leeds). Planners, architects, engineers and conservation experts should work together in each local authority or cluster of authorities, consult with the public, and publish what changes to the appearance of homes are locally acceptable and do not require planning permission. These should be accompanied by well thought through and tested standard construction details.

Consider, for example, a street of private rented student accommodation in one of Cardiff's city centre conservation areas. To improve the energy efficiency of the properties as required by MEES, it may well be appropriate to install external wall insulation. To require every landlord to seek planning permission is unworkable, not only from the perspective of the landlords, who have only two months each year to carry out work on their properties, but also from the perspective the planners, who do not have the resources to deal with ever-increasing numbers of requests.

¹⁰ <https://gov.wales/planning-permission-heat-pumps>

¹¹ <https://www.leti.london/retrofit>

Redress scheme

An effective redress scheme will be needed, so that if work is carried out that is unsatisfactory homeowners are protected against loss. Welsh Government has a major role to play in the creation of such a scheme.

Surveys and Passports

While no Welsh Government cannot make commitments on behalf of future administrations, each can ensure that work carried out during its term in office supports the decarbonisation effort of future governments. That is why collecting data about the construction of homes and the energy consumption of their occupants is such an urgent task. If completed during the 2021-2026 term, it can inform decisions made by subsequent administrations. Welsh Government should mandate that every home is properly surveyed and its Building Renovation Passport created by the end of this Senedd term. It is possible that this work can be carried out at no cost to Welsh Government or to private homeowners.

Targets

As recommended above, Welsh Government should commission a study to analyse the thermal behaviour of the 14 archetypes of Welsh homes that the Welsh School of Architecture identified in earlier work, to identify the optimum %age reduction in space heating demand for each archetype. The impact of electric heating and electric vehicle charging on low voltage networks needs to be considered in this study.

Not every homeowner will be willing to act, so it is likely that some coercion will be necessary. That highlights the importance of Welsh Government setting some explicit long-term mandatory targets, in a way that is recognised by buyers, with failure to comply preventing further transactions (sale or renting) of the property. For example – no detached home's annual space heating is to exceed X kWh/m²/year by 2031.

Third sector organizations

Many organisations exist in Wales whose values and goals are relevant to residential energy efficiency, fuel poverty and climate change. It is important to identify them and to understand their purposes (their intention or goal; what change they

are trying to achieve), what type of objectives they have (e.g. community building, filtering information, facilitating learning, providing resources, convening stakeholders and so on), and their geographic area of activity (community, city, regional, national, international).

The table below explores some possible goals of third sector organizations.

<i>Possible goals of third sector organizations</i>	
Policy action	Practitioners support each other to understand and act, usually to meet/implement policy or targets for sustainability or climate change.
Policy influence	To gather a critical mass of people, organisations and evidence around a subject to help influence agendas and help policy makers with decision-making.
Knowledge sharing	To share knowledge and experience. Various channels (online libraries, face-to-face events) may be used to maximise the potential audiences and new knowledge creation and sharing.
Capacity development	To provide external expertise to help implement best practice in the field. May involve formal process of peer-to-peer sharing and learning.
Collaboration	To provide peer-to-peer support, mostly through face-to-face events. Identifying opportunities for collaboration on other projects. Knowledge sharing is informal and is limited outside of events.

Welsh Government should begin by organising workshops with Third Sector Support Wales and relevant third sector organisations to

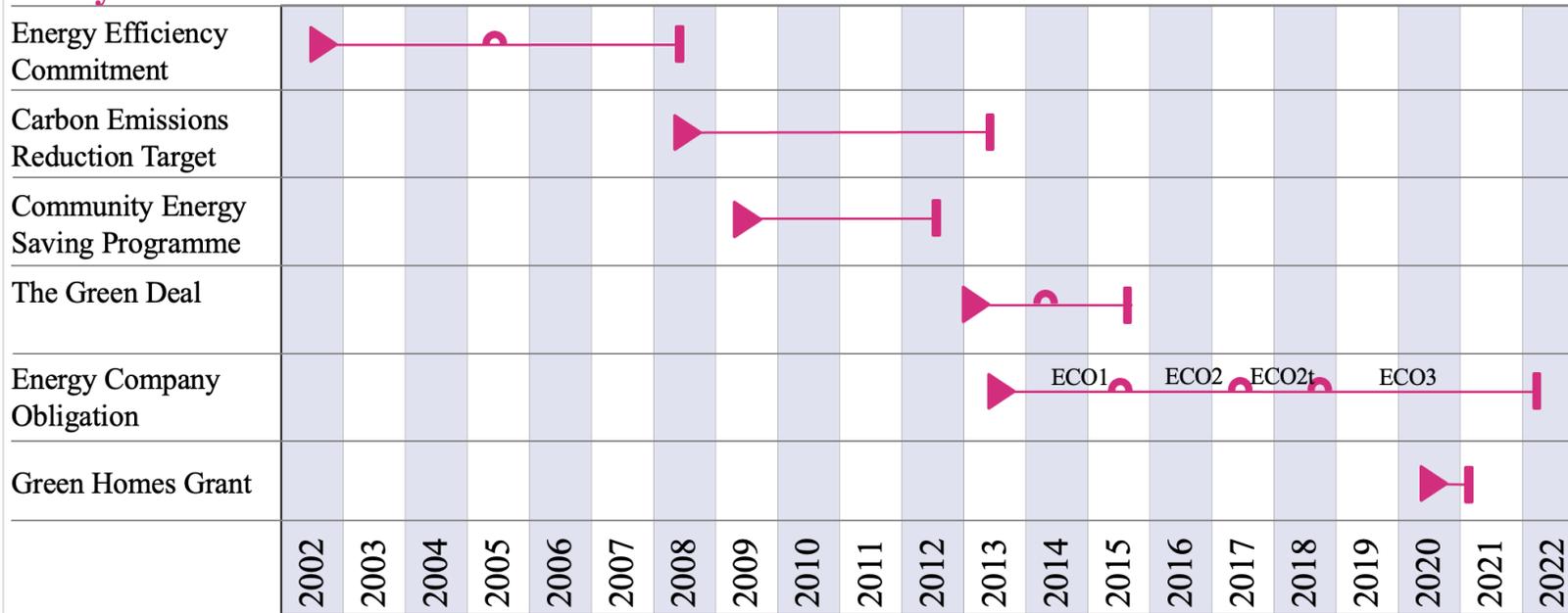
- a) review expectations and create a common understanding of the scope, resources and timeline of a national programme of residential decarbonisation, and
- b) identify the roles that different parties could play.

The key challenges of delivering a programme of retrofit within these sectors, including financial, practical and behavioural, and action required from the Welsh Government (and its partners) to overcome them

UK Government – policy environment

Successive UK Governments have created a fluctuating policy environment since 2002. The diagram below shows some of the policies that have come and gone. Most recently we have seen The Boiler Upgrade Scheme (England and Wales) Regulations 2022 and UK Government has announced but not implemented ‘The Great British Insulation Scheme’. Such a policy environment discourages investment and innovation.

Policy



Key: Introduced Overhauled Withdrawn

It is not so much the impact of any individual policy as the uncertainty and confusion caused by so many policy changes that has impaired the decarbonisation of UK homes. The National Infrastructure Commission has referred to the damage caused by “frequent, almost arbitrary changes in [government] policy... with numerous and sometimes conflicting aims”.

UK Government - Poor policy and delivery.

On 29th June 2022, the UK Climate Change Committee (CCC) published its latest ‘Progress Report to Parliament’ on the UK’s net-zero journey, warning that “major failures in delivery programmes” relating to home energy efficiency and agriculture are jeopardising progress. Regarding buildings and heat, the CCC has singled out the UK’s housing stock as a source of emissions which will derail net-zero progress without effective policy interventions soon. The CCC gave UK

government 9/10 for ambition and 4/10 for delivery. This is exemplified by the recent Green Homes Grant Voucher scheme, on which the National Audit Office has reported¹².

Welsh Government

Having made an excellent start with the Optimised Retrofit Programme, which improves socially owned homes, Welsh Government appears to have run out of steam. I speculate that there is a capacity and continuity issue at officer level, with not enough civil servants across the board and a lack of expertise in decarbonisation in the Housing and Regeneration department. For example, it has taken over a year for Welsh Government resolve a GDPR issue that has been delaying data capture in ORP. The civil servants I deal with in my role as chair of the advisory group on residential decarbonisation do not have any background in the decarbonisation of existing homes, and neither did their immediate predecessors.

While it is true that lack of data about the construction of privately-owned homes and their energy consumption makes it very hard for Welsh Government to know what to do, it has not acted to make that data available.

Ministers have very wide areas of responsibility. The Minister for Climate Change is responsible for 43 topics. It is not surprising, with so many demands on her attention, that residential decarbonisation does not receive much of it. The full list, downloaded from the Welsh Government website, is as follows.

Responsibilities of the Minister for Climate Change

Access to the countryside, coast and rights of way and Areas of Outstanding Natural Beauty
Active travel
Aids and adaptations, including Disabled Facilities Grants and Physical Adaptation Grants
Arms-length oversight of Cardiff Airport

Best and most versatile land policy, mineral site restoration advice and Agricultural Land Classification and implementation of the EIA (Agriculture) Regulations
Biodiversity policy, including the implementation of the Nature Recovery Plan
Building regulations
Bus services

¹² <https://www.nao.org.uk/report/green-homes-grant/>

Responsibilities of the Minister for Climate Change (continued)

Climate change, emission reduction targets and carbon budgets
 Coal tip safety
 Cross Government Digital and Data Policy & Strategy
 Cross-cutting measures of mitigation and adaptation in relation to climate change, including water; land drainage; flood and coastal risk; and control of marine and air pollution
 Developments of National Significance: determination of planning applications and connected consents
 Digital connectivity infrastructure, including Public Sector Broadband Aggregation, fast broadband and mobile
 Energy policy including small-medium scale energy production, domestic energy, energy efficiency
 Forestry policy and legislation, including re-stocking, tree health and forest reproductive material
 Future Wales: the national plan 2040
 Genetically modified crops
 Homelessness and housing advice
 Housing and housing-related activities of Local Authorities and housing associations, including housing management and the allocation of social and affordable housing
 Local environment quality, including litter, fly-tipping, noise policy and regulation
 Marine and freshwater planning, biodiversity, conservation and licensing
 Matters relating to housing provided by the private rented sector and regulation of registered social landlords
 National Forest
 National Infrastructure Commission
 National Parks

Natural Resources Management, including oversight and implementation of the Environment (Wales) Act and Natural Resources Wales
 Oversight and implementation of the Planning Acts and all aspects of planning policy and the determination of called-in planning applications and appeals
 Planning gain – Section 106 Agreements contained in the Town and Country Planning Act 1990
 Protection and management of wildlife, including control of pests, injurious weeds and vermin and the regulation of plant health, seeds and pesticides
 Provision of housing-related support (but not the payment of Housing Benefit)
 Rail services through the Wales and Borders franchise
 Regeneration, including Strategic Regeneration Areas; legacy regeneration; Transforming Town Centres and provision of sites and premises, derelict land and environmental improvements relating to regeneration
 Regulation of commercial tenancies let by Local Authorities
 Renewable Energy
 Road safety; safer routes to schools; transport for children and young people; regulation of pedestrian crossings and on-street parking
 Roads, including construction, improvement and maintenance of motorways and trunk roads
 Second Homes
 Strategic lead on allotments and urban green infrastructure
 Supply and quality of market, social and affordable housing
 Sustainable resource and waste management
 Transport for Wales
 Transport policy
 Water

Other blockers to action

1. Reserved Powers.
2. As described above, Welsh Government must wait for the changes from Westminster to the MEES regulations.
3. Until very recently, there has been no all-Wales building stock model that would allow Welsh Government and LAs to test different strategies, set targets and develop local area plans.
4. Decarbonisation requires cross-sectoral thinking by Welsh Government, for example the electrification of transport and heating.
5. While the UKGBC's Accelerator Cities project¹³ exists to catalyse action, Welsh LAs lack the resources to act.
6. Decarbonising homes is not a socially normal thing to do, compared with having a new bathroom or kitchen. It has no cachet the way that, for example, an electric vehicle has.
7. There is conflicting publicly available information both about what to do and about the need to act; homeowners need an easily accessed single source of the truth.
8. The cost of decarbonising a home is too high for many people. Procurement at scale can help to reduce costs.
9. The right funding is not yet available for all segments of the homeownership population.
10. There is a shortage of suitably skilled builders because they do not trust that there will be a steady and growing pipeline of profitable work and therefore do not seek such work.
11. The ratio of electricity unit cost to gas unit cost is still too high, which makes it hard to justify ASHPs on running cost grounds without additional expenditure to allow the storage and use of off-peak and/or pv-generated electricity.

Actions required from Welsh Government (and its partners) to overcome the challenges

Earlier in this submission I proposed some actions by Welsh Government. It may be helpful to categorise the ways in which the public sector and others can act. The headings under which the public sector can act are listed below and are taken from Michie et al¹⁴, which also provides guidance on how to decide what actions are most appropriate to achieve a desired goal.

¹³ <https://www.ukgbc.org/ukgbc-work/accelerator-cities/>

¹⁴ Michie S, Atkins L, West R. (2014) *The Behaviour Change Wheel: A Guide to Designing Interventions*. London: Silverback Publishing. www.behaviourchangewheel.com

<i>Public sector actions</i>	<i>Typically characterised by¹⁵</i>	<i>Example</i>
Guidelines	The development and dissemination of documents that make evidence-based recommendations for action in response to defined situations	Guidance for people with symptoms of a respiratory infection, including COVID-19
Environ. and social planning	Architecture, urban and rural planning, object and location design, and planning for housing, social care, employment, equality, benefits, security and education	Managing Conservation Areas in Wales
Comms. and marketing	Mass media campaigns, digital marketing campaigns, and correspondence	CCBC Communications & Engagement Strategy 2019 - 2022
Legislation	Use of laws, bylaws and similar legislative instruments to set the boundaries for acceptable behaviour with penalties for infringement	Renting Homes (Amendment) (Wales) Act 2021.
Service provision	Provision of services, materials and/or social resource and aids, whether they be structured or ad hoc, financed or unpaid	Local authority 'One Stop Shops' that help homeowners to retrofit their homes.
Regulation	Development and implementation of rules regarding behaviour that instruct the behaviour and possibly provide rewards and punishments for conforming	Building Regulations
Fiscal measures	Use of taxation, tax relief and financial incentives	Varying Council Tax or Land Transaction Tax by linking rates to the energy efficiency of a property, or by offering a rebate when measures are installed.

¹⁵ West et al. (2020). [Achieving behaviour change: A guide for national government](#). PHE publications.

Earlier in this submission I listed some actions by others in the broader energy system that influence the behaviour of homeowners. There are many more ways to intervene than the commonly cited incentivization and provision of information and these are given below, with examples. The intervention types are taken from Michie et al¹⁶.

<i>Intervention</i>	<i>Definition</i>	<i>Example</i>
Education	Increasing knowledge and understanding by informing, explaining, showing and providing feedback	Explain how a heat pump works, the benefits of installing one, and the steps to be taken before doing so.
Persuasion	Using words and images to change the way people feel about a behaviour to make it more or less attractive	Use a video campaign to depict heat loss as money escaping from the home
Incentivisation	Changing the attractiveness of a behaviour by creating the expectation of a desired outcome or avoidance of an undesired one	Provide a financial reward such as a council tax rebate for installing energy efficiency measures
Coercion	Changing the attractiveness of a behaviour by creating the expectation of an undesired outcome or denial of a desired one	Publish evidence that, other things being equal, homes with low energy efficiency are worth less than homes with higher energy efficiency
Training	Increasing the skills needed for a behaviour by repeated practice and feedback	Provide courses for existing and new local builders in how to install low-carbon technologies to a high standard
Restriction	Constraining performance of a behaviour by setting rules	Welsh Housing Quality Standards
Environmental restructuring	Constraining or promoting behaviour by shaping the physical or social environment	Publish guidance on acceptable changes to the appearance of homes in conservation areas
Modelling	Showing examples of the behaviour for people to imitate	Show a celebrity installing EWI on their home
Enablement	Providing support to improve ability to change in a variety of ways not covered by other intervention types	Provide a Building Renovation Passport to help identify and plan suitable energy efficiency measures for a specific home

¹⁶ Michie S, Atkins L, West R. (2014) The Behaviour Change Wheel: A Guide to Designing Interventions. London: Silverback Publishing.
www.behaviourchangewheel.com

How the right balance can be struck between influencing/incentivising homeowners and private sector landlords to retrofit their properties and regulating to increase standards to drive progress

What needs to be done, by Welsh Government (and others) goes far beyond influencing, incentivising and regulating.

In this submission I have tried to make the case for a systems approach that is based on an evidence-based framework for designing and delivering interventions to change behaviours at the individual, organisational, community and population levels. As lessons are learned, the approach must be improved over time. That is because residential decarbonisation is a ‘wicked’ problem, one that cannot be solved in the conventional sense of the word.

Wicked problems:

- are difficult to define clearly
- have many interdependencies and are often multi-causal
- are often not stable
- usually have no clear solution
- are socially complex
- hardly ever sit conveniently within the responsibility of any one organisation
- involve changing behaviour
- are sometimes characterised by chronic policy failure

Attempts to address wicked problems often lead to unforeseen consequences.

To tackle residential decarbonisation requires:

- holistic thinking that can grasp the big picture, including the interrelationships between the full range of causal factors underlying the problem.

- additional core skills to allow working across organisational boundaries and engagement with stakeholders, which include communications, big picture thinking and influencing skills and the ability to work cooperatively.
- a better understanding of behavioural change by policy makers
- a comprehensive focus and/or strategy which involves a range of coordinated and interrelated responses requiring sustained effort and/or resources to make headway.
- tolerating uncertainty and accepting the need for a long-term focus.

What we think is the best way to decarbonise our homes will evolve. Both policy and delivery must learn from experience. How we do it now will not be the same as how we do it in 5-, 10-, 15- or 20-years' time.

For Wales to decarbonise its privately owned housing stock, Welsh Government must have a long-term focus and a commitment to speedy and effective delivery. These will require a sustained effort by successive Welsh Governments and others, a willingness to take risks in order to learn by doing, joined up working across Welsh Government, and engagement with civil society.

The Welsh Government website lists 228 groups¹⁷ that advise Welsh Government, among which are the Decarbonisation of Homes in Wales Advisory Group that I chair and the Bus Decarbonisation Task and Finish Group, but I could not find any advisory groups for the decarbonisation of transport, or business, or land use, or the public sector.

Reflecting on the magnitude of the challenge to decarbonise Wales and the need for urgent action, I believe serious consideration should be given to the creation of a new body, akin to the National Infrastructure Commission for Wales, with a remit to advise Welsh Government on the decarbonisation of all sectors, and possibly to hold it to account in ways that the CCC cannot.

The CCC holds Welsh Government to account after the end of each four year carbon budget period, but the process is slow: before the end of the second year after each budget period Welsh Government publishes a statement

¹⁷ <https://gov.wales/organisations>

setting out whether Wales has met the budget; no more than six months later the CCC must provide a report setting out its views on the way in which the carbon budget for the period was or was not met and the action taken by the Welsh Ministers to reduce net Welsh GHG emissions during the period. That is a feedback loop that is a) six years long and b) does not align with the Welsh electoral cycle. Wales needs to be nimbler than this. As I outlined earlier, access to smart meter data can ensure faster, more granular and more accurate data on emissions from homes. Part of the remit for the new body I am advocating would be to drive the development of methods for providing faster, more granular and more accurate data on emissions from other sectors of the Welsh economy.

How effective the Welsh Government is influencing decisions on reserved matters to support decarbonisation of these sectors

The Wales Act 2017 provided a new devolution settlement for Wales, with the Conferred Powers Model replaced with a Reserved Powers Model. The Reserved Powers Model allows the Senedd to make laws on matters that are not reserved to the UK Parliament. Among the reserved matters are

Head D – Energy

Section D1 – Electricity

Section D2 – Oil and gas

Section D3 – Coal

Section D4 – Nuclear energy

Section D5 – Heat and cooling

Section D6 – Energy conservation

Head E – Transport

Section E1 – Road transport

Section E2 – Rail transport

Section E3 – Marine and waterway transport etc.

Section E4 – Air transport

Section E5 – Transport security

Section E6 – Other matters

The graphic below shows the sectors most responsible for GHG emissions in the UK, and the Welsh picture is very similar¹⁸. The reservation of powers concerning heat and cooling and energy conservation restricts Wales's ability to act to reduce its residential GHG emissions. The reservation of all transport powers similarly hampers Wales.

¹⁸ National Atmospheric Emissions Inventory (2022) Devolved Administration GHG Inventory 1990-2020



Source: BEIS (2021) Annex: 2019 UK Greenhouse Gas Emissions, final figures by end user and fuel type

The effectiveness of any devolved administration in influencing decisions on reserved matters depends on the willingness of UK Government to listen and to act.

As the First Minister eloquently described on BBC's PM programme on 22nd July, Westminster has not been very good at listening for a long time. I know from personal experience that not listening is not unique to the current administration. I was invited in 2016 to Number 10 to meet the Prime Minister's energy SPAD to discuss a residential decarbonisation report I had just authored in my role as Arup's global buildings retrofit leader, but the SPAD was much more interested in telling me about decommissioning North Sea oil rigs than in listening to what I had to say.

