

Report:
**Research into the economic
impact of the provision of
affordable housing in Wales**

A M I O N
CONSULTING



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1 Introduction

1.1 Purpose of the report

AMION Consulting ('AMION') was appointed by Community Housing Cymru ('CHC') in September 2019 to produce a research report that would provide CHC with a clear understanding of the wider economic impact of investment in affordable housing.

The scope of the assignment as set out in the brief was to:

- undertake research that would support CHC in lobbying for the funding required to deliver its vision of a Wales where good housing is a basic right for all;
- assist CHC in understanding the impact of their activities set out in 'Housing Horizons', namely the housing associations' ambition to:
 - build 75,000 affordable homes, with all new homes reaching near zero carbon standard by 2020, and all homes to reach this standard by 2036; and
 - prioritise local investment with 95p of every £1 spent by housing associations remaining in Wales;
- provide a more detailed analysis of the following themes (to demonstrate the impact of the 75,000 new homes described above):
 - the economic activity (GVA, jobs and skills) generated by investment in 75,000 zero carbon affordable homes over 20 years;
 - the savings made to Universal Credit (or associated legacy benefits i.e. Housing Benefit) through the provision of this additional affordable housing;
 - the savings made by other departmental budgets (for example, social care) by investment in high quality homes;
 - the wider economic impact of housing associations increasing the amount they spend in Wales to 95% of overall spend; and
 - the value generated by every £1 of government grant received in investments outlined, including the leveraging of private finance.

The research has been commissioned to augment the case for Affordable Housing¹ and to ensure that it becomes a key funding priority for the Welsh and UK governments. The report aims to inform the full multiyear spending review that will take place in 2020 and influence manifesto preparation ahead of Welsh Assembly elections.

¹ Affordable housing includes social rented, affordable rented and intermediate housing, provided to specified eligible households whose needs are not met by the market. It can be a new-build property or a private sector property that has been purchased for use as an affordable home.



1.2 Structure of the report

The remainder of the report is presented in the following sections:

- **Section 2** – provides a brief context for the research;
- **Section 3** – sets out a framework for assessing the full range of impacts associated with investing in Affordable Housing in Wales;
- **Section 4** – outlines the projected economic impact of housing associations’ activities in Wales up to 2036 and a commentary on the wider social and environmental impacts that could be realised; and
- **Section 5** – presents our conclusions from the research.



2 Context

2.1 Community Housing Cymru

CHC is the representative body for approximately 70 ‘not for profit’ housing associations and community mutual in Wales. The members all work closely with local government, third sector organisations and the Welsh Government to provide a range of housing and wider regeneration services to local communities across Wales.

During 2017/18, CHC’s members (the Housing Association Sector) spent £1.2 billion on the provision of new homes, refurbishing existing homes and delivering a range of community regeneration initiatives², which represented an increase of 15% on the previous year. The Housing Associations supported:

- total output/turnover of £2.3m and GVA of £886m – which includes both direct and indirect impacts (e.g. supplier effects and induced income effects)³ ;
- 9,138 direct jobs and in excess of 23,000 FTE jobs in total (which includes supply chain/induced employment);
- the delivery of community regeneration interventions with a value of £23m; and
- the provision of 1876 additional homes⁴

While the provision of new homes was lower in 2017/18 compared with the previous two years, the projected 3045 additional homes for 2018/19 will ensure that housing associations remain on track to achieve their contribution of 12,500 homes over a five year period as set out in the housing pact between the Welsh Government, WLGA and CHC.

CHC and its members are currently working to deliver a 20 year vision as set out in ‘Housing Horizons’ which seeks to build a Wales where good housing is a basic right for all. To achieve this vision the sector set out ambitions to deliver 75,000 new affordable homes by 2036 and for all new homes to be zero carbon by 2020. The remainder of this report aims to quantify the potential benefits associated with realising this strategy and the objectives within it.

2.2 Making the case for Affordable Housing in Wales

2.2.1 *Contributing to the UK Housing Crisis*

Since 2010, housing has increasingly risen in importance and is now one of the ‘most important issues facing Britain today’, primarily as a result of the cost of housing and the associated issue of supply.

² These relate to care and health; employment support and apprenticeships; digital inclusion; social enterprise development; financial inclusion; energy projects; empty homes and assisting victims.