Welsh Government does need to persuade UK Government to act in several areas, as described in earlier sections of this submission:

- To allow DCC to share smart meter data
- To require that up to date EPCs must be provided as a condition of a mortgage offer
- To deliver consistent long term decarbonisation policies

Agenda Item 3



Chartered
Institute of
Housing
Cymru

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith /
Climate Change, Environment and Infrastructure Committee
Datgarboneiddio'r sector tai preifat / Decarbonising the private housing sector
DH2P_07

Ymateb gan Sefydliad Tai Siartredig Cymru / Evidence from Chartered Institute of
Housing Cymru

Decarbonisation of housing– Decarbonising the Private Housing sector

CIH Cymru inquiry response

This is a response to the Climate Change, Environment, and Infrastructure Committee as it undertakes its inquiry into 'Decarbonisation of housing in Wales: Decarbonising the Private Housing Sector'.

1. Introduction

For this submission, we define the “private housing sector” as being made up of two core tenures, owner-occupier, and the Private Rented Sector (PRS).

Housing is responsible for 21%¹ of all carbon emissions in Wales and owner-occupiers account for just under 70% of all homes in Wales and the PRS around 14%². Current net-zero strategies have focused on social housing, implying that they are not applicable to more than four-fifths of Wales's housing stock.

As outlined in the oral evidence CIH Cymru gave to the committee for its wider “Decarbonisation of Housing” inquiry, we believe private housing is the elephant in the room that must be addressed if housing is to play its role in reaching the target of a net-zero UK by 2050. Incentivising and funding the decarbonisation of private housing is the only way we will truly impact the marketplace (skills, supply chains, cost, technology) at the pace and scale needed if we are to meet our shared ambition.

CIH Cymru's Tyfu Tai Cymru project has recently published a substantial report on the support that the PRS will need to meet the net-zero challenge, authored by Dr Donal Brown of Sustainable Collective, Severn Wye Energy Agency and Sero. Most of the evidence in that report goes to the heart of answering many of the committee's questions in relation to the PRS. We thereby attach that report (see attached) – or you can view here <https://www.cih.org/media/zbccclbu/0510-ttc-decarbonising-wales-private-rented-sector-v5.pdf> – to this submission as our evidence in relation to the PRS and would urge consideration of the report as it

¹ <https://gov.wales/sites/default/files/publications/2019-07/decarbonising-welsh-homes-stage-1-report.pdf>

² <https://statswales.gov.wales/Catalogue/Housing/Dwelling-Stock-Estimates/dwellingstockestimates-by-localauthority-tenure>

contains relevant technical and other information beyond that in this response to the consultation questions.



The headline finding of our PRS report found that alongside existing policies, and assuming the current Warm Homes Programme is continued through the 2020s, this leaves an **89% funding shortfall for meeting EPC “C” in the Welsh PRS rising to 98% for the 2050 net-zero targets.**

Our evidence demonstrates the huge undertaking needed to meet the net-zero ambition by 2050 and we welcome the focus on all housing tenures as essential to reaching this aim.

Headline messages – decarbonising the private rented sector

- Welsh Government should develop a long-term strategy for energy efficiency, fuel poverty and decarbonisation of the private rented sector (PRS) and integrate with broader objectives surrounding housing quality, fire safety and landlord licensing
- Welsh Government should engage with landlords and tenants in this process, including communicating the benefits of the programme alongside tailored support, advice, funding, and delivery via local ‘One-Stop-Shops’
- New regulations and standards are needed to drive the uptake of energy efficiency in the PRS, and in meeting net zero objectives. This will require increased resource and better enforcement, especially for Local Authorities
- Increased grant funding and new forms of financing are needed. The affordability crisis means fuel poverty funding should increase significantly, alongside new property linked financing and tax incentives for landlords
- A massive retrofit skills drive is needed, requiring public investment in new apprenticeships and a Welsh supply chain for low carbon technologies
- Decarbonisation of the PRS will require low carbon heat, especially via heat pumps, requiring government to create a level playing field, encouraging new business models, policy changes and a subsidy regime to drive down costs

2. The current approach to decarbonising housing in the private rented and owner-occupied sectors in Wales, including the effectiveness of existing programmes and support for retrofit;

Alongside the need to decarbonise our homes, people across Wales are facing increasing bills and a probable sharp increase in people experiencing fuel poverty.

32% of Welsh homes were built before 1919, with just 6% built in the last 35 years. With an average Energy Performance Certificate (EPC) of “D”, Wales requires the highest investment to reach EPC “C” and has the lowest household income in the UK. In April 2022, energy prices increased by 54% a with further 32% increase expected in October. While in 2020, 20% of the Welsh PRS lived in “fuel poverty”, Welsh Government expect this to rise to >45% in 2022, with 98% (217,700) of low-



income households in fuel poverty and 91,700 (41%) in severe fuel poverty. From October, EPC “E” properties expect to be paying £3,853/year in energy bills, while G rated will pay £7,098/year – an unprecedented affordability crisis.

Housing policy and fuel poverty reduction is devolved to Wales. The Warm Homes and Energy Conservation Act 2000 required Welsh Government to ensure, as far as reasonably practicable, people in Wales do not live in fuel poverty. Indeed, until recently fuel poverty reduction in Wales was viewed as a success story. Between 2001 and 2009, more than 108,000 homes were given energy efficiency measures under the Home Energy Efficiency Scheme. In 2011 this was replaced by the Warm Homes Programme (WHP), which provided over £366m to 61,400 homes in Wales and advice and support to more than 144,800 people.

The PRS’s poor energy efficiency is partly explained by the “split incentive” where landlords are unlikely to capture energy efficiency measures’ cost and comfort benefits. In contrast, tenants receiving these benefits are unlikely to contribute to capital costs. In addition, various studies have identified reticence among tenants in requesting energy efficiency improvements for fear of rent rises or eviction.

The Minimum Energy Efficiency Standards (MEES) came into force for new tenancies on 1st April 2018, and all existing tenancies from April 2020; requiring rental properties in the PRS to have a minimum EPC (EPC) rating of “E”. It is now unlawful to rent a property below an E rating unless there is an applicable exemption, or the cost of the measures exceeds £3,500 (incl VAT).

However, there is significant evidence that the MEES are currently poorly enforced, due to a lack of resources in Local Authorities. The UK Government is now consulting on proposals for MEES of EPC “C” for new tenancies by 2025 and all private rented housing in England and Wales from 2028. The consultation outlines an average cost of £4,700 per home to meet EPC “C”, with a maximum spend likely capped at £10,000. Given that ~50% of Welsh fuel poor households are in EPC band “E” or worse, we can expect a higher average spend of at least £7,500 for the 36,000 PRS homes in fuel poverty, costing an expected £270m. Recent work by the Future Generations Commissioner (FGC) anticipates the total cost of meeting EPC “C” in the PRS to be £846m in Wales alone.

Alongside existing policies, and assuming the current Warm Homes Programme is continued through the 2020s, this leaves an 89% funding shortfall for meeting EPC “C” in the Welsh PRS rising to 98% for the 2050 net-zero targets. Most funding will need to come from landlords and other forms of private financing.

The Energy Company Obligation (ECO) 3 is now the main funding source for fuel poverty reduction in Great Britain, providing around £640m/ year, while



ECO4 (2022-2026) increase to £1bn/year. Combining these two schemes will deliver ~£296m for improving Welsh homes at EPC “E”, “F” or “G” through the 2020s (although evidence suggests Wales does not capitalise on its share of around £32 million a year). Studies also show that past energy efficiency programs have been poorly targeted at the PRS and landlords, who often lack access to the appropriate information, skilled contractors and the financial resources needed to complete the work.

Other policies such as the Landlord Energy Saving Allowance (LESA) - (allowing landlords to claim back tax against energy efficiency measures) have since been scrapped.

In terms of the owner-occupier sector, there is currently very little support for retrofit work either from government – both Wales and Westminster – or from lenders. There does not appear to be support to provide owners with the level of information needed about the type of retrofit that their house archetype will require to make an informed choice that provides piece of mind. Moreover, there have been an increasing number of stories appearing in the media about damage being done to home through substandard approaches to home insulation. One expert has estimated that up to two million homes across the UK may have problems because of insulation being pumped into the cavity between outside and inside walls³.

Furthermore, if homeowners do find information, there are very few financing packages available to support the punitive cost implications of a whole-house retrofit to EPC A – estimated by Cardiff University’s School of Architecture at between £17-67k depending on house archetype⁴.

“Green mortgages” currently offer either a) a lower interest rate or b) a cash-back incentive but both approaches offer little financial incentive to owner-occupiers⁵.

We are effectively faced with a chicken and egg scenario where lenders are unlikely to explore developing more attractive lending packages because there is little demand from the owner-occupier sector. Low demand is driven by lack of incentive from government or otherwise to spend upward of £17k on retrofitting one’s home.

We need a situation where government incentive and lenders join to create demand and, in turn, drive down market costs of retrofit technologies and approaches.

³ <https://www.thisismoney.co.uk/money/news/article-10390579/Botched-cavity-wall-insulation-ruining-homes-causing-damp-mould.html>

⁴ <https://gov.wales/sites/default/files/publications/2019-07/decarbonising-welsh-homes-stage-2-report.pdf>

⁵ <https://www.theguardian.com/money/2021/nov/06/green-mortgages-could-your-loan-help-make-britain-greener>



3. The role of sector specific retrofit targets to help drive change.

Targets can be a good measure of progress but targets without a strategy to deliver outcomes, both in terms of financing or addressing issues around supply chains and skills gaps, can result in a meaningless exercise. However, targets could function as the stick through which to move different tenures to different positions along the timeline to 2050. For example, if there was an incentive to having a EPCA certificate for your home which would increase the likelihood of selling at a higher price than otherwise, that could drive behavioural change. To have credibility to the public there would also need to be a strategy to drive down the cost of retrofit which is viewed as costly at present.

4. Actions the Welsh Government should take to progress a programme of retrofit for these sectors in the short, medium, and long term.

Our report sets out further details in the technical solutions contained within our recommendations <https://www.cih.org/media/zbccclbu/0510-ttc-decarbonising-wales-private-rented-sector-v5.pdf>. A consistent issue raised during the interviews and workshop was the complex and overlapping regulatory environment for PRS landlords. 75% of landlords are non-professional or accidental landlords, who are often time poor and are poorly informed about the range of obligations they face.

“You have to have information. [It’s] probably there and I haven’t found it. I’m not aware of it is the answer.” – Landlord 3

There were concerns that if not implemented with greater support, new energy efficiency and decarbonisation regulations could exacerbate this picture and lead to further disengagement and non-compliance.

Recommendations for Welsh Government

1. Develop a National Retrofit Strategy

Welsh government must develop a long-term plan for the decarbonisation of the housing stock and the evolution of the PRS, how the sector will achieve this in the context of other priorities e.g. fire safety, homelessness prevention and implementing the Renting Homes (Wales) Act. This should include setting targets and developing accountability within different government departments for meeting them.

2. Engage landlords and tenants on this journey

This plan must be inclusive and bring both landlords and tenants on this journey, allowing them to co-create how programmes are designed in their local areas. These recommendations should be incorporated into the local One-Stop-Shops outlined below. This should include an effective advice and communication strategy which raises awareness among the public, providing certainty and support to households and landlords and set the direction of travel.

3. Reform WHP & double funding

The WHP needs reform to focus away from fossil fuel boilers towards energy efficiency and low carbon heat, remove arbitrary cost caps per property, and better



target homes in the PRS - requiring a doubling of past funding and integration with other funding sources to ~£732m for 2020s, urgently targeted at the worst properties and those in extreme fuel poverty.

4. Trial Property Linked Financing

The pervasive split incentive requires property linked financing which can integrate with other funding streams and enable sharing of costs and benefits between landlords and tenants on higher incomes. Recent research suggests the Development Bank of Wales would be ideally placed to trial models based on using both energy bills and council tax as a repayment channel, in conjunction with the other policies outlined here.

5. Building Renovation Passports & Smart EPC's

The ORP is highlighting how better data on the characteristics of the housing stock is an essential pre- requisite of a National Retrofit Strategy. We suggest the following sequential steps are taken.

- Develop whole house plan for every Welsh home
- Record and track progress via BRPs
- Adopt smart EPCs and measured energy saving

6. Resource and Train a Welsh Supply Chain

Delivering this agenda will require 12,710 skilled contractors in Wales alone. This will need a widespread skills drive involving increased funding for green apprentices as well as retraining for the existing ~8,000 RMI workforce. A range of measures will be needed, although we suggest Welsh Government should allocate an increased £2-3m/year for training.

7. Ban New Fossil Fuel Heating by 2030

We believe that a hard stop date of 2030 for new fossil fuel heating is needed. This will provide certainty to industry and drive investment and innovation, as seen with the petrol and diesel ban.

Local Government

8. Resource & Enforce MEES Legislation

Local Authorities in Wales should immediately increase resourcing for MEES EPC "E" enforcement, adopting emerging best practice and coordinate between Rent Smart Wales, Environmental Health and Trading Standard's teams, developing an effective national MEES compliance and enforcement database and tools. We estimate these aims could be delivered across Wales for <£1m annually

9. Develop Local One Stop Shops

Local authority led One-Stop-Shops are needed to provide an integrated and tailored offer to both landlords and tenants: providing advice, energy audits, financing and delivering quality assured retrofits. We recommend that Wales should aim to have a One-Stop-Shop in all 22 areas, and each should have a specific team focussed on the PRS and offer face to face and digital engagement to address different accessibility requirements. NEF estimate these models require around £12m per

500,000 homes retrofitted, or £33m for the entire Welsh retrofit programme.



10. Integrate Funding Streams

Existing low-income funding streams are fragmented, creating piecemeal programmes and confusion for the public. We suggest integrating schemes such as ECO, Nest and Arbed and future 'able to pay financing' under a single offer to landlords, coordinated by the One- Stop-Shop.

UK Government

11. Regulate for EPC "C" in PRS

To improve standards the Welsh Government should urge the UK Government to increase MEES to EPC "C" for all tenancies by 2028 and, if unwilling to act, explore implementation of higher MEES standards in Wales only.

12. Create Fiscal Incentives for Landlords to Invest

Various 'fiscal incentives' may be needed, the UK government should re-instate the Landlord Energy Savings Allowance (LESA), that provided up to £1,500 of tax relief.

13. Level Playing Field for Heat Pumps

Heat pumps have the potential to create bill savings and have a lower cost of ownership than gas boilers, requiring the following policy changes:

- Removing environmental levies from electricity bills
- Require suppliers to offer time of use, smart heat tariffs
- Industrial policy to reduce ASHP install costs by 30%

With these measures we estimate the total cost of ASHP ownership would be between only 1% higher and 24% lower than the fossil alternatives.

In terms of the owner-occupier tenure, the biggest barrier to progress at the pace and scale needed to address the climate emergency is the coalescence, or lack of it, between government incentive, the lending/mortgage market, and the impact of creating that demand at pace and scale to drive down market costs. There are various options open to the Welsh Government to plug this investment gap, as set out by the New Economics Foundation in its "Financing Wales's Housing Decarbonisation"⁶. There are lending mechanisms such as working with Local Authorities to trial the Property Assessed Clean Energy (PACE) mechanism, through a levy on council tax. PACE has been used in the US and is a lending mechanism that is attached to the property rather than the individual which address the "split incentive" issue which is a particular barrier for PRS landlords as described in our Tyfu Tai report.

Welsh Government could also look to working with the Welsh Development bank to provide a wider range of affordable lending products such as equity release models. Some of the options are set out in the table 1 below from the New Economics Foundation report.

⁶ <https://neweconomics.org/uploads/files/Financing-Wales-Housing-Decarbonisation.pdf>

Table 15 Feasibility of finance mechanisms for private housing retrofit

	Central Government/ Public Bank Loan	PACE finance	Green Mortgages	On-bill Finance/ Green Deal 2.0
Customer Journey -How complex is it to access finance?	In both Scotland and Germany, the government is willing to waive onerous underwriting requirements. In Germany loans are disbursed through retail banks, while in Scotland this is managed by the energy saving trust. This makes the application process fairly simple with the majority of people eligible.	In the USA PACE financing is an incredibly simple process, as it can be offered by retrofit contractors. However, the transferability of this to the UK/Welsh context will not be straightforward as FCA consumer protection could make this more complex.	Mortgages involve a fairly onerous process of underwriting and credit checks. This is likely to deter less committed households, and therefore are likely to only be taken up in large numbers where wider cosmetic improvements are being made.	The Green Deal is infamous for its onerous Customer Journey, which was viewed as a hassle for both contractors and customers alike. Because it used private capital, lenders introduced fairly onerous underwriting requirements.
Split Incentive - Split incentive between landlords and tenants and those looking to move?	Neither of these schemes are designed to solve the split incentive barrier, although the Scottish scheme has a specific product for landlords, where landlords are expected to cover the costs of repayment.	Theoretically PACE financing solves the split incentive barrier, tying the repayment of finance to the property, meaning landlords or those looking to sell are not tied into repayments.	Green mortgages do not solve the landlord tenant dilemma. However, because the debt is secured to the property, it will be cleared upon the sale, potentially also opening up the shorter-term property developer market.	One of the key advantages of On bill financing is that it resolves the split incentive issue, although there are examples of buyers requesting these debts to be cleared prior to a properties sale.
Political -How easy/hard to implement -Where would change be needed?	These models both require significant political will to be implemented, also requiring large sums of publicly backed capital to be committed. Germany benefits from a pre-existing institution in the KfW, whereas a Wales or UK wide scheme would incur significant set up costs.	PACE financing will require several changes to the way council tax is estimated and collected. The extent to which this will require major changes to legislation remains uncertain.	Green mortgages do require some support from government to get going, however, we expect this market to be largely private sector led, subject to policy actions in other areas driving demand for retrofits.	While there would be limited changes to legislation required to resurrect a Green Deal 2.0, its toxic brand means that politicians will likely be reticent to being associated with its revival.
Social Justice -Share of financial burden -Who sees a return, is this felt in local economy?	Because these models mobilise public backed capital at 0% interest, they are viewed as correcting market failures and thus acting in the public interest, providing access to capital for groups who would otherwise not be deemed creditworthy.	Without regulation, there are risks that landlords could pass the costs of retrofits onto tenants without their permission. Private sector PACE loans also have a higher cost of capital, which could add a burden to future property owners or tenants.	Green mortgages are unlikely to create negative outcomes for disadvantaged groups. However, the model is only likely to be accessible to wealthier homeowners, doing little to solve issues at the bottom end of the market.	In a similar vein to PACE there are concerns surrounding landlords passing the costs of renovations on to tenants. Although the original green deal included safeguards, there is also the risk that total costs may increase.

We recognise that there are some actions available to the Welsh Government, there are other interventions that the Westminster Government should offer, such as influence over the Green Mortgage market and private investment at the scale needed to make any headway in retrofitting all our homes in Wales. We need a huge intervention on the scale that is happening in Italy⁷ where the government fund up to 110% (and up to 100,00 Euros) of the cost of whole-house retrofit (insulation and heat pumps).

Homes are one of the biggest carbon emitters; homeowners can't afford to retrofit; therefore, there has to be state-intervention on a big scale. That level of intervention drives the market, supply change and skills agenda. So far, the Italian Government has spent €21bn (£17.5bn) on the scheme and there's been an immediate boost for the construction sector, GDP and the creation of more than 150,000 new jobs⁸.

5. The key challenges of delivering a programme of retrofit within these sectors, including financial, practical and behavioural, and action required from the Welsh Government (and its partners) to overcome them;

In our Decarbonising Wales' Private Rented Sector report, we set out the perceptions of landlords and tenants in the PRS to the need to retrofit many properties. Respondents told us that any plan must be accompanied by a widespread communications strategy, using different forms of media and engagement to bring the public on the journey.

⁷ <https://www.itv.com/news/2021-10-21/italy-offering-to-pay-full-cost-of-upgrading-to-green-homes-plus-a-bonus>

⁸ <https://www.theguardian.com/world/2022/apr/13/italys-superbonus-110-scheme-prompts-surge-of-green-home-renovations>



“If you know if there’s loads of us doing it then I would feel more comfortable in that situation.” Landlord 3

They also told us that Local Authorities: remain among the most trusted organisations in communities. When asked about who should deliver a retrofit programme, many landlords and tenants we interviewed saw a key, coordinating role for local authorities.

“if they’ve got a streamlined system with a dedicated installation engineer that are trusted by the Council, then I won’t have to go along...with a load of cowboys.”- Landlord 2

There was also evidence of a breakdown in trust between landlords and tenants, with tenants fearful of rent increases, evictions or landlords abusing their power and therefore unlikely to ask for improvements:

“So I think [landlords] can, almost, Impose any conditions that they want, and they know that they’ll still get a tenant at the end of the day.” – Tenant 3

“the new landlady wanted to almost double the rent. So we then moved out” – Tenant 1

In terms of the owner-occupier tenure many of the barriers, which are predominantly financial or access to affordable finance are outlined in the answer above.

The Welsh Government needs to work with mortgage lenders and the Wales Development Bank to join up financing products and government backed incentives to drive demand in the marketplace.

Owner-occupiers are unlikely to add £25k or more to their existing debt unless there is an incentive to do so. Part of that incentive needs to be low-cost lending but there must be more incentives attached by Government, for example through Council Tax or Land Transaction Tax relief.

6. How the right balance can be struck between influencing/incentivising homeowners and private sector landlords to retrofit their properties and regulating to increase standards to drive progress;

For PRS see <https://www.cih.org/media/zbccclbu/0510-ttc-decarbonising-wales-private-rented-sector-v5.pdf>

As stated in previous answers we need both carrot and stick to drive the pace and scale we need to retrofit private housing. The balance must be right and complimentary.