³ Direct impact/HA sector outputs and employment - £1.2billion and £359m GVA

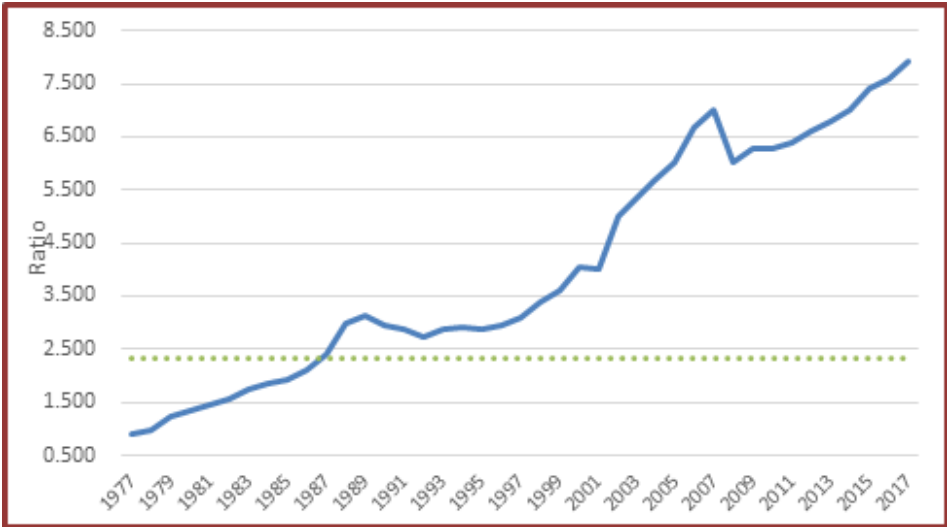
⁴ These additional homes were provided by a subset of the members, i.e. 28 Housing Associations with an active development programme



Whilst the housing crisis varies in its scale and nature in each constituent nation of the UK, addressing the housing crisis in Wales has been a key priority for the Welsh Government. In order to meet this challenge, the Welsh Government currently has a target to build 20,000 new affordable homes over the period 2016-2021, with housing associations on track to deliver 12,500 new homes towards this five-year target. Following the publication of Housing Horizons – the housing association sector’s twenty year vision for housing in Wales - an independent review of Affordable Housing Supply in Wales was commissioned⁵ to increase supply and improve delivery, which identified the need for further investment in affordable housing to deliver on the ambitions of the Welsh Government.

As shown in figure 2.1, the ratio of house prices to income has risen sharply since the turn of the millennium and following a decline associated with the recession, this ratio has started to increase again and is currently at 7.8:1.

Figure 2.1: Ratio of house prices to income for England and Wales⁶



Source: UK House Price Index, Effect of taxes and benefits on household income, Office of National Statistics

In response to the key issues facing the country, the UK government published the most recent Housing White Paper ‘Fixing Our Broken Housing Market’ in 2017 and in the subsequent budget, set a target of 300,000 new homes a year in England by the mid-2020s.

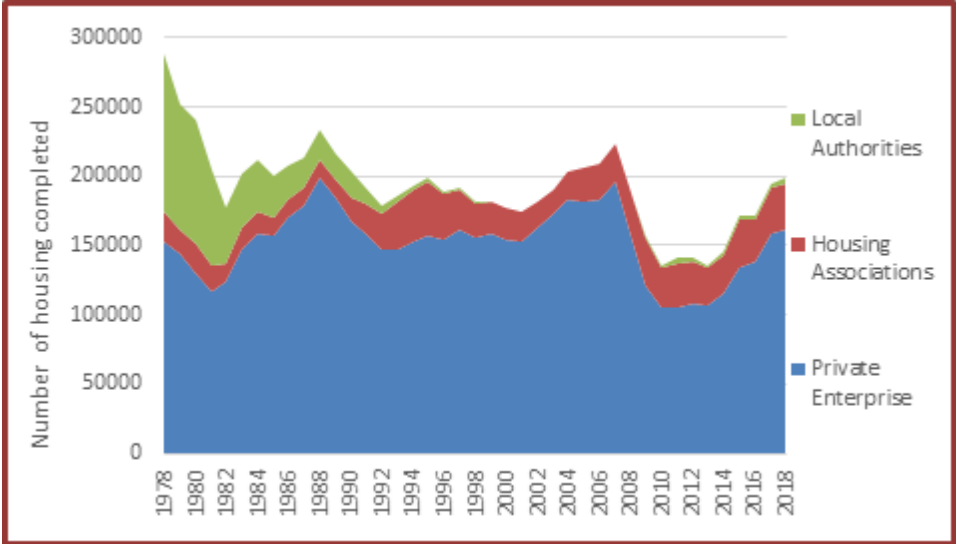
However in Spring 2019, the National Audit Office stated that this would be challenging to meet and unlikely to be achieved by the private sector alone, based on past performance. Figure 2.2. illustrates the number of housing completions since 1978 and the importance of the contribution made by the Housing Association sector.