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7. How effective the Welsh Government is influencing decisions on reserved matters to support decarbonisation of these sectors.

CIH Cymru is unaware of any specific example of where the Welsh Government has specifically tried to influence decisions on reserved matters related to the decarbonisation agenda.

However, the Westminster Government's scheme to provide grants of up to 5,000 for air source heat pumps suggested that the approaches of both Governments are not joined up. The Welsh Government has identified a fabric-first approach to retrofit because if you fit heat pumps to homes before they are properly insulated you are likely to increase fuel bills quite substantially.

We need all governments in the UK to be joined up in their approach if we are to influence the marketplace and supply chains to drive down costs.

About CIH

The Chartered Institute of Housing (CIH) is the independent voice for housing and the home of professional standards. Our goal is simple – to provide housing professionals and their organisations with the advice, support, and knowledge they need to be brilliant. CIH is a registered charity and not-for-profit organisation. This means that the money we make is put back into the organisation and funds the activities we carry out to support the housing sector.

We have a diverse membership of people who work in both the public and private sectors, in 20 countries on five continents across the world. Further information is available at: www.cih.org.

August 2022



Decarbonising the private housing sector: Evidence from Nesta Cymru

Nesta is the UK's innovation agency for social good. We design, test and scale new solutions to society's biggest problems, changing millions of lives for the better. The aim of Nesta's **A Sustainable Future** mission is to help rapidly accelerate the reduction of household emissions by 2030, and to ensure that policies and conditions are in place to support continued reduction from 2030 onwards.

This submission addresses the following areas of the inquiry terms of reference:

- The current approach to decarbonising housing in the private rented and owner occupied sectors in Wales
- Actions the Welsh Government should take to progress a programme of retrofit for these sectors in the short, medium and long term
- The key challenges of delivering a programme of retrofit within these sectors

Contents

Executive summary and recommendations (p2)

Decarbonisation first: Why Welsh Government should focus on electrification of heat (p5)

- Emissions reductions and costs by intervention (p7)
- What do we know about homes with heat pumps in Wales? (p9)
- Cost of living crisis (p15)

Other actions to speed up the decarbonisation of private housing (p17)

Executive summary

Context: The climate emergency in Wales

- 1.1. The Welsh Government declared a climate emergency in 2019, and in 2021 restructured its cabinet around a single ministry, with the stated aim of making climate change the top priority across multiple portfolios. They have acknowledged that “We must cut emissions more in the next ten years than we have in the last thirty and innovation will provide part of the solution.”¹
- 1.2. Nesta welcomes this emphasis on both urgency, and innovation. As well as the technical challenge of upgrading homes, success in decarbonisation requires greater focus on the residents - their attitudes, motivations, capacity and confidence to engage with this issue. Social norms will need to shift, and the solutions may require new business and service delivery models to emerge, as well as new financial products and ways for householders to engage with their energy use.

The Welsh Government’s current approach to retrofitting homes does not put decarbonisation first

- 1.3. Carbon emissions are cumulative, so reductions achieved in the early part of this decade have greater value than those achieved later. This means we should be asking what **actions we can take today to achieve the greatest reduction in emissions quickly and sustainably**, with the resources we have.
- 1.4. Nesta's core argument is that the Welsh Government should focus on achieving the fastest possible reductions in emissions in the private housing sector. Such a 'decarbonisation first' approach will mean introducing new policies focused on **replacing gas and oil boilers with electric heating systems**.
- 1.5. **Electric heat pumps** are the best currently available replacement for fossil fuel heating systems, as they deliver the greatest emissions reductions per pound spent compared to other options.
- 1.6. The Climate Change Committee's most ambitious pathway to

¹ <https://gov.wales/sites/default/files/pdf-versions/2022/7/3/1658310241/innovation-strategy-wales.pdf>

net zero advocates a 28 per cent cut in household emissions over the next decade. To achieve this the UK needs to save some 19 million tonnes of carbon dioxide (MtCO₂e) per year by 2030, compared with 2019. Among other measures, this will require at least five million households in the UK to switch to low-carbon heating, and over ten million to install cavity wall, solid wall or floor insulation.

- 1.7. Wales should aim to maximise our contribution to the Climate Change Committee's pathways, and **reduce domestic emissions by nearly 1m tonnes** by 2030. This means **installing 250,000 heat pumps in homes** by 2030 - saving 447,500 tonnes of CO₂ per year.
- 1.8. We currently have around 8,500 heat pump installations recorded on the EPC register. So Wales will need new heat pump-focused policies to increase the pace of installations. These should initially be targeted at the significant proportion of Wales' private housing stock which is already well insulated,
- 1.9. These new policies should complement a continued investment in insulation, as Wales will also need **500,000 properties to install cavity wall, solid wall or floor insulation** to deliver the needed reductions by 2030. Insulation programmes should continue to target households in, or at risk of, fuel poverty or cold related health problems.
- 1.10. We should not default to assuming deep and extensive fabric retrofits will be necessary to decarbonise all homes. **Some homes will not need any fabric retrofit at all** - and the Welsh Government should prioritise these for heat pump installation in the short term.
- 1.11. Driving the uptake of heat pumps sooner rather than later will also help ensure Wales' **heating sector is not left behind the rest of the UK.**

Headline recommendations:

1. Make the **installation of heat pumps in well-insulated private housing** a focus for the forthcoming Heat Strategy
2. Support households to **optimise their existing heating systems**
3. Invest in **research into how to scale learning** from the Optimised Retrofit Programme to the private housing sector
4. Support households in Wales to **apply for the Boiler Upgrade Scheme (BUS)** from Ofgem
5. Ensure **heat electrification workforce / skills are a focus** within wider retrofit skills policy
6. Develop **new finance products for home decarbonisation** in Wales
7. Remove **unnecessary barriers within the planning system** to heat pump uptake, particularly in urban areas

2. Decarbonisation first: Why Welsh Government should focus on electrification of heat

- 2.1. The Welsh Government should focus on achieving the fastest possible reductions in emissions in the private housing sector. A decarbonisation first approach means increasing focus on **replacing gas and oil boilers with electric heating systems** in the short and medium term.

Objectives and prioritisation

- 2.2. When advocating a particular approach to upgrading existing homes stakeholders might have different outcomes in mind:
- Reducing the carbon footprint of homes / heating
 - Reducing household bills and tackling fuel poverty
 - Improving comfort or health outcomes
 - Lowering risks to energy bills long term from volatile gas markets
- 2.3. There are clearly both tradeoffs and positive interactions between these outcomes. So policy should be designed on the basis of a clear ranking of these priorities.
- 2.4. We note the conclusions of the Auditor General for Wales' 2021 report² into the Welsh Government's Warm Homes programmes Nest and Arbed.

“Given its ambitions to achieve net-zero carbon emissions, the Welsh Government will need to rethink the energy efficiency measures offered. Both schemes rely heavily on installing fossil fuel heating, particularly gas boilers. New, efficient boilers may produce less carbon than older ones but are not the most environmentally effective option.”

² Audit Wales - The Welsh Government's Warm Homes Programme (2021)
<https://www.audit.wales/sites/default/files/publications/The%20Welsh%20Governments%20Warm%20Homes%20Programme%20-%20English.pdf>

- 2.5.** This clearly demonstrates the tension between fuel poverty first and decarbonisation first approaches. The Warm Homes schemes have understandably prioritised the immediate cash savings of a replacement boiler, but this has had the unfortunate consequence of potentially locking in a decade of additional fossil fuel emissions from those homes.
- 2.6.** We believe that the private housing sector is a better space for policies where decarbonisation is the top priority.

The case for putting low carbon heat first

- 2.7.** Our analysis of the costs and carbon benefits of the currently available technologies has led us to focus on rapidly increasing the uptake of electric heat pumps, which we think can be achieved by using innovation to reduce their cost, improve their appeal and increase capacity in the installer workforce. We believe this represents the optimal 'decarbonisation first' approach.
- 2.8.** We have chosen to focus on heat pumps because:
- they deliver a **greater CO2 saving per pound spent** than any insulation measure
 - they are a **market-ready technology**, already widely used in other EU nations, including many with much colder average temperatures than Wales
 - they are **highly efficient** delivering almost **three times as much heat per unit** of energy consumed than a gas boiler, and most other electric heat options
- 2.9.** Insulation clearly has an effect on emissions, as well as reducing bills and improving health and comfort. There is clearly a strong argument for continuing and increasing government support for insulation programmes. However, when evaluated from a decarbonisation perspective, **insulation is not the most cost effective way to reduce carbon emissions** when compared to installing heat pumps.
- 2.10.** We of course recognise that the current cost of living crisis changes the context for what governments should prioritise, and we return to this below.

3. Emissions reductions and costs by intervention

- 3.1. Fig. 1 shows the percentage carbon abatement achieved by replacing a gas or oil boiler with a heat pump. Heat pumps are highly efficient. Heat pumps currently installed in UK homes produce on average 2.7 units of heat per unit of energy, compared to 0.85 for fossil fuel boilers, and the highest quality installations achieve efficiencies of 3.5 and above. This has a multiplier effect on an already cleaner technology, resulting in an emissions abatement of just over 60%.

Fig. 1

Emissions per kWh - kg CO ₂ e	Input - emissions per kWh	Efficiency	Output - emissions per kWh
Gas boiler	0.1830	0.85	0.215
Oil boiler	0.2140	0.85	0.252
Heat pump	0.2290	2.7	0.085
Abatement - Heat Pump vs gas boiler			0.130
Abatement %			60.61%
Abatement - Heat Pump vs oil boiler			0.167
Abatement %			66.31%

Source: Greenhouse gas reporting: conversion factors 2021
<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>

- 3.2. Fig. 2 shows how this translates into actual tonnage of CO₂ emissions annually. The 13,700kWh figure represents the mean average gas consumption per UK household³. Installing a heat pump delivers a reduction of 1.79 tonnes of CO₂ per year. The earlier this abatement is achieved, the greater the cumulative reduction.

Fig. 2

Annual emissions per 13700 kWh	Tonnes CO ₂ e
Gas boiler (efficiency above)	2.95

³ **Subnational Electricity and Gas Consumption (BEIS 2020)**

Statistics https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1079141/subnational_electricity_and_gas_consumption_summary_report_2020.pdf

Heat pump (efficiency above)	1.16
Annual abatement	1.79
% abatement	60.61%

3.3. Fig. 3 shows the emissions reductions achieved by the most common types of fabric retrofit measures. The greatest reduction achievable comes via solid wall insulation, at around 17% - significantly lower than the 60% reduction from installing a heat pump.

Fig. 3		
	Median energy savings	Mean energy savings
Cavity wall insulation	8.6%	8.1%
Loft insulation	3.7%	2.6%
Solid wall insulation	18.0%	17.0%
Cavity wall and loft combined	13.6%	12.5%

Source: National Energy Efficiency Data Framework (NEED) (BEIS 2019: England and Wales data)

Comparison of costs

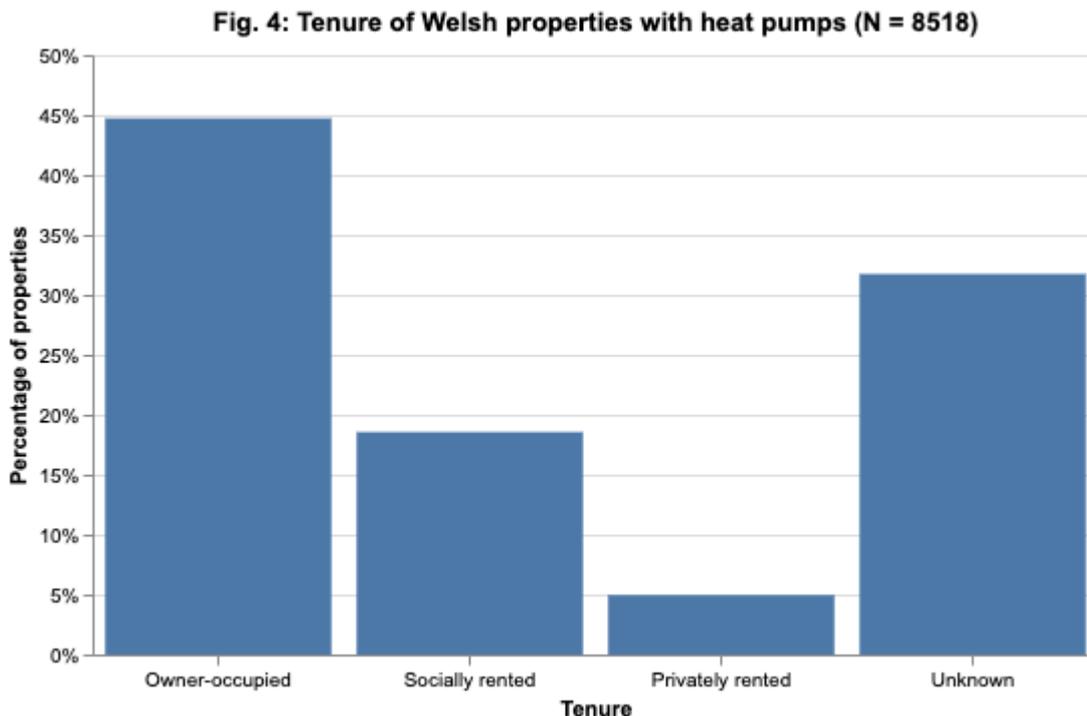
3.4. Nesta's analysis of Microgeneration Certification Scheme (MCS) data⁴ concluded that the median cost of an air-source heat pump installation in the UK is £10,500. This upfront cost will clearly remain a barrier for many households in the early part of this decade. However, with policy changes and achievable improvements in installation quality, heat pumps could generate annual running costs savings sufficient to offset the difference in upfront costs within equipment lifetimes.

3.5. Solid wall insulation is the most directly comparable in terms of cost to a heat pump installation, with average costs quoted by the EPC register broadly falling between £5-15,000. For a 3-bed semi-detached solid wall home with a gas boiler, solid wall insulation might cost around £13k, and would save just under 1000 kgCO₂/year. An air source heat pump costing roughly the same would save 3200 kgCO₂/year.

⁴ How to reduce the cost of heat pumps (Nesta 2022)
https://media.nesta.org.uk/documents/How_to_reduce_the_cost_of_heat_pumps_v4_1.pdf

4. What do we know about homes with heat pumps in Wales?⁵

- 4.1. About 8500 of the 884,000 properties in the Welsh EPC database are recorded as having a heat pump (0.96%). Since the EPC register only includes data on around 63% of Welsh homes, this is likely to be an underestimate of the true number of heat pumps installed.
- 4.2. Of these, 45% are in owner occupied properties, 19% are in social housing, and 5% are in privately rented homes. The remaining 31% are 'unknown' - suggesting their tenure might not have been certain at the time the EPC was undertaken (most likely if they are new builds).



Where are heat pumps in Wales?

- 4.3. Fig. 5 shows a higher concentration of heat pumps in more rural

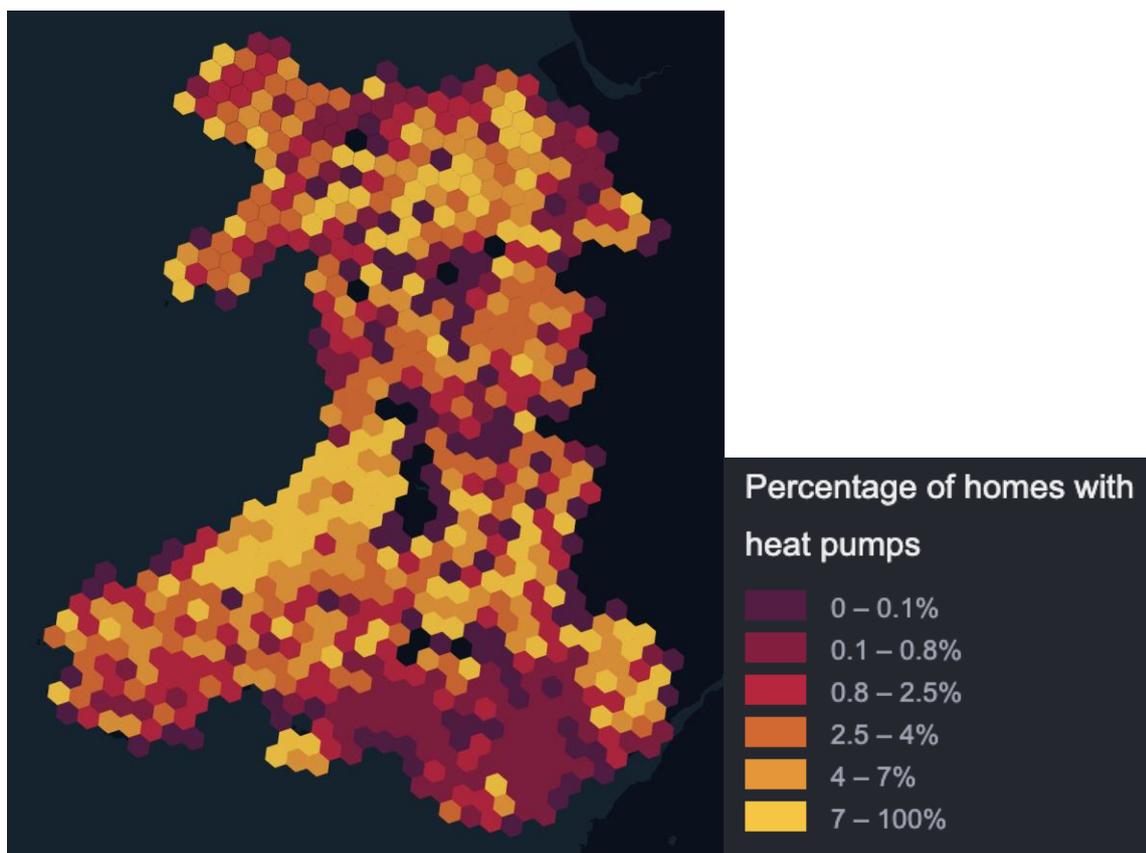
⁵ This section is based heavily on the Energy Performance Certificate (EPC) database. Only around 884,000 of Wales' 1.4m homes are recorded in the database, and the characteristics of homes not on the register may vary from those that are.

We also acknowledge the shortcomings of the EPC register from a methodological point of view - not least the fact that installing a heat pump can actually reduce the EPC rating of a home whilst improving its carbon footprint. Improving the data available to policymakers around housing decarbonisation would be valuable, until then we continue to make use of the EPC record as the best available data set - which at least enables like-for-like comparisons with other users.

parts of Wales, and lower concentrations in cities and urban areas. We have not undertaken detailed research on this for Wales specifically, but factors we could reasonably assume are influencing this would be:

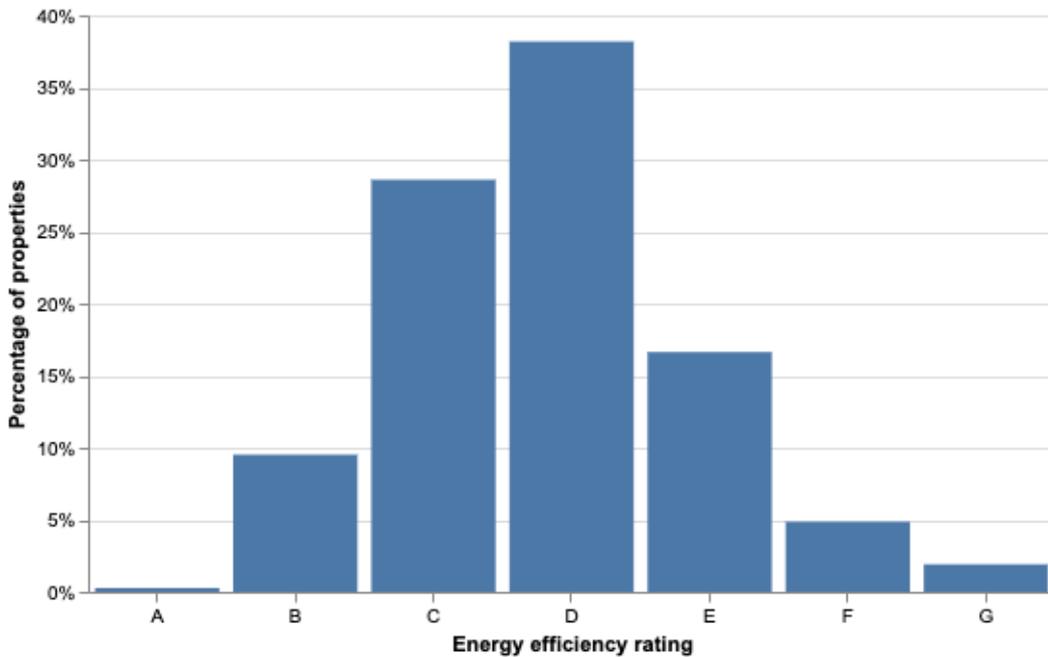
- **Planning restrictions** - which restrict the installation of heat pumps within a certain distance of neighbouring properties, or within a certain line of sight
- **Replacement of off-gas heating systems** - evidence from Nesta in Scotland examining a similar pattern concluded that many heat pumps were being installed to replace LPG or oil boilers. Off-gas grid homes don't have the option of installing combi-boilers and heat pumps may compare more favourably on both installation and running costs with oil or LPG based heating systems.

Fig. 5: Distribution of heat pumps, normalised by property density



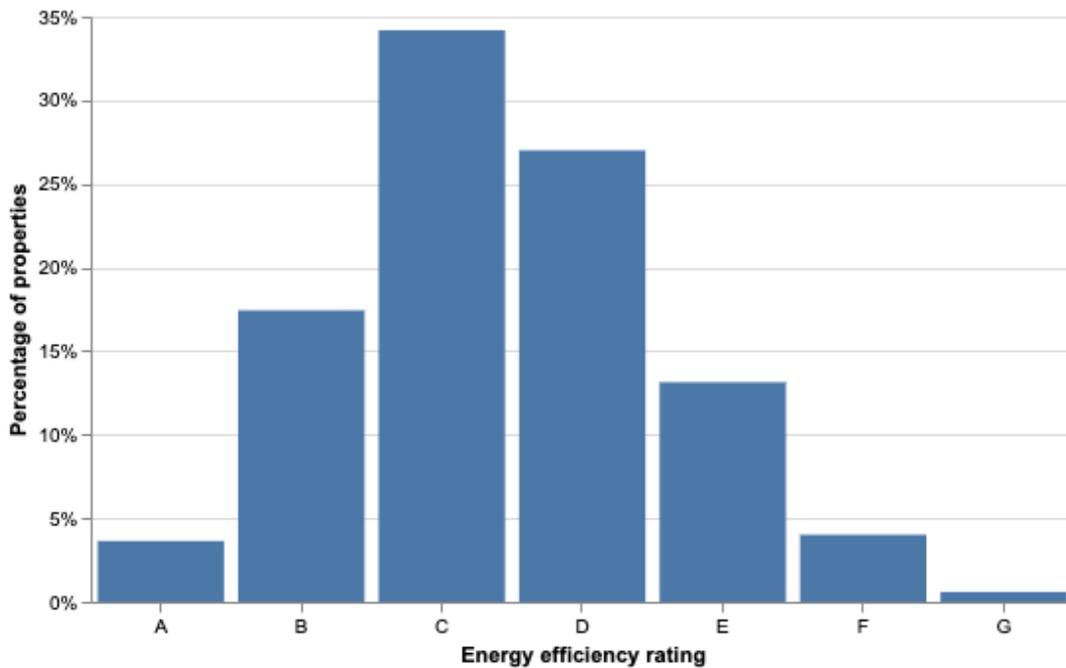
How do heat pump installations correlate with energy efficiency of buildings?

Fig. 6: EPC ratings of all Welsh properties (N = 883,748)



4.4. Fig. 6 shows EPC ratings of all Welsh homes in the EPC database.

Fig. 7: EPC ratings of owner-occupied and privately rented Welsh properties with heat pumps (N = 4233)

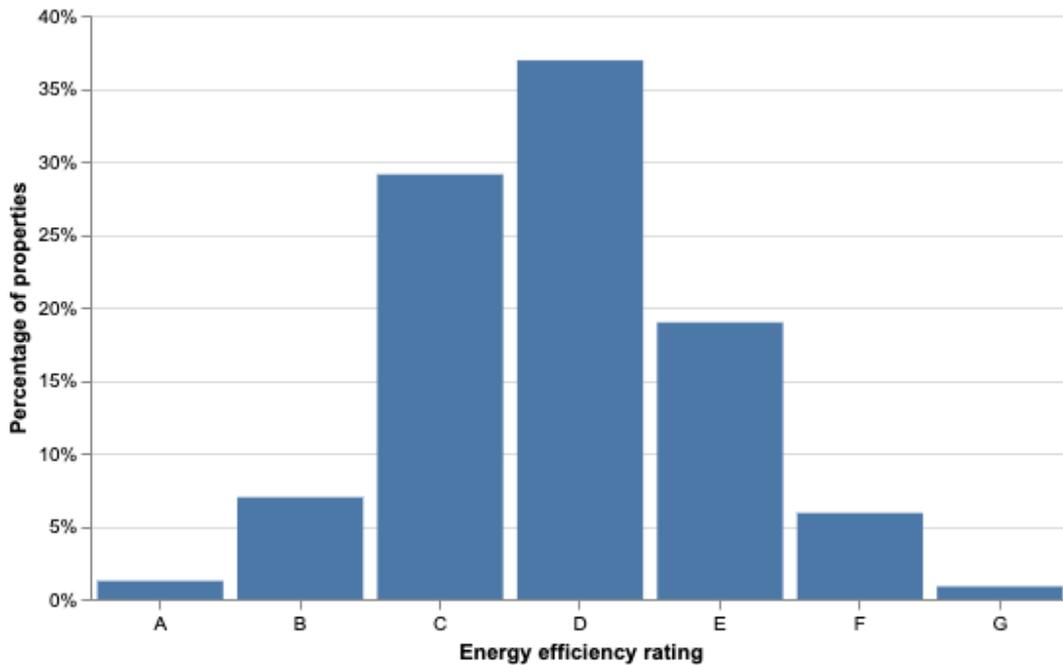


4.5. Fig. 7 shows owner-occupied and privately rented Welsh homes with heat pumps installed. This shows that heat pumps tend to be installed in more efficient homes than the average distribution, but a reasonable proportion are nevertheless in low EPC homes.

- 4.6. Nesta understands that in some cases the installation of a heat pump has caused the EPC rating of a property to decrease. The thermal efficiency of some of these homes may in fact be better than implied by the EPC rating.

Older homes with heat pumps

Fig. 8: EPC ratings of owner-occupied and privately rented Welsh properties with heat pumps, built pre-2007 (N = 2879)



- 4.7. Fig. 8 shows all homes in Wales built before 2007 with heat pumps. These records cover all properties built before 1900 until 2007 - when EPC records began. We have assumed, because of their age, that the majority of these are homes where the heat pump was installed as a retrofit - rather than in a new build property.

- 4.8. Comparing Fig. 7 and 8 we can conclude that heat pumps installed as retrofits appear in private housing in similar proportions to the general distribution of EPCs across the whole housing stock (Fig. 6). The experience of home owners across these housing types would be a valuable area for further investigation.

How many Welsh homes could be 'heat pump ready'?

- 4.9. Heating system design is complex, so homes will need individual assessments before any green upgrades are made, as well as verification and testing after installation to ensure the new system is working optimally.
- 4.10. The assumption is sometimes made that we should aim to install the smallest possible heat pump in homes, as this will have lower operating costs. This often leads to the conclusion that all homes should be assessed for, and receive, fabric insulation retrofit to lower overall demand before a new heating system is installed.
- 4.11. We are concerned that a blanket fabric first approach does not lend itself to achieving the greatest possible pace. For some homes, the amount of additional fabric insulation needed to ensure a heat pump system works well is likely to be minimal. In other cases, the same results could be achieved by resizing radiators. Effective heating controls, which householders know how to use, can also mitigate the need for either insulation or replacement radiators. In some cases, a larger heat pump or a system designed to run at a slightly higher flow temperature will be more cost-effective than a smaller heat pump plus more extensive fabric measures.
- 4.12. In weighing up any of these options, we should be cautious of overestimating the appetite homeowners or landlords will have for the disruption and cost of multiple rounds of building work. If we want people to act, then the message that they absolutely need to have both fabric insulation and a heat pump may result in some homeowners not doing either.
- 4.13. With this in mind, we believe that **between a quarter and a third of Welsh homes might be ready to have a heat pump installed** without any upfront fabric retrofit.

4.14. Our assumptions here are:

- There are 276,256 properties in the EPC databases that are **EPC C and above**, and which **also have 'good' or 'very good' wall insulation** (31.1% of all records)
- Of these, 201,102 **also have 'good' or 'very good' roof insulation** (22.8% of all records)
- These properties are likely to be able to be heated effectively with a low-temperature heating system. In practice, some may need upgrades to pipes and/or emitters (radiators), but further reducing heat loss through insulation is unlikely to be cost effective over the lifetime of a heat pump.

5. Cost of living crisis - the right solutions for the right problem

- 5.1. The ongoing increases in the energy price cap will understandably influence much of the thinking around action to decarbonise homes, particularly as some households are pushed into fuel poverty for the first time. In this context, **government funding for insulation should ideally increase in ambition**. But we should be realistic about how much we can achieve through insulation programmes, and when.
- 5.2. The retrofit sector is not ready to deliver an urgent, unplanned increase in the scale and pace of its activities in time to help households in the winter of 2022. Even if it were, the reduction in energy usage achievable by even the more extensive and costly retrofit remains low (as per Fig. 3 above) at around 17%. Such a reduction would clearly help households, but will also self-evidently not offset all of the anticipated increase.
- 5.3. Sadly, many households in homes that are already energy efficient, and which have already been insulated will also find themselves unable to meet the coming price rises.
- 5.4. Likewise, success in the electrification of heat will play a significant role in reducing our exposure to gas price volatility in wholesale markets. However, there is no real argument that installing a heat pump is a way to reduce costs in the short term. Even if it was, the heat pump installation sector is in a similar position in respect of its capacity to scale up quickly.
- 5.5. Both insulation and heat pumps therefore play *preventative* roles

in reducing costs in the energy system, but we cannot prevent our way out of a crisis.

- 5.6. Support for households during this crisis will most usefully take the form of direct financial assistance. Nesta has previously supported calls by E3G and others regarding the form this should take.
- 5.7. Policy on both insulation and low carbon heat should therefore focus on what both interventions are best placed to achieve in the medium term, and not be over-optimistic about their potential to help with the immediate crisis.
- 5.8. A, hopefully, short term cost crisis should not make policy makers lose focus on getting to grips with reducing our emissions during this crucial decade.

Recommendation 1: Make the installation of heat pumps in well-insulated private housing a focus for the forthcoming Heat Strategy

- 5.9. For the reasons outlined above, we believe there is a clear policy gap in Wales for a **targeted approach to increasing heat pump adoption in well-insulated private homes**. This should be a focus for the forthcoming Heat Strategy (due in 2023).
- 5.10. We outline further actions which could contribute to an increased pace in decarbonisation below.

6. Other actions to speed up the decarbonisation of private housing in the short, medium and long term

- 6.1. We have argued above for a significant shift of emphasis in retrofit policy. Below are some more specific actions which could contribute to the specific goal of increased heat pump adoption, as well as to domestic decarbonisation more generally.

Short term (12 months)

Recommendation 2: Support households to optimise their existing heating systems

- 6.2. While we would like to see heat pump installations scale up rapidly, the majority of households will remain on fossil fuel heating systems for the medium term. We believe that in the interim, many households could reduce their carbon emissions and save money through simple, low- and no-cost actions. One of these is to lower the 'flow temperature' of their combi boilers. This has the effect of reducing the temperature of water in radiators, without affecting room temperatures.
- 6.3. The majority of condensing combi boilers installed in the UK aren't operating to their maximum efficiency. If flow temperatures are too high, the boiler may fail to condense. This means it will burn more gas, generate more emissions and cost households more than they need to.
- 6.4. At installation, combi boiler flow temperatures are often left on a default setting which is too high for efficient operation. Only one in ten households report having changed their boiler flow temperature in the last year⁶. Many householders aren't aware they can change their boiler's settings, and others are worried they would make a mistake by doing so. However, changing this setting is quick and simple, and reversible.
- 6.5. Nesta has developed a digital tool to help people change their boiler settings, with a communications campaign launching in the autumn. We are keen to work with other organisations to

⁶ ONS Public opinions and social trends, Great Britain: 22 June to 3 July 2022
<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/publicopinionsandsocialtrends/greatbritain/22juneto3july2022>

scale and tailor the advice - including for those who will need additional support (e.g. telephone or face to face advice).

- 6.6. We are also creating an online toolkit for organisations that want to recommend lowering flow temperatures (e.g. community groups, energy suppliers).
- 6.7. Reducing boiler flow temperatures saves money, gas and carbon in the short term, but it also helps households get on the road to a heat pump by normalising low-temperature heating. A home that can be heated with a flow temperature of 50 degrees or lower is highly likely to be heat-pump ready.
- 6.8. As a funder of advice services, the Welsh Government is well-placed to drive increased awareness of boiler optimisation as a simple and quick way to reduce energy usage. It should also mandate the provision of advice on this as part of its future Warm Homes programmes.
- 6.9. Nesta has also commissioned an evidence review and modelling to explore the savings that could be achieved through 18 further low- and no-cost actions, with results due in September 2022.

Recommendation 3: Invest in research to map the most plausible paths to scaling learning from the Optimised Retrofit Programme to the private housing sector.

- 6.10. The Optimised Retrofit Programme is the Welsh Government's flagship 'test and learn' whole house retrofit scheme. Social landlords participating in the programme have an explicit mandate to explore paths to scale outside their own tenure. Nesta believes this has significant potential to increase the pace of decarbonisation, but its success will depend on a proper understanding of how it will be achieved.
- 6.11. Our work on scaling innovation has shown that it requires clarity on:
 - The goals of scaling - **what should be achieved** by growing the impact of a specific intervention - in this case, is it about comfort, reducing bills or reducing carbon emissions?
 - Whether these goals **align with what users want**
 - The key **dependencies** of success - asking 'What made this

successful?' and whether this key factor is also scalable / transferable

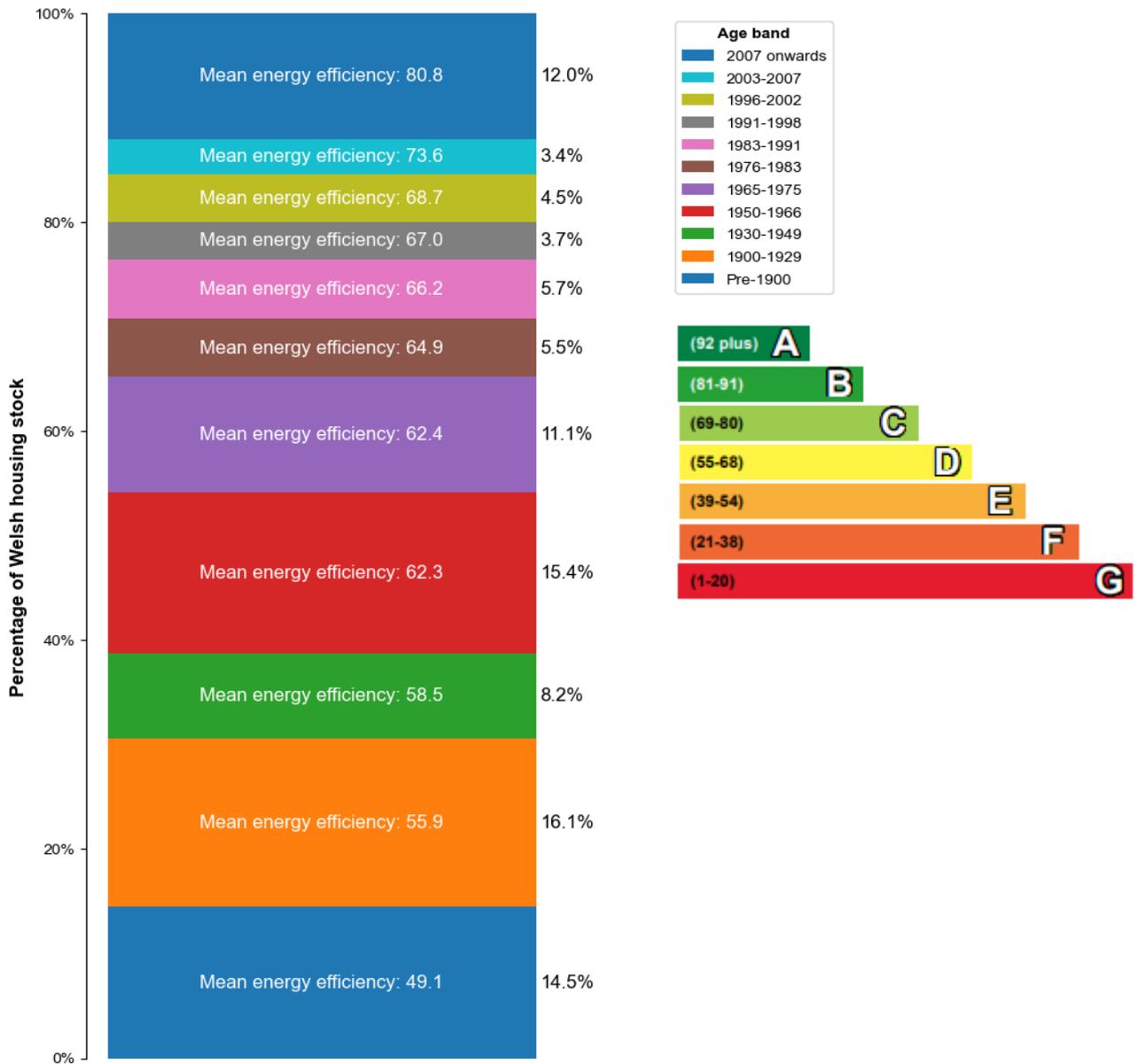
- 6.12. Only then can we understand which **strategies** are likely to be most effective in scaling.
- 6.13. Scaling also requires that there is sufficient **demand** for the lessons. At present, it isn't clear how much demand there is within the private housing sector for the lessons that ORP is likely to generate, or which sorts of homeowners that demand is most likely to come from. Demand is unlikely to be uniform across the owner occupied and privately rented sectors.
- 6.14. The ORP is multifaceted, but clearly two significant dependencies are the availability of large amounts of public funding, and a set of willing delivery partners who are able to make decisions about large volumes of stock.
- 6.15. By contrast, the private housing sector is unlikely to receive the same volume of grant funding, and is fundamentally different in its decision making structures - with 1.1 million individual households in all their diversity requiring a reason to act.
- 6.16. As well as answering the core ORP technical questions like 'What measures work in what housing archetype?', the wider research into scaling should also ask 'What is most persuasive in getting property owners to take action?'. Reliable information about what works technically is unlikely to be sufficient in itself.
- 6.17. Nesta is interested in exploring partnerships in Wales which could explore the question of how ORP learning can scale.
- 6.18. Involving homeowners and landlords directly in research around the ORP at the earliest possible opportunity will enable small-scale testing and insight generation on questions like: How might ORP insights be presented? Who is the most trusted organisation to deliver these messages? Have we tested our assumptions about what private owners and landlords are trying to achieve when upgrading their homes? Does this align with what the ORP is learning?
- 6.19. This can be followed by larger scale trials to see which of the important behavioural barriers can (and cannot) be overcome by the ORP's findings.

- 6.20. To be clear - We have made no conclusions about the extent to which ORP learning can scale, and it is likely to be hugely valuable. But it is clear that we must invest directly in understanding and developing clear paths to scale.

Recommendation 4: Support households in Wales to apply for the BEIS/Ofgem Boiler Upgrade Scheme (BUS).

- 6.21. The BUS provides grants of £5,000-£6,000 towards heat pump installations. Welsh taxpayers have contributed to the funding pot for this scheme, so we should ensure Wales does not miss out relative to England and Scotland.
- 6.22. This activity could focus on the 23-31% of of Welsh housing stock which is already of a good energy efficiency standard (i.e. EPC C and above) - see Fig 9 below.

Fig. 9: Construction age bands and energy efficiencies



Medium term (2-5 years)

Recommendation 5: Ensure heat electrification workforce / skills are a focus within wider retrofit skills policy

- 6.23. The Optimised Retrofit Programme already has extensive activity around skills for fabric retrofit, and this should be complemented with a specific focus on heat installers in Wales.
- 6.24. As well as supporting heat pump rollout in Wales, this will help ensure Wales' heat engineering sector is not left behind the rest of the UK. The design, installation and maintenance of electric heating systems has the potential to provide skilled, secure local

jobs in the foundational economy for decades to come. If Wales moves more slowly, there is a strong possibility that Welsh homes will be upgraded by businesses from over the border.

- 6.25. Nesta has published research⁷ exploring the current state of the heat pump market from a skills, training and productivity perspective and suggests ways of increasing the supply chain's capacity to install heat pumps. Based on direct engagement with the sector, we conclude that the UK as a whole needs to train more engineers each year than there are currently in the whole industry.
- 6.26. Our research found that existing training pathways are complex and fragmented. There is currently no single, clear route for someone new to the industry to train as a heat pump engineer. Training offers are fragmented and sometimes inconsistent.
- 6.27. The industry needs to attract both experienced gas engineers and new entrants. Having enough companies and experienced engineers to take on and help train new workers is vital so the heat pump industry can grow. Attracting new entrants via colleges and apprenticeships will also be crucial given the age demographic of the existing gas workforce.
- 6.28. The pathways for new heat engineers and new fabric retrofit installers are unlikely to be identical. So both should be given a specific focus within the Welsh Government's skills programme around the ORP.

Recommendation 6: Develop new finance products for home decarbonisation in Wales, and target them on wider outcomes

- 6.29. The Decarbonisation of Homes in Wales Advisory Group's 2019 report⁸ and research by the New Economics Foundation on behalf of the Future Generations Commissioner for Wales⁹ identified the provision of publicly funded finance products as a way to address the strategic gap in respect of private housing in

⁷ How to scale a highly skilled heat pump industry (Nesta 2022) https://www.nesta.org.uk/report/how-to-scale-a-highly-skilled-heat-pump-industry/?gclid=Cj0KCQjw3eeXBhD7ARIsAHjsr-LA8BZyQZc3pTQ_nXuDASgK26IRcQFLOlcsfViFTZr4-XJHVNqy-IaApr4EALw_wcB

⁸ Better Homes, Better Wales, Better World: Decarbonising existing homes in Wales (2019) <https://gov.wales/sites/default/files/publications/2019-07/independent-review-on-decarbonising-welsh-homes-report.pdf>

⁹ Homes fit for the Future: The Retrofit Challenge (2021) https://www.futuregenerations.wales/resources_posts/homes-fit-for-the-future-the-retrofit-challenge/

Wales.