While these UK Government policy directives will apply only to England, investment in housing will have a knock on effect on funding for the Welsh Government through the Barnett Formula.

⁵ The Independent Review of Affordable Housing Supply Panel (2019) ‘Independent Review of Affordable Housing Supply’, Welsh Government
⁶ <https://www.ons.gov.uk/peoplepopulationandcommunity/housing/bulletins/housingaffordabilityinenglandandwales/2018>



Figure 2.2: UK housing completions by type, 1978-2018



Source: Permanent dwellings completed by tenure 1978-2018, MHCLG

Figure 2.2 also demonstrates the increasingly important role of the Housing Associations⁷ in contributing to the provision of new homes across the UK⁸. Housing Associations offer similar types of housing as local authorities, often to people on a low income or in need of extra support. Although independent, they are regulated by the state and commonly receive public funding and are now the UKs major providers of new housing for rent, although many also run shared ownership schemes to help those who cannot afford to buy a home outright.

2.2.2 Recent Studies

Since the review was carried out, a number of further studies have been carried out to strengthen the case for investing in affordable housing, specifically related to Housing and Health, and the benefits associated with Decarbonising Homes. These studies are important as they provide data and evidence to inform the assessment of the potential benefits that could be realised by building 75,000 new affordable homes by 2036. A very brief overview of the reports is provided below, and the sources of information used to inform the assessment of impact.

(i) Making a Difference Housing and Health: A Case for Investment 2019⁹ (BRE, CHC, Public Health Wales)

This report provides an extension to Public Health Wales’ Making a Difference publications and aims to inform, support and advocate for wider Health policy and cross-sector approaches and

⁷ Also known as Registered Social Landlords or Private Registered Providers of Social Housing
⁸ <https://www.gov.uk/government/statistical-data-sets/live-tables-on-house-building>; Table 211 Permanent Dwellings started and completed, by tenure, UK (Quarterly)
⁹ Watson I, MacKenzie F, Woodfine L and Azam S (2019). Making a Difference. Housing and Health: A Case for Investment. Cardiff, Public Health Wales.



interventions offering benefits to the people, health system, society and the economy. The report provides:

- a summary of the impact of housing on health and well-being across the life course;
- sets out the case for investing in housing as a determinant of health by identifying what interventions work and are value for money - namely investment in housing quality, unsuitable homes and homelessness; and
- identifies priority areas for preventative action within Wales.

Based on the evidence which estimates that poor quality housing in Wales costs the NHS more than £95m per year in first year treatment costs alone (with the cost to Welsh society associated with distress, lifelong care, welfare, finances/economy estimated at over £1bn), the report demonstrates the importance of investing in housing, not only for the significant health and well-being benefits that can be achieved, but for significant cost savings that can be realised. With regard to the three priority areas, the research identified the following potential return on investments gathered from a range of sources:

- **housing quality** - upgrading homes can result in 39% fewer hospital admissions for cardiorespiratory conditions, and £1 spent on improving warmth in vulnerable households can result in £4 of health benefits¹⁰; £1 spent on insulation provides a return of £1.87¹¹ (through improvements to Asthma in children for example); and for every £1 spent on central heating, 42p in health benefits are realised¹²;
- **unsuitable homes** – falls prevention results in pay back in less than 3 years; adaptations and a reduction in falls has a payback in 5-6 years for NHS costs; and home modifications result in 26% fewer injuries requiring medical treatment p.a. For every £1 spent on adaptations prior to hospital discharge there is a saving of £7.50 for health and social care¹³; while extra care schemes reduce NHS health costs by £1,786 per person per year¹⁴; and
- **homelessness** – housing first models for homeless individuals with complex needs returns £3.60 for every £1 spent and for every £1 invested in moving people out of homelessness, £2.80 is generated in benefits¹⁵. Preventing homelessness can result in savings of around £9,266 per person compared to allowing homelessness to persist for 12 months.

Based on the overall cost estimates to mitigate poor housing of £584m for repairs, improvements, reducing falls and cold hazards, the report concludes that the removal of hazards in the home offers a payback in 6 years for the immediate health savings (i.e. £95m for first year treatment costs) and 6 months for the wider impacts for society (i.e. to return the £1bn).