- 6.30. Following this, the Development Bank of Wales has begun to invest in developing products which could be used for green home upgrades / retrofit. Nesta has been working in partnership with the Bank to support the development of these potential products, primarily through user testing and insight generation. Our work so far has identified the key needs homeowners¹⁰ have around access to finance, and how to choose the right retrofit measures for their home.
- 6.31. This has informed a large-scale behavioural science experiment to test which of a range of currently hypothetical products might achieve the greatest rate of uptake in Wales. At the time of submission this work has only just begun, but we would be delighted to share our findings with the committee at a later date.
- 6.32. We hope to see the Development Bank pilot a financial product, informed by our work, in the near future. If this pilot proves successful, the Welsh Government should support the scaling of this product and service offering in the longer term.
- 6.33. However whilst a substantial investment of public funding into retrofit in this market would be welcome, we recognise it is unlikely to be possible to fund works in all 1.1m of Wales' privately owned homes. We therefore believe the Welsh Government should consider what else it can achieve by contributing to the development of this finance offer.
- 6.34. For example, a key insight is that householders perceive a big risk in making the wrong decision about what measures to install in their home. They suspect that if they invest in a technology in 2022, they may find this has been superseded by a better technology in the near future. Whilst understandable, this mindset clearly does not lend itself to rapid progress in this crucial period for climate action.
- 6.35. The Welsh Government could address this by using this finance offering to send a clear signal to home owners that there are retrofit measures - like heat pumps - which they can have confidence in installing sooner rather than later. This in turn could

¹⁰ Not including private landlords, at this stage

also send a message to the wider workforce and supply chains.

- 6.36. Householders also clearly identified a need for tailored advice about their own home, and to find trusted installers and tradespeople to do the work. The Welsh Government is well placed to align its advice services funding with the delivery of the Development Bank of Wales' finance offering.

Recommendation 7: Remove unnecessary barriers within the planning system to heat pump uptake - particularly in urban areas

- 6.37. Nesta understands, through our engagement with installers, that planning requirements around air source heat pumps can sometimes present a barrier to uptake in Wales. Particularly in urban areas with higher population density.
- 6.38. Reasons for planning restrictions include assumptions around the noise an outside heat pump unit makes, as well as considerations around placing units at a fixed distance from windows, and out of the line of sight of neighbouring houses.
- 6.39. However, we believe concerns about the noise of heat pumps are often overstated, especially in the context of other noise sources within densely populated areas which go unregulated.
- 6.40. We intend to look more closely at the impact of planning on uptake in Wales, and properly map which regulations apply and where. Given their importance to reducing carbon emissions over the next ten years, awarding heat pumps permitted development status in planning would be more consistent with the approach the Welsh Government has taken on rooftop solar¹¹.

Long term (5 years onwards)

- 6.41. The actions outlined above should align towards a step change in the rate of heat pump adoption in Wales in the second half of this crucial decade.
- 6.42. Further actions in this period could include scaling the learning from the Optimised Retrofit Programme - based on the pathway mapping described above, as well as an increased investment in

¹¹ Gov.wales - Planning permission: solar panels <https://gov.wales/planning-permission-solar-panels>

government finance.

For further information on this submission please contact: Andy Regan -
Mission Manager, A Sustainable Future, Nesta Cymru

Agenda Item 4.1

**Pwyllgor Newid Hinsawdd,
yr Amgylchedd a Seilwaith**

—

Climate Change, Environment, and Infrastructure Committee

Elin Jones MS

Llywydd

23 September 2022

Dear Llywydd

On 17 July, you wrote to me in relation to a request from the Welsh Government to bypass Stage 1 Committee consideration of the Environmental Protection (Single-use Plastic Products) (Wales) Bill. The Committee recognises the Welsh Government's aim to use the Bill as material to support its case in relation to the Internal Market Act in the Supreme Court. That is why it wishes to progress the Bill through the Senedd quickly. This aim was supported by witnesses in our initial scrutiny session on the Bill. However, there are several related matters that need further consideration.

The Welsh Government submitted its request to the Business Committee for consideration in its final meeting before summer recess and before the Bill had even been introduced. At the time of the request, no-one outside the Welsh Government was aware of the detailed provisions of the Bill. The Government has an inbuilt majority on the Business Committee through weighted voting and can exercise that majority in its favour if it so wishes. It was in this context that I requested that the Business Committee defer its decision, so that the CCEI Committee could at least undertake a degree of consultation and scrutiny of the proposals. I subsequently secured from the Minister for Climate Change a commitment to publish a draft Bill.

I can confirm that on 15 August the Welsh Government published a draft Bill and a summary of responses to a related consultation undertaken between 30 July and 22 October 2020. This enabled the Committee to undertake some work over the summer. However, I must emphasise that these arrangements were less than satisfactory, particularly in comparison to Stage 1 committee scrutiny:

- Because of the timing, the CCEI Committee was able to undertake only a short public consultation on the Bill of approximately 3 weeks, starting on 15 August.
- The Government determined that it could not agree to my request to publish explanatory notes, an explanatory memorandum, or an impact assessment alongside the draft Bill. This meant that, for example, stakeholders had no information about the Welsh Government's assessment of the financial impact of the proposals.

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- It became apparent that the consultation in 2020 did not cover the exact proposals in the Bill. Two of the proposed banned products in the draft Bill were not subject to consultation during 2020 and were, according to the Government, added in response to the consultation. I am not in a position to know whether this information was shared with the Business Committee at any point.

Despite these constraints, I am pleased to say the Committee received thirty-four written responses to its consultation. This reflects an appetite amongst stakeholders to contribute to scrutiny of the Bill and reinforces the importance of committee scrutiny at Stage 1.

The Committee has now completed the first of two meetings dedicated to hearing oral evidence on the draft Bill. In terms of scrutiny, we are satisfied we have done everything possible given the time available. In considering the timetable for the Bill, we would be grateful if the Business Committee could ensure there is sufficient time available for the Committee to hear from the Minister and to prepare and publish a report.

As I said in my letter of 11 July, a decision by the Business Committee to bypass committee scrutiny would deny stakeholders and the public the only opportunity for them to be consulted on the detailed provisions in the Bill. The CCEI Committee's work, outside the formal Bill scrutiny process, was necessary to avoid a scrutiny deficit. I believe we have succeeded in our aim. However, this approach should not in any way be considered equivalent to, and certainly not an adequate replacement for, formal Stage 1 Committee scrutiny.

Finally, in the light of these events, it may be timely for the Business Committee to consider the appropriateness of a committee with a Government majority deciding on the extent to which Government Bills are scrutinised.

I am grateful that the Business Committee has consulted the Committee on this matter.

Yours sincerely,



Llyr Gruffydd MS,
Chair, Climate Change, Environment and Infrastructure Committee

Croesewir gohebiaeth yn Gymraeg neu Saesneg | We welcome correspondence in Welsh or English.

Agenda Item 4.2

Julie James MS
Y Gweinidog Newid Hinsawdd
Minister for Climate Change



Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref
Ein cyf/Our ref

Llyr Gruffydd MS
Chair of the Climate Change,
Environment and Infrastructure
Committee
Senedd
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28 September 2022

Dear Llyr

The Environmental Protection (Single-Use Plastics Products) (Wales) Bill, which was introduced on 20 September 2022, proposes to ban all products made of oxo-degradable plastic. During the engagement period of the Bill development, some concerns were raised about the potential negative impact the proposed ban may have on the agricultural sector in Wales.

To better understand the possible impact, two additional research projects were commissioned and completed by ADAS and Aberystwyth University. The key findings from this additional research can be found at Annex A. We have not received permission from the authors to share the reports for publication.

In addition, the Waste and Resources Action Programme (WRAP) has recently completed a survey on public attitudes and behaviours related to carrier bags. The information, which is presented in a PowerPoint format, is attached to this letter.

The research identified there is a broad support for policy interventions regarding single use plastic bags. For example, three quarters of those surveyed supported the ban of single-use plastic bags. Please see the 'Summary and implications' page for more details on the survey's conclusion.

Policy officials are continuing engagement with relevant stakeholders to effectively manage the proposed legislative change and the transition to alternative products. Evidence gathering is also ongoing to ensure all potential impacts are considered in future policy development regarding other single-use products.

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:
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Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Yours sincerely

A handwritten signature in blue ink that reads "Julie James". The signature is written in a cursive, flowing style.

Julie James AS/MS
Y Gweinidog Newid Hinsawdd
Minister for Climate Change

The Environmental Protection (Single-Use Plastics Products) (Wales) Bill Oxo-degradable Plastic in Agriculture - Summary of Additional Research

The Environmental Protection (Single-Use Plastics Products) (Wales) Bill proposes to ban all products made of oxo-degradable plastic. Oxo-degradable plastic is a type that includes an additive (usually a metal salt) which is designed to accelerate its fragmentation process, especially when exposed to ultraviolet radiation, heat and other abiotic environmental factors.

Products made from this type of plastic include shopping bags, refuse sacks, disposable cutlery, plastic cups, agricultural mulch films and certain plastic bottles.

During the policy development stage of the Bill, there was a formal consultation on the proposals, followed by targeted engagement with key stakeholders. During this process, reassurances were sought by the farming unions regarding any potential impacts on the agriculture and horticulture sectors in Wales.

To gain a better understanding of the expected impact and inform policy recommendations, additional research by expert bodies was commissioned. This research was completed after the submission of the Explanatory Memorandum (EM) / Regulatory Impact Assessment (RIA) which was prepared to support the passage of the Bill in the Senedd. For this reason, the findings were not included in the EM/RIA.

Additional Research

Two research papers were completed in August 2022:

- *Literature Review: The use of oxo-degradable plastic in Welsh agriculture* by Dr William Stiles - IBERS, Aberystwyth University
- *Oxo-degradable and Oxo-Biodegradable Plastic use in Agriculture and Horticulture in Wales* by JP Metcalfe – ADAS

Summary of Key Findings

- Both papers indicated that oxo-degradable and oxo-biodegradable plastic have a negative impact on the environment, although they also acknowledged that research in this area is ongoing. The ADAS paper does not mention environmental impacts from oxo-biodegradable film. Dr Stiles noted these types of plastic have a “high potential to result in microplastic pollution”, especially “where environmental conditions do not promote breakdown into sufficiently small fragments” or in conditions where any biological processes run more slowly than the initial fragmentation processes
- The ADAS study also warned about microplastic pollution associated with oxo-degradable plastic products, emphasising that microplastics are entering the food chain, and the “effects of microplastic bioaccumulation on animal and human health are not yet fully understood”.
- Plastic is widely used in agriculture. Conventional plastic, which is used for silage wrap, floating crop covers, or poly tunnel covers, is more durable and can be recovered and recycled before it starts to break down into fragments and microplastics.

- According to ADAS, the main agricultural use of the oxo-degradable and oxo-biodegradable plastics in Wales are for mulch films for growing maize/sweetcorn, early varieties of potatoes, vegetables and fruit, such as raspberries and blackcurrants. The main purpose of mulching film is weed suppression.
- Oxo-degradable mulches are less suitable for recycling than traditional plastic film, due to their level of contamination by soil. When left in place, these mulches degrade and disintegrate in situ, leading to potential microplastic pollution of the soil.
- The evidence base for the use of oxo-degradable plastic in agriculture is limited. The available data indicates that the UK, generally, is one of the least users of oxo-degradable plastics in agriculture, compared to other EU countries.
- In the EU, approximately 2% of all plastic used in agriculture is classed as oxo-degradable. Most of it is used in horticulture as mulch film.
- It is presumed that adoption rates in the UK as a whole are negligible, meaning that “the presence of oxo-degradable plastic as a proportion of Welsh agricultural plastic use is currently highly limited.” (Dr Stiles)
- ADAS concluded that the use of oxo-degradable film in Wales is limited to a minority of crops, hence the impact of the proposed ban is expected to be minimal. However, one of the impacts identified was an increase in the cost of production for affected crops.

Plastic bags in Wales

Pack Page 109

Phil Downing
September 2022

ICARO
INSIGHT INTO FOCUS



Methodology

- **Fieldwork:** online survey with dedicated market research panels. 1,003 adults, 04-17 July 2022.
- **Quotas:** age/gender interlocked, Welsh region and social economic grade.
- **Access:** The questionnaire was translated into Welsh and respondents were offered the opportunity to complete in English or in Welsh
- **Sub-group analyses:** Socio-demographics (e.g. age, gender, children in the household)
- **Statistical significance:** statistical tests have been undertaken to the 95% confidence level (i.e. 95 times out of 100 the observed difference will be real vs. 5 times it will happen by chance).

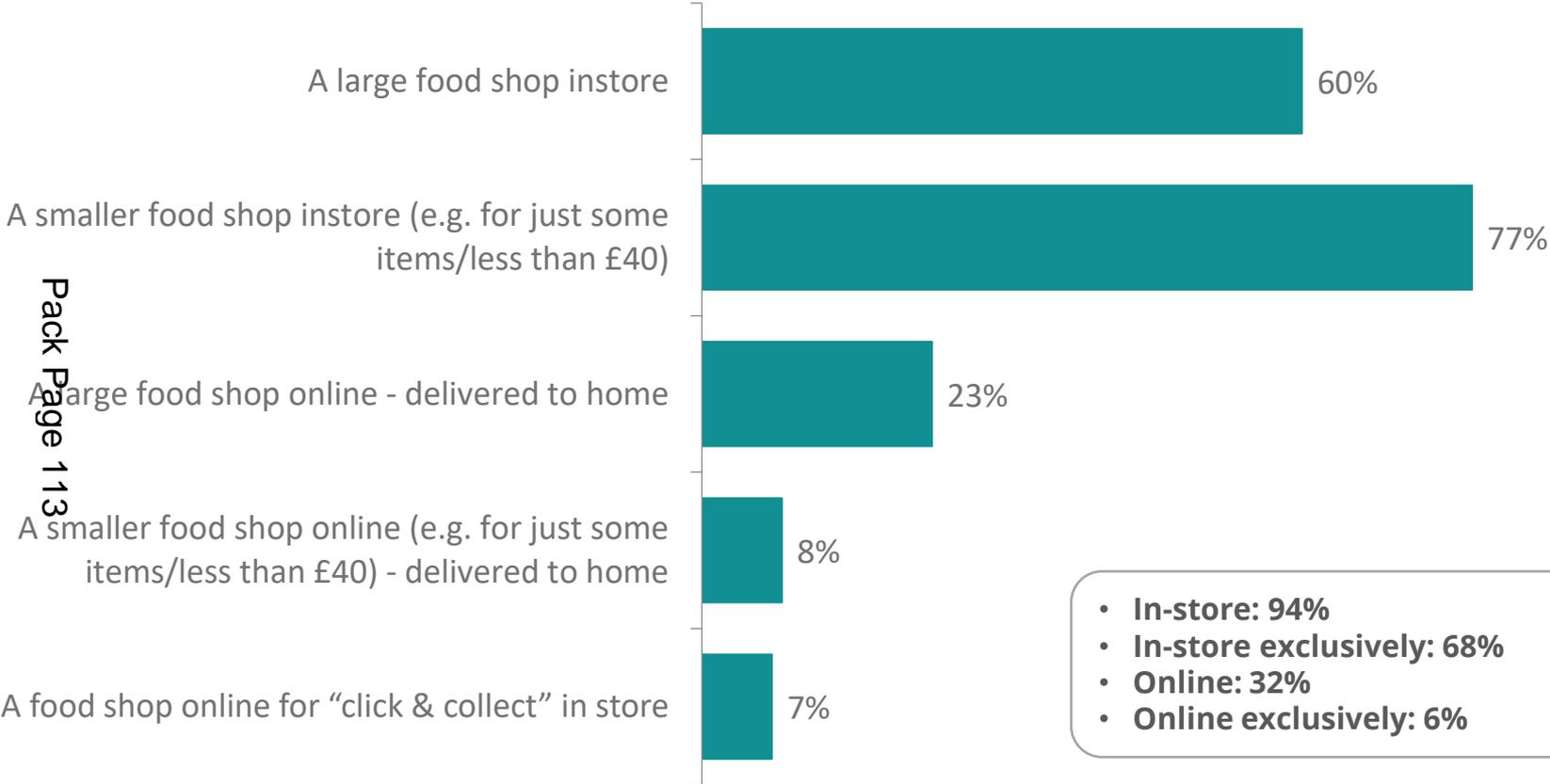


Plastic carrier bags

1. Grocery shops in the past two weeks

Grocery shopping in Wales

Q. In the past two weeks, which of the following – if any - have you personally done yourself?

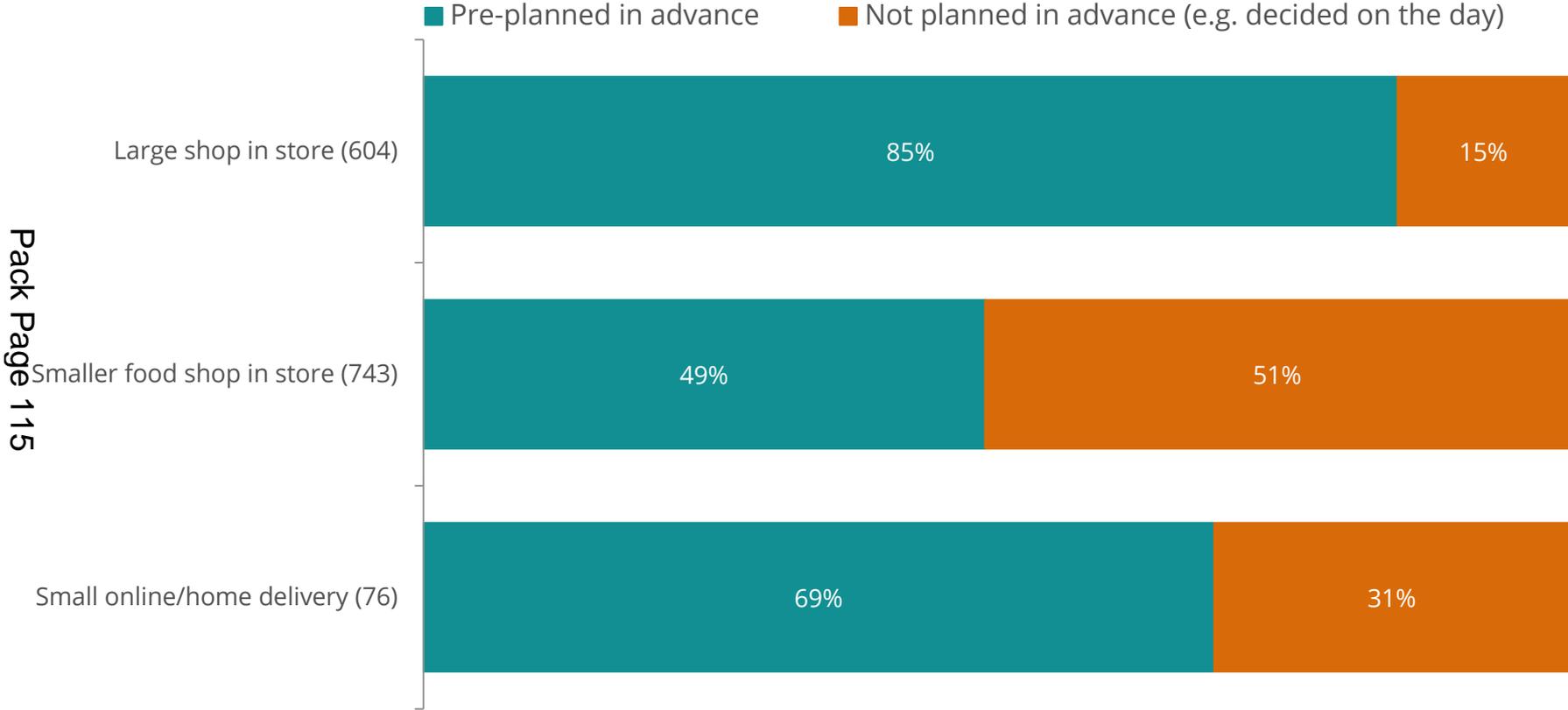


Pack Page 113

2. Nature of the grocery shop

Levels of planned shopping behaviour

Q. You said that you have done a [ADD TYPE OF FOOD SHOP] in the past two weeks. Thinking about the last time you did this, was it a pre-planned shop that you knew in advance that you'd do, or an unplanned shop (e.g. you decided on the day)?

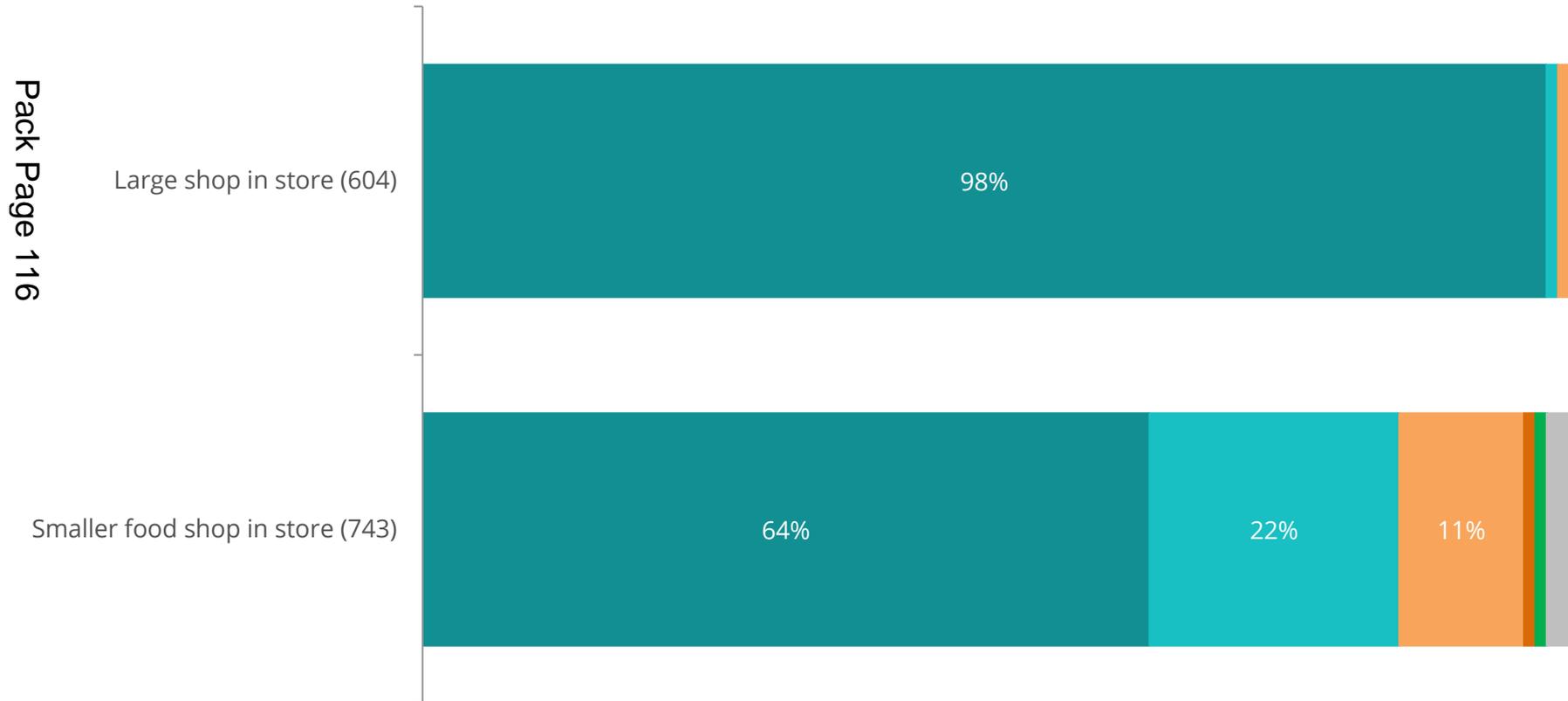


Base: Adults in Wales who answered about their recent food shopping through these kinds of shops (base sizes in brackets)

Where the shop was undertaken

Q. Which of the following best describes what kind of shop it was?

- Supermarket
- Mini/express supermarket
- Local store
- Greengrocer/deli
- Farm shop/market
- Somewhere else



Base: Adults in Wales who answered about their recent food shopping through these kinds of shops (base sizes in brackets)

3. Bags use

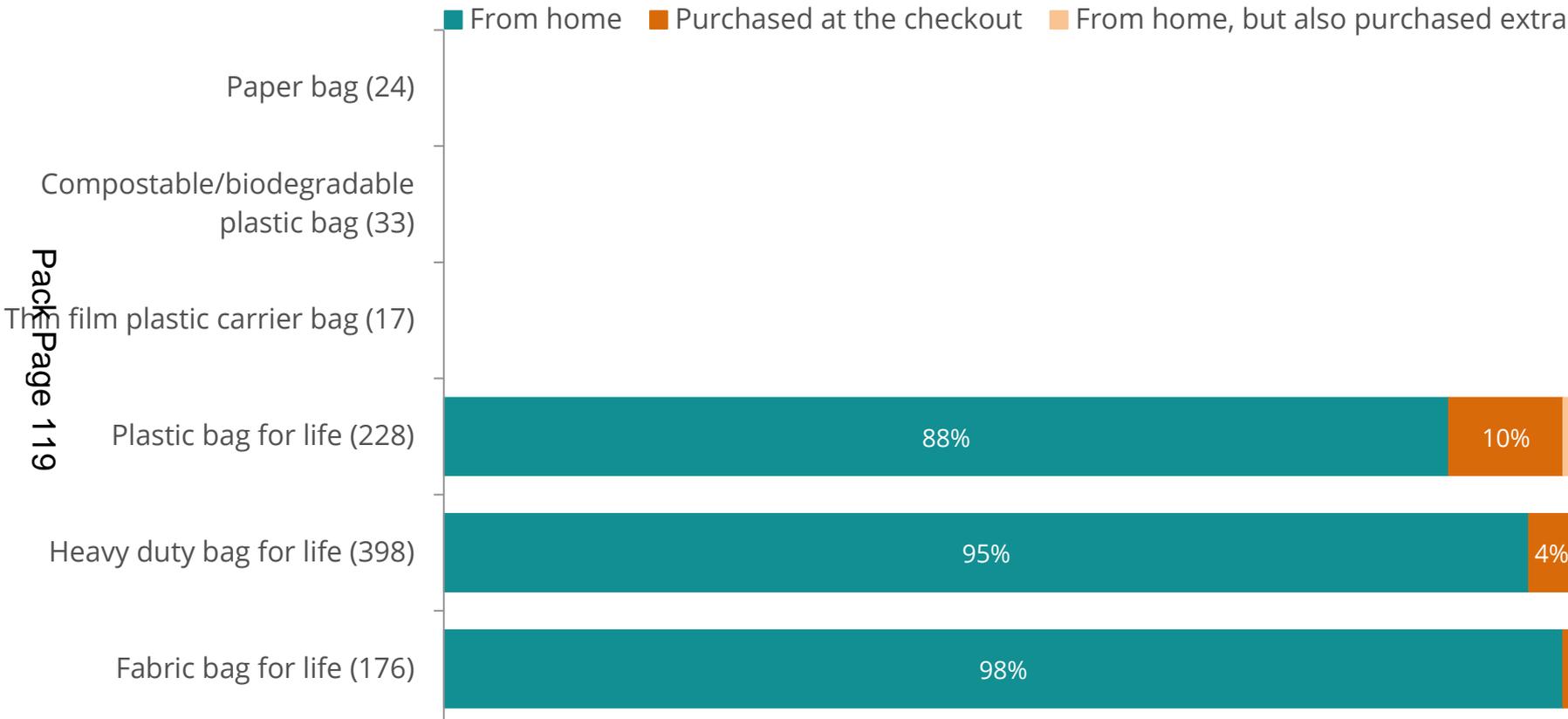
Bag mix

Q. What type of bags did you bring the shopping home in? NB. respondents could select multiple answers to reflect the fact they may have used a range of bag types. Therefore percentages exceed 100%



Large shop in store – bags purchased or taken from home

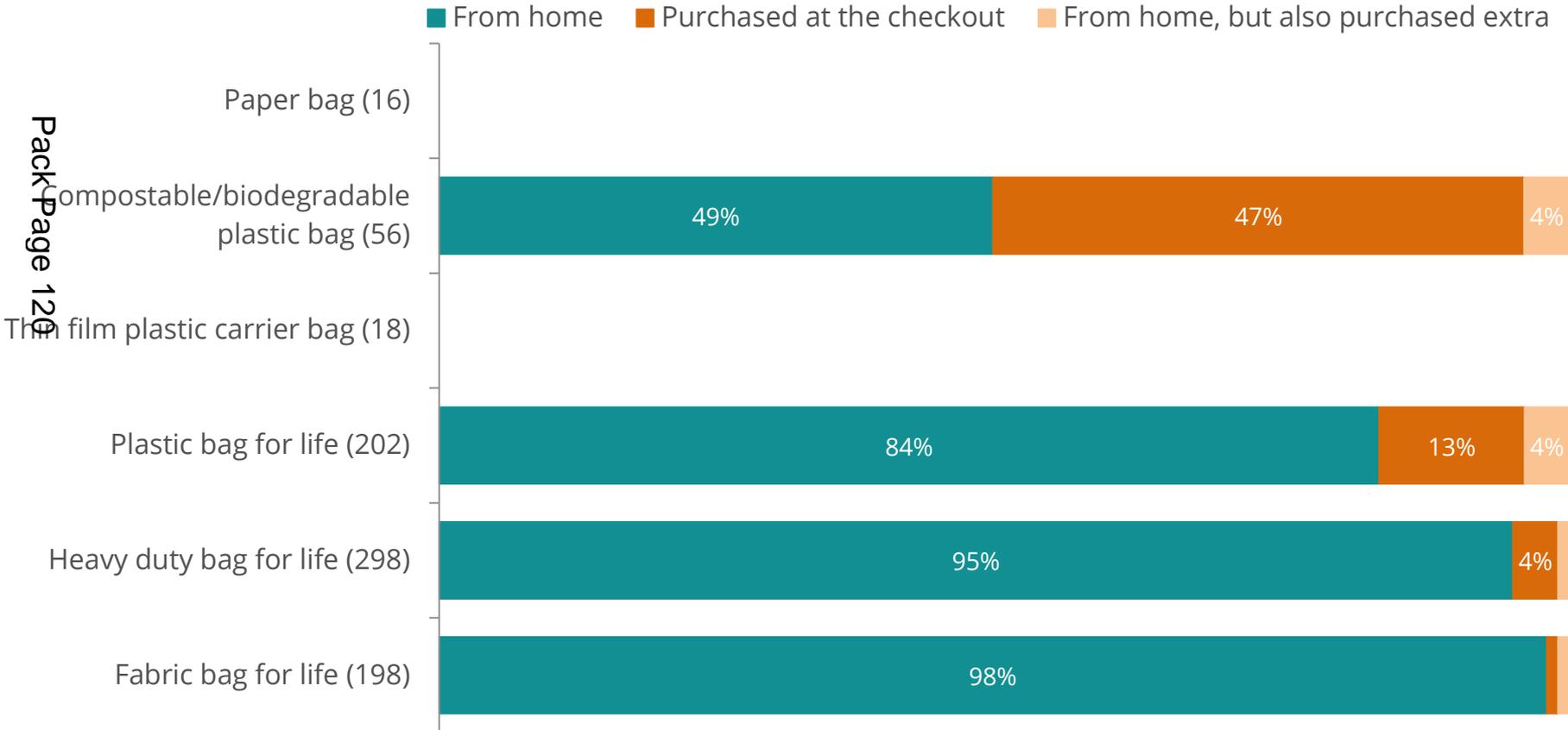
Q. Did you bring those bags with you, buy them at the supermarket or was it a mixture of the two?



Base: 604 adults in Wales answering about a recent large food shop in store

Smaller shop in store – bags purchased or taken from home

Q. Did you bring those bags with you, buy them at the supermarket or was it a mixture of the two?

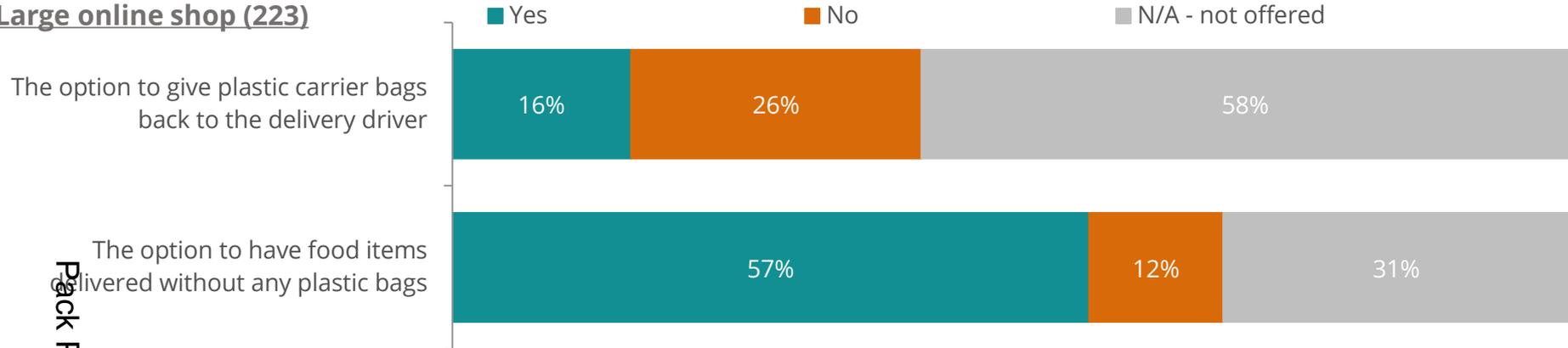


Base: 743 Adults in Wales answering about a recent smaller food shop in store

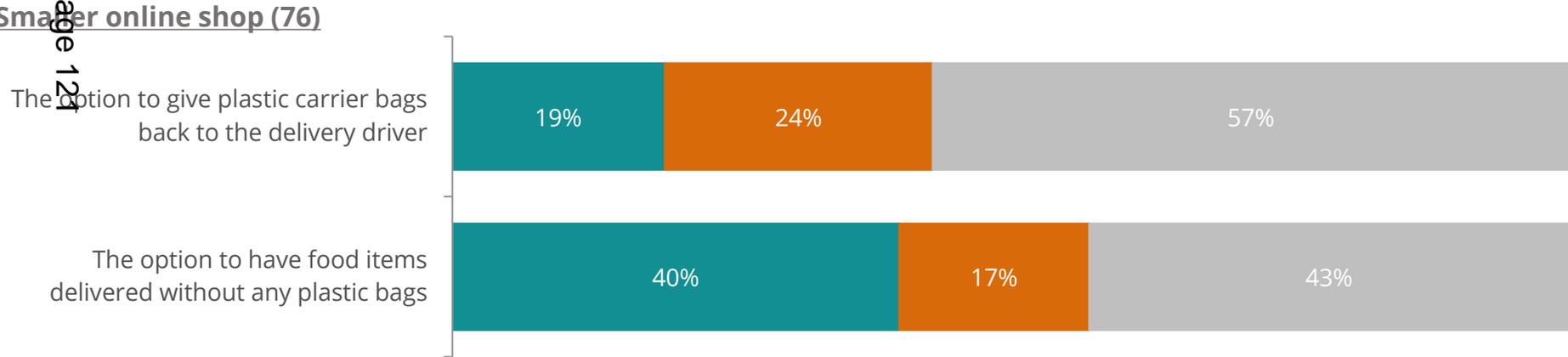
Online shops for home delivery

Q. When the order was delivered to your home, did you take up any of the following options which are sometimes offered?

Large online shop (223)



Smaller online shop (76)



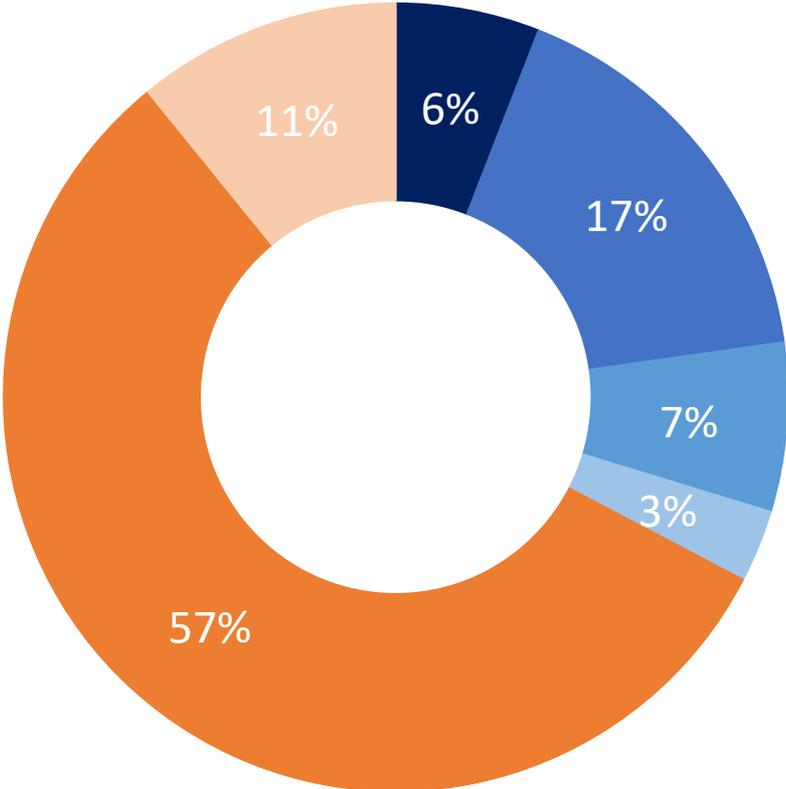
Page 124

Base: Adults in Wales who answered about a recent online order for home delivery (base sizes in brackets)

Click and collect shops

Q. When you collected the order, was the shop packed in carrier bags for you to collect, or bag-less?

Pack Page 122

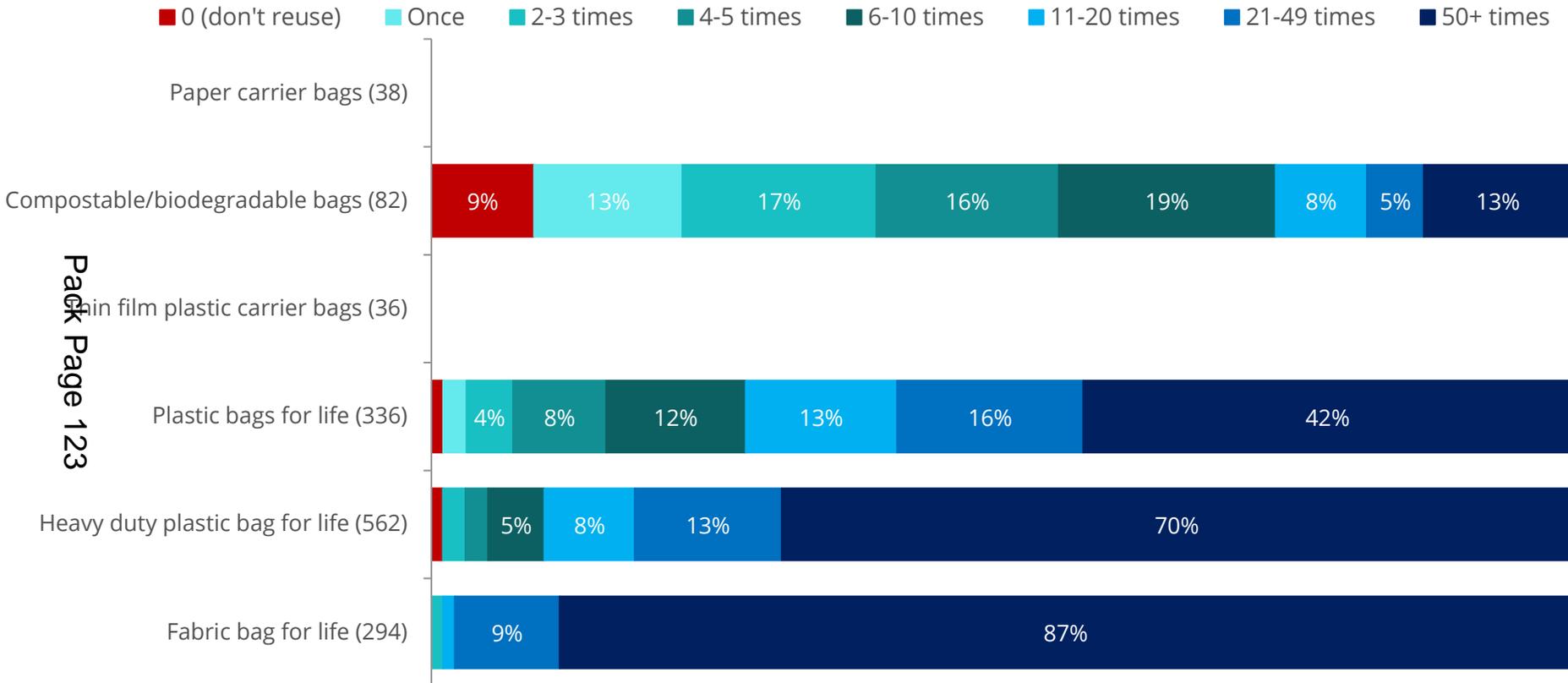


- Packed in paper bags
- Packed in compostable / biodegradable plastic bags
- Packed in thin film plastic carrier bags
- Packed in plastic bags for life
- Without carrier bags - I packed it using my own bags
- Without carrier bags - I took it home without bags (e.g. directly in the car)