¹⁰ Sheffield Hallam University, Warm at Home

¹¹ New Zealand Study?

¹² Kirklees Warm Zone Project

¹³ Care and Repair, Cymru

¹⁴ NHS, Extra Care schemes

¹⁵ Price Waterhouse Coopers (2018) 'Assessing the costs and benefits of Crisis' plan to end homelessness'



(ii) **Better Homes, Better Wales, Better World, Decarbonising existing homes in Wales, July 2019¹⁶**

This recent report from the Independent Advisory Group for the Decarbonisation of Homes in Wales, provides a series of recommendations for the Welsh Government, gathered over a 15-month period, that will assist in reducing domestic greenhouse gases to net zero by 2050. In particular, they recommend that political parties in Wales should make a strategic commitment to national residential decarbonization and stick to it, and that the Welsh Government should:

- set ambitious housing targets to meet its ambition of achieving net zero carbon by 2050;
- put in place the right quality system and delivery mechanisms across all tenures to help achieve the targets;
- working with others, should develop a holistic package of support across all tenures to motivate and facilitate action;
- collect data about the status and condition of the housing stock to inform future decisions and measure progress towards targets;
- continue to monitor and test new solutions to decarbonise homes; and
- and its partners, should make maximum use of communities, networks, associations and third sector organisations in helping to decarbonise homes.

In May 2019, the UK Committee for Climate Change (UKCCC) recommended that the UK parliament legislate, without delay, to reduce domestic greenhouse gas emissions to net zero by 2050. While UKCCC recommended a 95% reduction in GHG emissions by 2050 for Wales, the Welsh Government responded with its intention to ‘bring forward a target for Wales to achieve net zero emissions no later than 2050.’

In light of legislative commitments and the global challenge, the report comments on how imperative it is that Wales takes action now to reduce emissions produced in Welsh homes, but recognises the particular challenges that this will bring given the condition of Welsh housing stock, prevalence of older homes, current low energy efficiency of many homes and unacceptably high levels of fuel poverty and the need for ‘whole system approaches’ which brings the energy suppliers and networks together with the home owners.

In making its recommendations to the Welsh Government, the advisory group considered the likely costs of implementation against the benefits that would flow from it and sought expert guidance from the Centre for Behaviour Change at UCL (University College London). They strongly believe that in the context of the well-being goals set by the Future Generations Commissioner for Wales, the benefits will substantially outweigh the costs.

¹⁶ Better Homes, Better Wales, Better World: Decarbonising existing homes in Wales, Report to Welsh Ministers from the Decarbonisation of Homes in Wales Advisory Group, July 2019



(iii) Homes of today for tomorrow, Decarbonising Welsh Housing between 2020 and 2050, Cardiff University¹⁷

Cardiff University were commissioned by the Welsh Government in March 2018 to carry out two stages of research in support of the Housing Decarbonisation Programme. The first stage scoping report concluded that the Welsh Government should decide on the programme's priorities (e.g. an exclusive focus on emissions versus a combined focus on affordable warmth, fuel poverty/quality homes) and that further work that delivers an holistic understanding of options should be used to inform decision-making. Furthermore, it recommended that the next step should be the application of stage 1 knowledge to the specifics of the existing Welsh Housing stock, beginning with the creation of a taxonomy for categorising the housing stock into recurrent dwelling archetypes using a dataset such as the EPC dataset 2016 that was used for the IWA Re-energising Wales Study.

The primary aim of the second stage report therefore was to understand the degree to which the nature of the existing Welsh Housing Stock could inform the development of a pathway to decarbonisation, whilst also giving due consideration to energy costs and affordable warmth. Fourteen recurrent dwelling types were used to explore the effect of key retrofit actions upon the Welsh Housing stock by modelling each dwelling type in 1990, in 2018 and in 2050. The impact of key retrofit actions is explained in terms of capital cost, carbon emissions, ongoing energy costs and overheating. Capital costs are also compared with likely ongoing maintenance costs.

The report concludes that if targets for decarbonisation are to go beyond 80%, in line with the CCC's recent directive that Wales should target a 95% reduction in carbon emissions by 2050 relative to 1990 levels, this reinforces the importance of aspiring to net zero carbon throughout the existing housing stock. Key recommendations included:

- UK Government must be lobbied to ensure that energy supplied by the national grid exceeds 60% clean energy by 2050. As this will inevitably increase the cost of energy, action must be taken to protect vulnerable households, to ensure that a further consequence is not an increase in fuel poverty.
- There should be no distinction between performance standards for retrofit and newbuild.
- Similarly, there should be no distinction between standards based on tenure or housing type.
- Some houses have constraints around retrofit, mostly related to character and historic features. However the justification for 'acceptable fails' must be carefully defined so as not to jeopardise decarbonisation targets.
- All other housing must be retrofitted beyond SAP90, to achieve an EPC A rating.
- Retrofit must overcome the performance gap (i.e. the results should be measured as delivered, not as predicted).