Base: 73 adults in Wales who answered about a recent click and collect food shop

Number of re-uses for different bag types

Q. How many times do you typically re-use the following types of bag before they are disposed of?

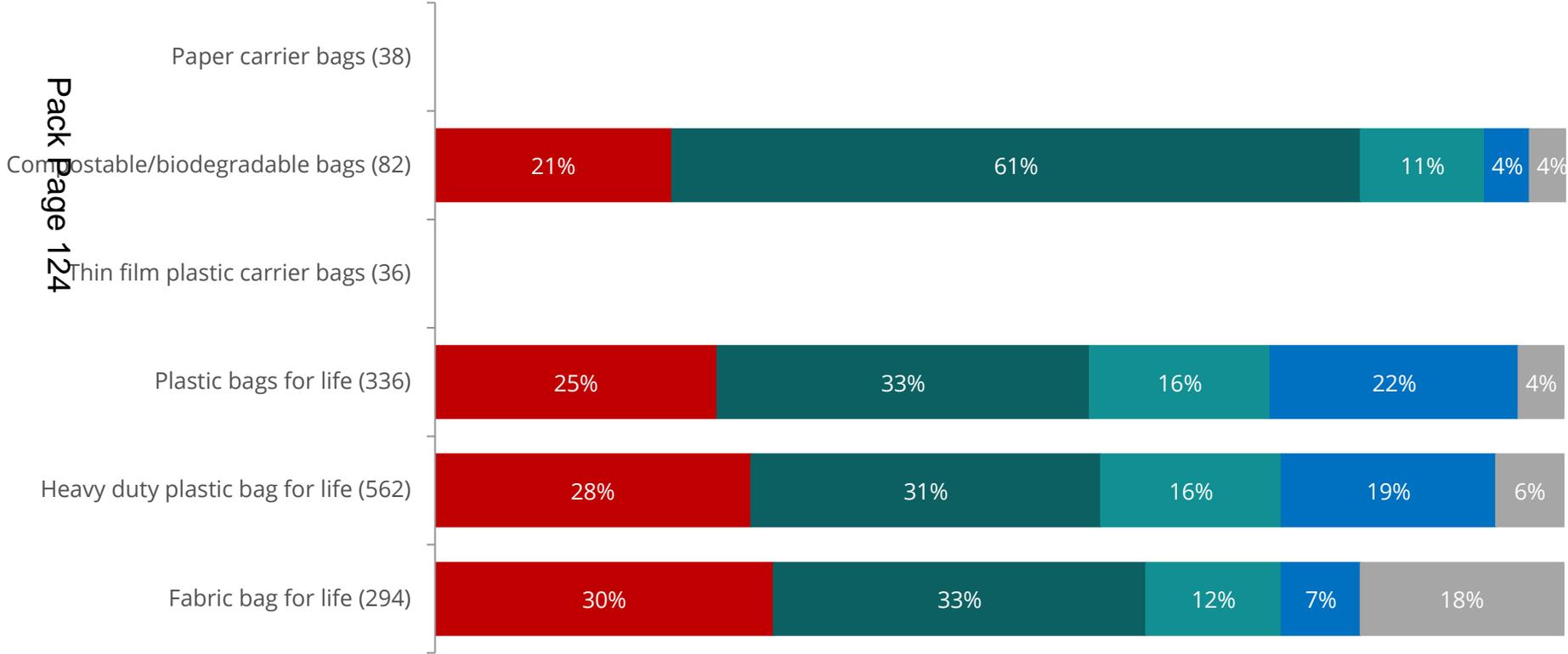


Base: Adults in Wales who used each type of bag during their recent shops in the past two weeks (base sizes in brackets)

Disposal routes for different bag types

Q. When a bag of this type wears out or gets old, or you have more than you can use, how do you dispose of it?

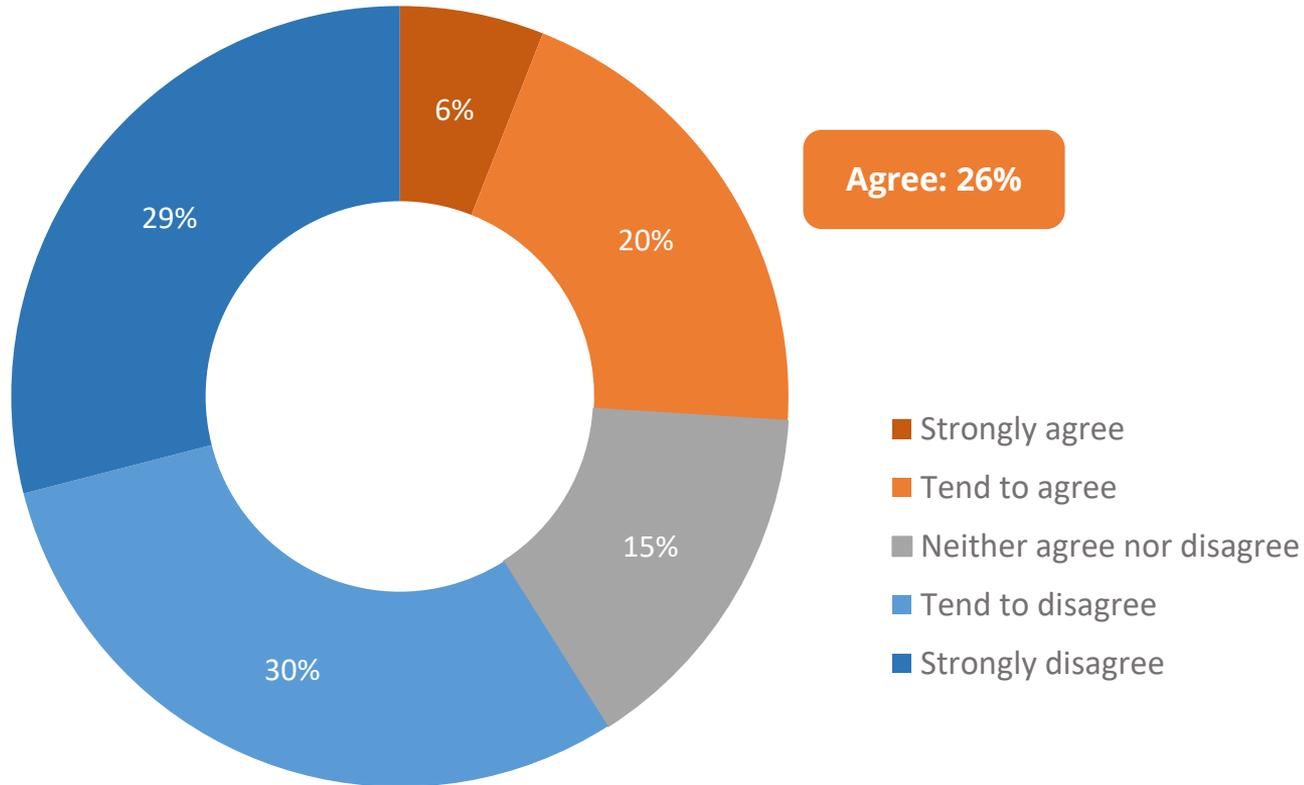
■ General rubbish ■ Recycling from home ■ Recycling away from home ■ Return to the retailer/swap for a new one ■ Something else



Base: Adults in Wales who used each type of bag during their recent shops in the past two weeks (base sizes in brackets)

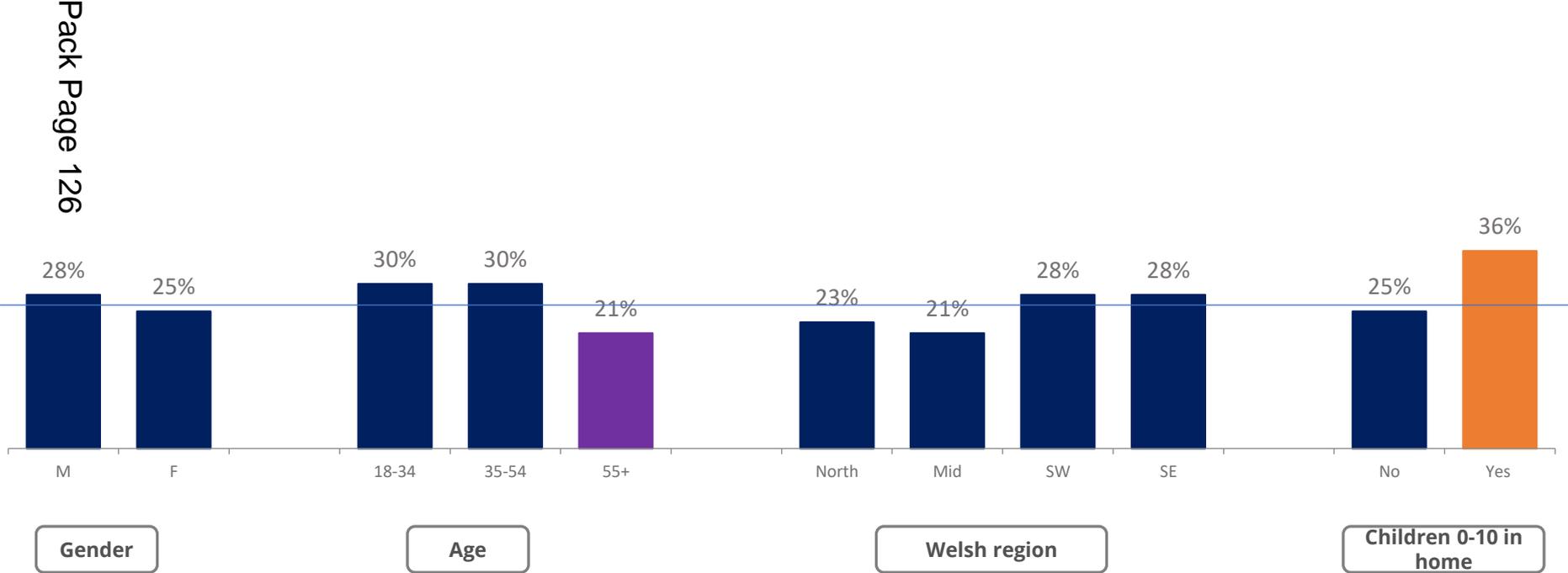
Bags for life not in use

Q. Here are some statements people have made about themselves. Please select how much you agree or disagree with each one: I have a lot of "Bags for Life" stored at home that I rarely use



Differences by sub-group (1)

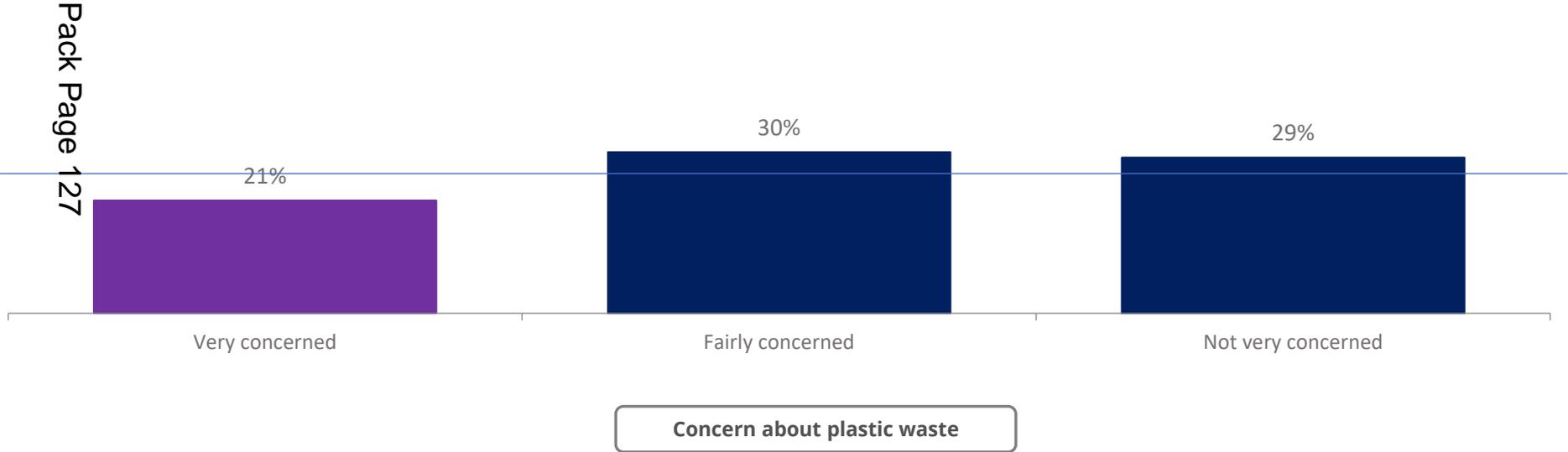
The graph shows the percentage of each cohort who agree they have a lot of 'bags for life' stored at home that they rarely use



Base: Adults in Wales (base sizes in brackets)

Differences by sub-group (2)

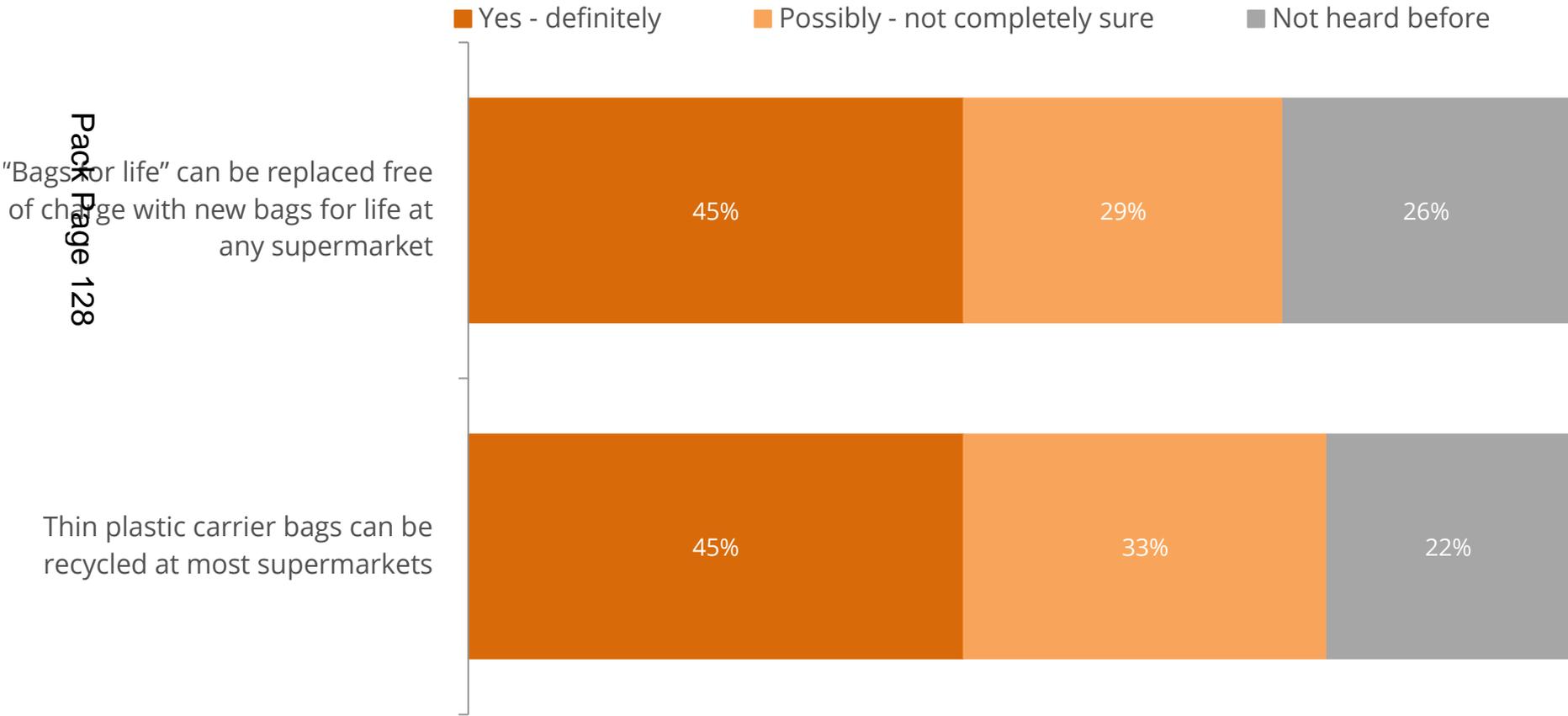
The graph shows the percentage of each cohort who agree they have a lot of 'bags for life' stored at home that they rarely use



Base: Adults in Wales (base sizes in brackets)

Awareness of bag replacement/disposal

Q. For each of the following, is this something that you have heard before or are aware of?



Page 128

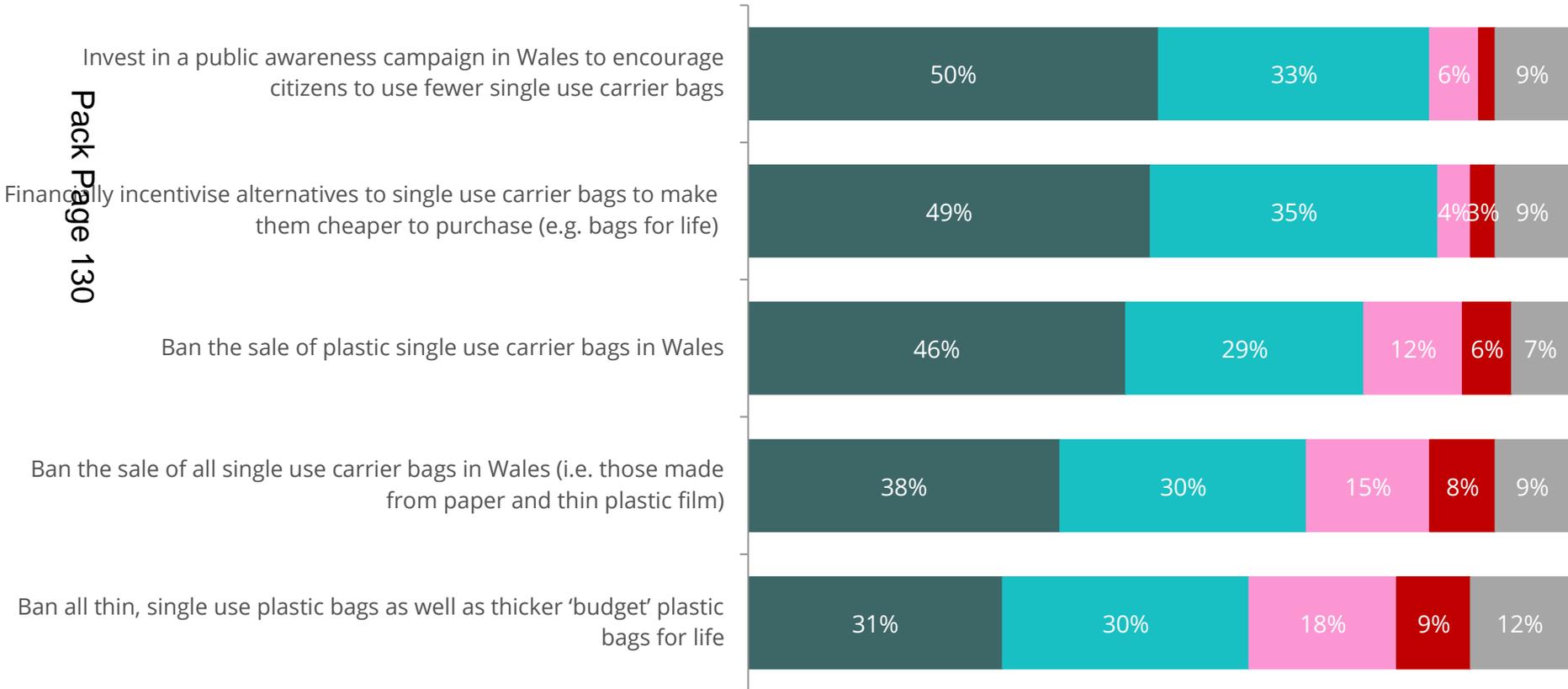
Base: 1,003 Adults in Wales

4. Views towards potential policy interventions

Views towards potential policy interventions

Q. To what extent would you be in favour or against the following interventions on single use plastic carrier bags in Wales?