¹⁷ Green, E. Lannon, S.Patterson, J.and Variale F (2018). Homes of Today for Tomorrow: Decarbonising Welsh Housing between 2020 and 2050, Cardiff University;
Green, E. Lannon, S.Patterson, J.and Iorwerth, H (2019) Exploring the potential of the Welsh Housing stock to meet the 2050 decarbonisation targets, Cardiff University



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- Retrofit standards are easier to enforce for social housing and the PRS sectors. Work must be undertaken exploring how to initiate this level of retrofit in the owner-occupied sector.
 - A flexible approach that pushes all housing to achieve appropriate performance standards by 2050 is the only way to anticipate achieving 90%+ decarbonisation under assumed energy supply scenarios.



3 A framework for assessing benefits

3.1 Overview

This section presents a framework for measuring the potential benefits of Affordable Housing provision in Wales by categorising benefits that relate to economic impacts, social impacts and environmental impacts, as set out in Figure 3.1 overleaf. These benefits are also valued in different ways, but broadly fall into the following classifications:

- **economic impacts** – which measure income, expenditure or consumption and relate to the ‘real economy’;
- **economic or social value** – which involves monetisation of non-market goods or services to measure the wider economic or social benefits for individuals or society; and
- **exchequer savings** – these include public sector cost savings and/or benefits associated with interventions.

As they represent different kinds of values they should not be added together – some relate to impacts for the economy, while others represent economic values for the individual or society.

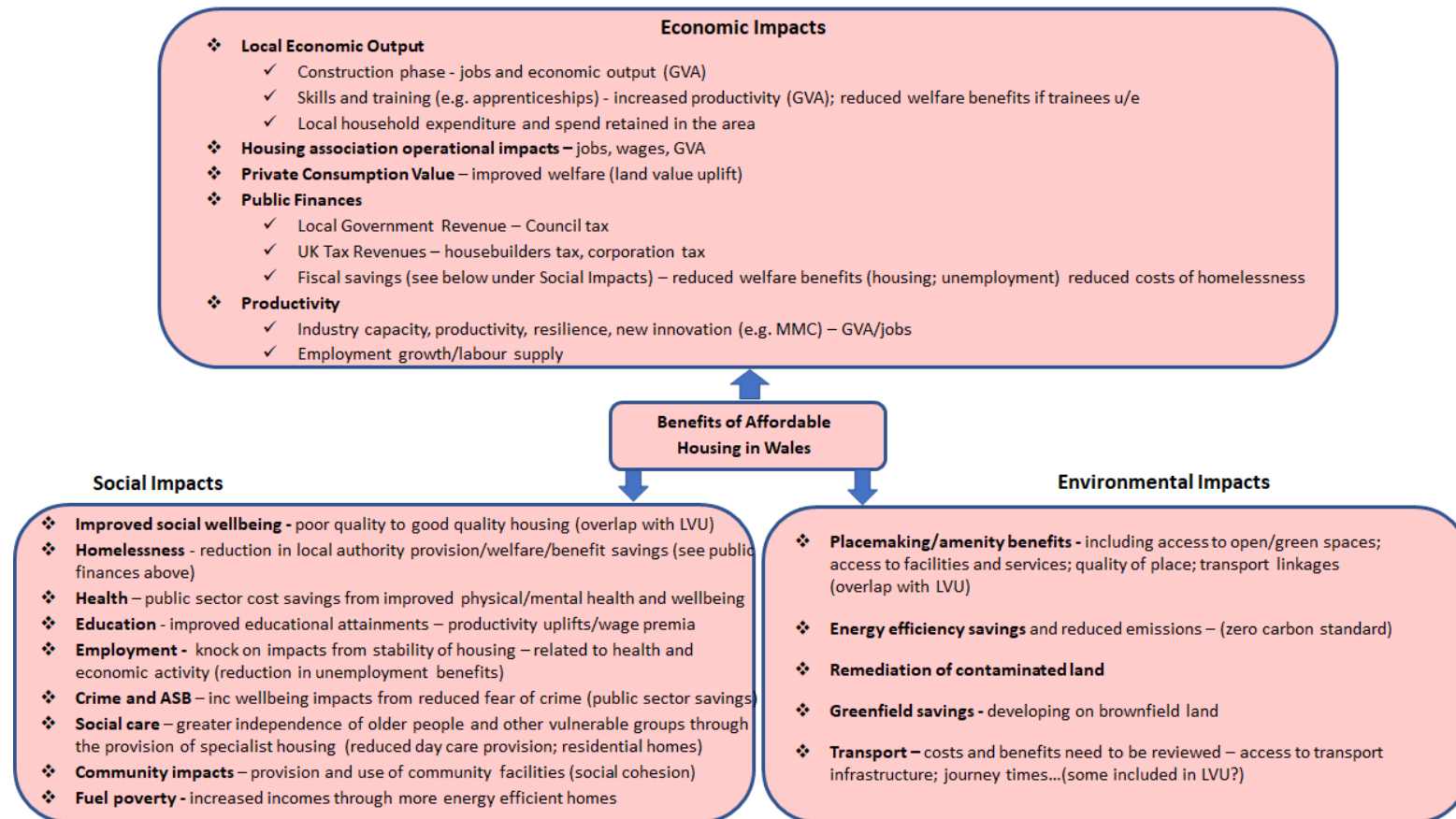
The remainder of this section describes each of the benefits in turn, the rationale for including them in the framework and the methodology that could be used for measuring them. It should be noted that not all of the measures highlighted within the framework have been included in this economic impact assessment for CHC, as some require bespoke analysis of the individual housing development in question, which is outside the scope this commission. For example, there are a range of environmental benefits and amenity benefits associated with the remediation of contaminated land and the development of brownfield land currently in poor condition which could be realised through investment in new affordable housing developments on these sites, however an appraisal of the individual site would be needed to capture/reflect the full benefits of the investment proposed.