Strongly in favour Somewhat in favour Somewhat against Strong against Not sure

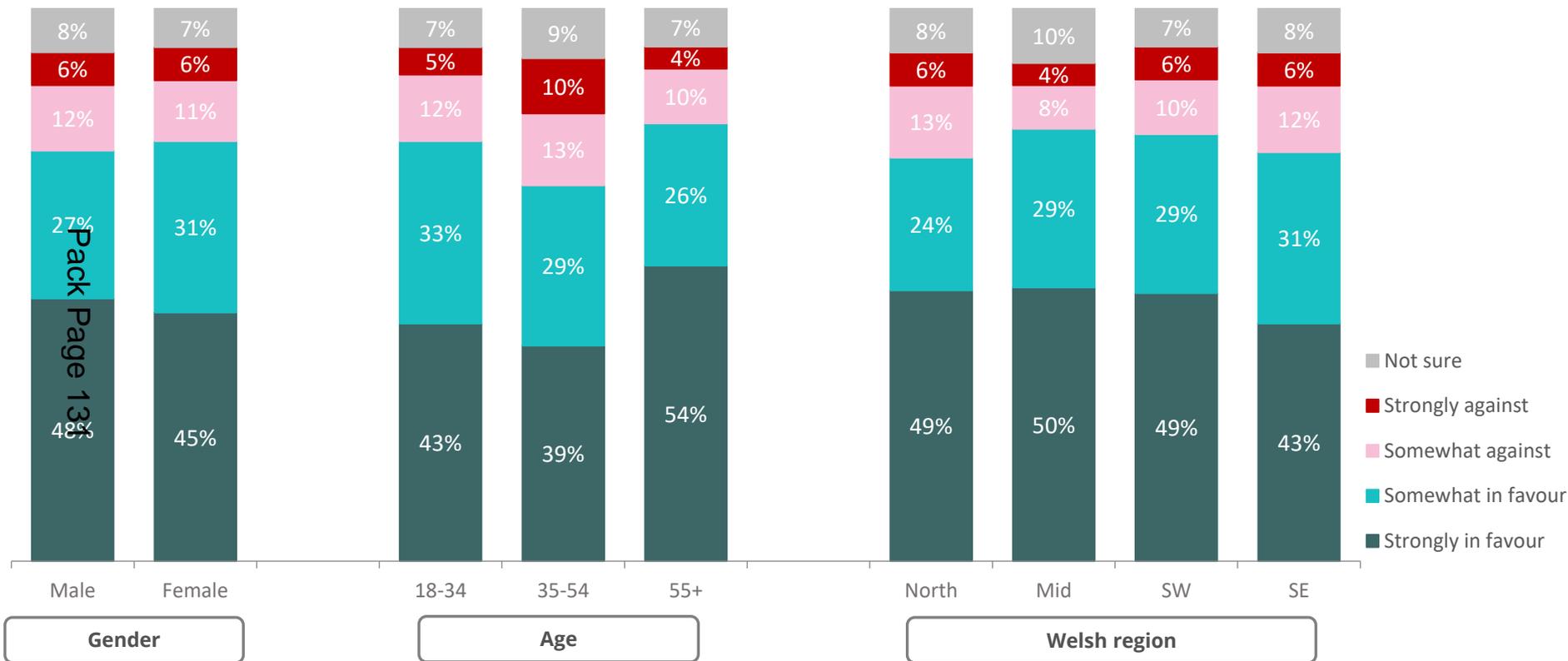


Pack Page 130

Base: 1,003 Adults in Wales

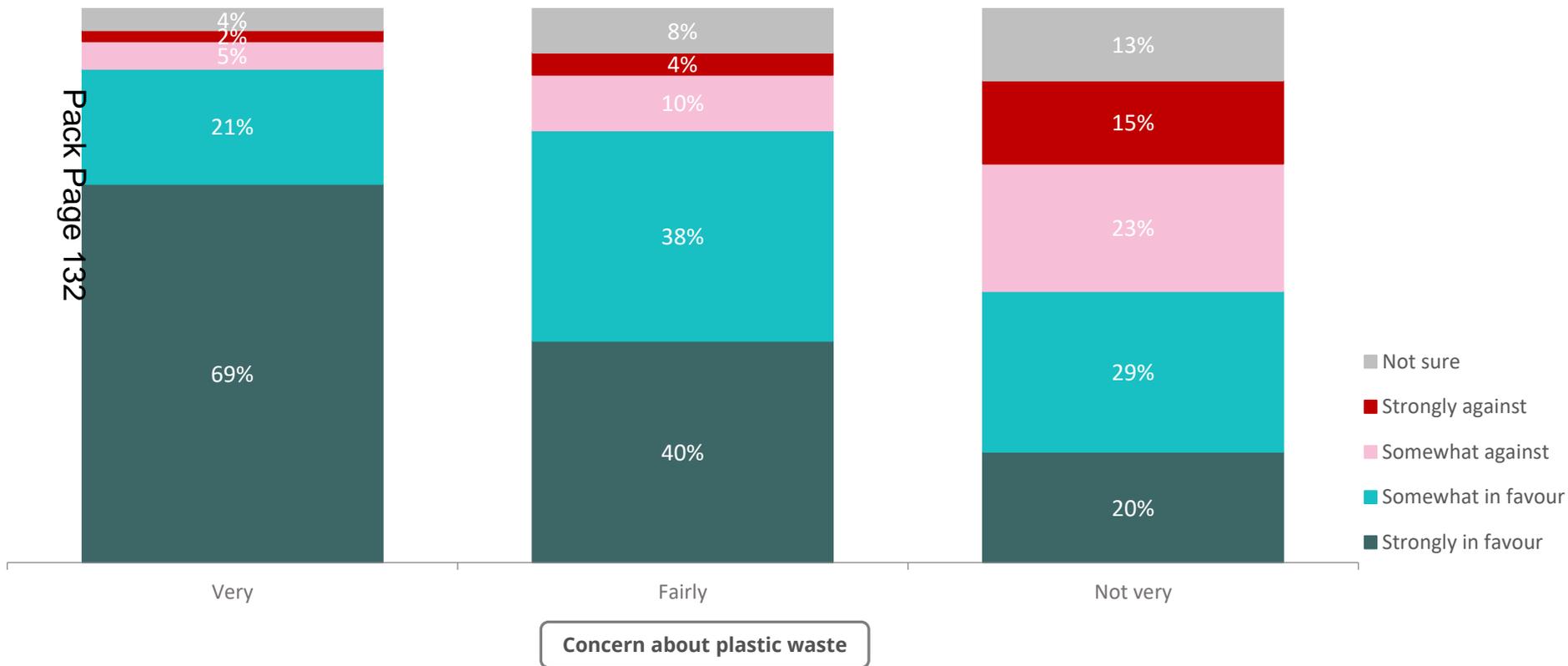
Sub-groups (1)

Q. To what extent would you be in favour or against the following interventions on single use plastic carrier bags in Wales? Ban the sale of plastic single use carrier bags in Wales



Sub-groups (2)

Q. To what extent would you be in favour or against the following interventions on single use plastic carrier bags in Wales? Ban the sale of plastic single use carrier bags in Wales



Pack Page 133

Summary of key findings: Bags



Summary and implications

1. In-store food shops dominate; whereas small online shops and “click & collect” remain niche (at the level of Wales as a whole)
2. The majority of food shops are undertaken in large supermarkets, even smaller food shops.
3. Most food shops are planned; the exception being smaller food shops which are evenly balanced between planned small shops and spontaneous shops.
4. Bags for life dominate, and the vast majority of these are reported to be brought from (even for smaller food shops). The exception is compostable/biodegradable bags which are frequently purchased at the check out, particularly for unplanned small shops.
5. Reported numbers of re-use are very high, particularly for heavy duty plastic bags for life and fabric bags for life.
6. A significant proportion of all bags are put in the home recycling collection; there is less frequent swapping of bags for new ones in store.
7. There are some knowledge gaps, with less than half certain they can switch an old bag for life for a new one, or can recycle thin plastic bags at front of store.
8. There is broad support for a range of possible policy interventions. For example, three quarters strongly or somewhat support a ban on single use plastic bags.



Llywodraeth Cymru
Welsh Government

Vaughan Gething AS/MS
Gweinidog yr Economi
Minister for Economy

Ein cyf/Our ref MA-JJ-2774-22

Llyr Gruffydd MS
Chair, Climate Change, Environment and Infrastructure Committee

27 September 2022

Dear Llyr

Thank you for your letter of 26 July providing a copy of the Climate Change, Environment, and Infrastructure Committee's report on Digital connectivity – broadband.

We are grateful for the committee's work and the constructive recommendations that have been provided. We enclose a detailed copy of our response to all 10 recommendations.

Broadband is a key utility and we'll continue to support all efforts to boost connections the length and breadth of Wales.

Yours sincerely,

Vaughan Gething AS/MS
Gweinidog yr Economi
Minister for Economy

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Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Welsh Government response to the Climate Change, Environment & Infrastructure Committee report on Digital Infrastructure - Broadband

Recommendation 1

The Committee recommends that: The UK Government must develop public initiatives that ensure that the 1% who cannot currently access decent broadband can do so. The Welsh Government should engage with the UK Government on the development of new public initiatives to ensure they meet the particular needs of Wales. The Welsh Government should report back on progress within the next 6 months.

Response: Accept

Officials already engage with their counter parts in the Department for Digital, Culture, Media and Sport (DCMS) on connecting very hard to reach premises across a range of fora including bilateral meetings and regular meetings with other devolved administration colleagues, and the UK Government on digital infrastructure issues. We also routinely respond to calls for evidence, for example, the recent DCMS call for evidence on connecting very hard to reach premises, for which there will be a further chance to provide a formal response to an anticipated consultation on this issue later this year.

Financial Implications – None expected at this stage.

Recommendation 2

The Committee recommends that: The Welsh Government has stated its long-term ambition to see around 30% of Welsh workers working from home or near home. The Welsh Government should clarify whether it is satisfied that the current level of access to broadband in Wales is compatible with its ambition.

Response: Accept

According to the latest Ofcom statistics there is over 95% coverage of superfast broadband to premises in Wales. While we are satisfied that this will enable most people in Wales to work from home, we recognise that there are still premises in Wales that cannot get access to usable broadband. Ofcom estimate that the total number of premises without at least 10 megabits per second download speed is around 15,000.

While this is a non-devolved remit where responsibility for addressing the problem rests firmly with the UK Government, we have consistently stepped in to address those premises without a usable broadband connection. We currently have several relevant interventions including our £56 million full fibre roll out with Openreach which is targeting around 40,000 premises, the Access Broadband Cymru scheme and the £20 million Local Broadband Fund.

Financial Implications: Current funding commitments are set out in the response.

Recommendation 3

The Committee recommends that: The Welsh Government should continue to fund projects that improve connectivity where improving levels of digital connectivity contribute to wider policy goals, such as its net-zero ambition.

Response: Accept

Our focus has been to increase coverage for all residents, businesses and the public and third sectors. Digital connectivity underpins a wide variety of policy ambitions and contributes to several of the Well-Being of Future Generations Act goals including a healthier Wales, a Wales of cohesive communities and a prosperous Wales.

Financial Implications: None expected at this stage.

Recommendation 4

The Committee recommends that: The Welsh Government should seek reassurances from Ofcom that concerns are being addressed about the migration to Voice over Internet Protocol. The Welsh Government should report back to this Committee on progress within the next 6 months.

Response: Accept

We are concerned about the potential impact of the migration to Voice over Internet Protocol particularly in relation to the impact of power cuts on the ability to make emergency calls or the proper functioning of life and limb services that rely on the public switched telephone network, including alert pendants and other alarms. Officials represent the Welsh Government on the cross Whitehall group of officials on the PSTN switch off and have raised concerns around the impact of power cuts at this forum.

We have also discussed our concerns with Ofcom on a number of occasions. Ofcom have put in place standards aimed at addressing continuity of services during power cuts. Officials will continue to make representations and seek reassurances that the switch to VoIP will not jeopardise the delivery of essential public services.

Officials have worked with industry representatives to host a number of seminars for officials and public sector bodies in Wales to raise awareness of the switch off and to highlight to them the potential impact both on public services and the sectors they represent or work with.

Earlier this year the Deputy Minister for Climate Change wrote to the chief executives of both local authorities and health boards in Wales to raise awareness of the issues and to highlight an awareness seminar being undertaken by Ofcom.

Financial Implications – None.

Recommendation 5

The Committee recommends that: The Welsh Government should hold discussions with the UK Government, Ofcom, and providers to explore opportunities to increase sign-up to the social tariff. The Welsh Government should report back to this Committee on progress within the next 6 months.

Response: Accept

Officials in the Digital Inclusion Unit reporting to the Minister for Social Justice are exploring ways to raise awareness of social tariffs and considering if the parameters of these tariffs go far enough.

One option officials are exploring, dependant on additional funding, is to include awareness of social tariffs as part of the '[Claim what's yours](#)' campaign. Through this campaign resources could be developed working with key partner organisations, including our procured programme, Digital Communities Wales, Ofcom, Department for Work and Pensions and Older Peoples Commissioner, to disseminate key messages. Any additional work on the 'Claim what's yours' campaign to raise awareness of social tariffs, would need to target traditional advertising e.g. radio and television, given the target audience.

It was pleasing to note in a recent summit held in June 2022, chaired by the UK Government Digital Secretary Nadine Dorries, that several of the UK's biggest broadband and mobile operators agreed to a series of measures regarding social tariffs. These include allowing customers struggling with bills to move to cheaper packages without charge or penalty, agreeing manageable payment plans, and options to improve existing low cost offers.

The recent announcement by UK Government of a new system to simplify access to cheaper broadband is welcome, as this will allow people receiving certain benefits to ask broadband firms to check their eligibility for social tariffs. The system, to be managed by the Department of Work and Pensions (DWP), went live on 22 August and Welsh Government Digital Inclusion officials will contact colleagues in the Department for Digital, Culture, Media & Sport (DCMS) UK government to understand how the system will be monitored for success.

Financial Implications: Additional funding will only be required if Ministers approve the extension of the 'Claim What's Yours' campaign to include promotion of social tariffs for broadband. The campaign would be targeted at people in receipt of benefits and also those who are digitally excluded, therefore a multi-channel campaign (TV, radio, social media, newsprint) is essential in order to reach the target audience. The success of the campaign could be measured initially by numbers reached and longer term by obtaining data from telecommunications companies and Ofcom of increased social tariff take-up figures.

Research published by Which? in August, analysing Ofcom data, found that the most common adjustment households made, due to affordability issues, was having to reduce spending on other essentials to afford telecoms services. An estimated 3.5 million UK households reduced their spending on other essential items, such as food

and clothes, in the last month to afford their connectivity services in April 2022, up from an estimated 2.2 million in February (a 59 per cent increase).

Recommendation 6

The Committee recommends that: The Welsh Government should undertake a piece of work to consider the impact of the cost-of-living crisis on its Digital Strategy. It should report back on the conclusions within the next 6 months.

Response: Accept

The Digital Strategy for Wales sets a clear vision and ambition for digital in Wales across 6 mission areas: digital services, inclusion, skills, economy, connectivity and data.

We recognise that the cost-of-living crisis will have many and far-reaching impacts on individuals, families, communities and businesses in Wales. Welsh Government digital and data officials will consider and report back on potential impacts across the Digital Strategy for Wales mission areas, as they deliver the actions in the refreshed [Delivery Plan](#) published in July.

The next meeting of the Ministerial Digital Policy and Delivery Group, which reviews delivery progress against the strategy, will be focused on their findings and assess how the cost-of-living crisis impacts each Mission area and the strategy as a whole. We will share the findings of this review with the Committee.

Financial Implications – None expected at this stage.

Recommendation 7

The Committee recommends that: The Welsh Government should explain how its Digital Strategy will remove barriers for groups who are disproportionately affected by a lack of digital connectivity.

Response: Accept

The Digital Strategy for Wales, through mission two, makes clear our aim to 'equip people with the motivation, access, skills and confidence to engage with an increasingly digital world, based on their needs.

Through our '[Digital Communities Wales: Digital Confidence, Health and Well-being \(DCW\)](#)' procured programme, with an annual budget of £2million (funded jointly by social justice and health), we work with organisations from all sectors that can help reach digitally excluded people. DCW was designed to provide training and support to front line staff, volunteers and organisations to engage with and develop the basic digital skills of end users (citizens) to access and engage with services. A key part of this work is to alleviate some of the barriers recognised with digital exclusion such as motivation, digital skills, affordability and access both in terms of device and connectivity. While DCW is not resourced to directly provide devices and connectivity to citizens, it can provide loan devices to organisations best placed to do so. The

contract commenced on 1 July 2019 and has been extended for a further three years to 30 June 2025.

In addition, DCW are working closely with the Good Things Foundation (a UK charity) on a National Databank initiative, which aims to provide free data for community groups to distribute across the UK, including the most digitally deprived areas.

Financial Implications: None, the Digital Communities Wales contract extension has already been agreed from existing budget lines.

Recommendation 8

The Committee recommends that: The Welsh Government should hold discussions with the UK Government about raising the amounts available for individuals and businesses in rural Wales under the Gigabit Voucher Scheme.

Response: Accept:

The Deputy Minister for Climate Change wrote to his then counterpart in DCMS Julia Lopez MP to raise the underfunding of Gigabit vouchers particularly in areas where digital connectivity is difficult and expensive to deploy. In her response, Julia Lopez MP highlighted that BDUK will be undertaking a review of the scheme over the summer and that the funding limit will be one of the issues to be considered as part of this work.

Financial Implications – None.

Recommendation 9

The Committee recommends that: The Welsh Government should hold discussions with the UK Government about the level of the cap on installations under the Universal Service Obligation with the aim of ensuring that it reflects significant increases in costs and the ongoing cost-of living crisis.

Response: Accept

We have repeatedly made representations to the UK Government and Ofcom dating back to the earliest design consultation for the UK Universal Service Obligation that the introduction of a cost cap would disadvantage the very premises in remote and hard to reach areas that the USO was meant to address, and that the value of the cap at £3,400 was appropriate to benefit those premises. These concerns have been borne out during the operation of the scheme, with costs being quoted to residents and businesses running into tens of thousands of pounds. We will continue to push for a review of the cost cap.

Financial Implications – None.

Recommendation 10

The Welsh Government should set out its position on legislating to require full fibre connectivity for all new-build housing developments. The Welsh Government should also explore how it can ensure that developers are not able to restrict homeowners from being able to access other providers.

Response: Accept

Officials are already developing detailed proposals to mandate the provision of gigabit capable broadband to all new build developments in Wales through amendments to Building Regulations. As the proposals are still in development, we cannot provide any more detail at the moment. The proposals will be subject to a public consultation, which is estimated to be published around the turn of the year.

Financial Implications – None expected at this stage.

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**Climate Change, Environment,
and Infrastructure Committee**

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Dr Nerys Llewelyn-Jones,
Interim Environmental Protection Assessor for Wales

28 September 2022

Dear Nerys,

Following on from your appearance before the Committee in June 2022, I am writing to inform you that our *Report on operation of the interim environmental protection measures* has been published today.

The report includes a series of recommendations, some of which are for your office. It would be helpful if you could respond to these recommendations no later than 9 November 2022.

Once we have received a response from you, and from the Welsh Government, we intend to schedule a Plenary debate on the report. I will ask Committee officials to get in touch with your office to confirm the date of the debate in due course.

We look forward to receiving your response.

Should you have any queries, please feel free to contact Committee officials at SeneddClimate@senedd.wales

Yours sincerely,



Llyr Gruffydd MS,
Chair, Climate Change, Environment and Infrastructure Committee

Croesewir gohebiaeth yn Gymraeg neu Saesneg | We welcome correspondence in Welsh or English.



Llywodraeth Cymru
Welsh Government

Rebecca Evans AS/MS
Y Gweinidog Cyllid a Llywodraeth Leol
Minister for Finance and Local Government

Ein cyf/Our ref: RE/757/22

Llyr Gruffydd MS
Chair
Climate Change, Environment and Infrastructure
Senedd Cymru

SeneddClimate@senedd.wales

26 September 2022

Dear Llyr,

Inter-Institutional Relations Agreement: Inter-ministerial Group (IMG) for Housing, Local Government and Communities

I am writing in accordance with the inter-institutional relations agreement to notify you of a meeting of the IMG for Housing, Local Government and Communities, which will take place on the 24 October 2022.

The virtual meeting will be hosted by the Welsh Government. The meeting will focus on a building safety update, with homelessness as the substantive item on the agenda. As lead Minister for this IMG I have asked the Minister for Climate Change to chair the meeting, as the agenda items fall within her portfolio.

An update will be provided after the meeting.

Yours sincerely,

Rebecca Evans AS/MS
Y Gweinidog Cyllid a Llywodraeth Leol
Minister for Finance and Local Government

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Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Agenda Item 4.6



29 September 2022

To: Chair of the Climate Change, Environment and Infrastructure Committee, Llyr Gruffydd MS

Dear Committee Chair,

Feminist Scorecard 2022

We are writing to you to share key recommendations from our Feminist Scorecard 2022 that are relevant to the Climate Change, Environment and Infrastructure Committee. The Feminist Scorecard 2022, launched in July this year, tracks the Welsh Government's progress towards advancing women's rights and gender equality in six policy areas:

- Fair Finance
- Caring Responsibilities
- Global Women's Rights
- Equal Representation and Leadership
- Tackling Gender Health Inequalities, and
- Ending Violence Against Women and Girls

Each area is rated using a traffic light system (red, amber, and green), indicating the level of progress towards equality for women and girls in Wales. Your Committee's portfolio crosses several areas and we would like to highlight actions needed to improve women's situation in each area below.

Caring Responsibilities

The area of Caring Responsibilities has regressed from amber to red over the last two years. This reflects the sharp impact of unequal caring responsibilities during the pandemic, with sometimes disastrous effects on women's mental health and finances. The Welsh Government has made positive commitments around childcare and social care, but the pace of action does not reflect the urgency for change. It is therefore a key recommendation that the Welsh Government should invest in a care-led recovery as part of building back greener and fairer and to address the cost-of-living crisis.

Investments in care are green and consistent with the transition to a low carbon economy, as jobs in care directly produce only a small proportion of the emissions of the average current job and use fewer imported inputs. In the long run, an economy with more people employed in care will produce fewer emissions.

Research shows that such investments will improve the resilience of the Welsh society and economy, will boost employment, will help lift people out of poverty and will reduce long-term costs through improving general well-being, in line with the Well-being of Future Generations Act.



Global Women's Rights

We were pleased to see some progress in the area of Global Women's Rights, which retained its amber rating. However, urgent action is needed to support sanctuary seekers and those affected by climate change globally for Wales to be a nation of sanctuary and global solidarity. The Scorecard recommends that Welsh Government should:

- Recognise and provide appropriate support for climate refugees.
- Ensure that the potential of investments in female-dominated, low-carbon sectors such as care and education is adequately considered in the transition to net zero, both domestically and internationally.

We would be grateful for the opportunity to meet with you to discuss how we can work together for greener Wales that cares, and to ensure that women and girls in Wales will not be held back for many years to come. Please contact Fadhilah Gubari at Oxfam Cymru to arrange a suitable date for a meeting on fgubari1@oxfam.org.uk.

We look forward to your response.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Sarah Rees'.

Sarah Rees
Head of Oxfam Cymru

A handwritten signature in black ink, appearing to read 'Catherine Fookes'.

Catherine Fookes
Director of WEN Wales

Agenda Item 8

By virtue of paragraph(s) vi of Standing Order 17.42

Document is Restricted