Furthermore, a number of the social impacts relate to benefits for the individual, which would require more detailed baseline information to capture the impacts arising. They have been highlighted nonetheless to demonstrate the full range of benefits that could accrue from investment in Affordable Housing provision, and to provide a framework that could be used to improve and capture more in depth monitoring and evaluation evidence to justify future funding decisions.

The measures included in calculating the potential impact of Affordable Homes in Wales for CHC set out in this report are outlined in section 4, together with the assumptions underpinning them.



Figure 3.1: Framework for measuring the benefits of affordable housing provision in Wales





3.2 Measuring economic impacts

3.2.1 *Potential economic benefits*

There are a range of economic benefits associated with the delivery of Affordable Housing which relate to local economic outputs (as measured by jobs and GVA) associated with the construction activities, refurbishment of existing homes, and the ongoing repairs and maintenance of homes (including retrofitting existing housing association stock).

The nature (and longevity) of these activities also lend themselves to the delivery of apprenticeship and training opportunities for young people and other groups excluded from the labour market – which in turn generate additional GVA, improved wellbeing for individual trainees and potential exchequer savings if the trainees were previously unemployed or not in education, employment or training. In addition to the direct jobs associated with the construction activity, there will also be a series of knock-on impacts for the local supply chain and induced employment arising from increased incomes and household expenditure.

Other economic benefits will also include the jobs, wages and GVA associated with the day to day operations of the Housing Associations – i.e. the housing management services, ongoing repairs and maintenance described above, and delivery of wider community initiatives.

The delivery of new homes will also contribute to increasing public finances through for example, additional council tax benefits and new homes/affordable homes bonus payments; tax receipts from the construction companies/house builders and their sub-contractors; and potential exchequer savings associated with a reduction in demand for public services (e.g. health services) arising from better quality homes and welfare payments for example as a result of jobs and training places being filled by individuals who were previously excluded from the labour market.

Two further types of potential economic impacts relate to productivity improvements in the local construction industry – arising from increased capacity, a better skilled workforce, and potential agglomeration benefits from new skills/firms moving into the area; and private consumption benefits (improved welfare) associated with individual occupiers of the new homes.

3.2.2 *Measures*

The following table (Table 3.1) provides a summary of the economic benefits that could be realised through the provision of Affordable Housing, a description of the projected outputs and outcomes that could be measured and the methodology that would need to be applied to assess the scale of the impacts.



Table 3.1: Affordable Housing – Economic Benefit Measures			
Benefit type	Outputs/outcomes	Logic chain/rationale	Methodology for measurement
Local economic output	Jobs/output (GVA) – construction; repairs and maintenance (R&M), including retrofitting	Capital investment and expenditure during construction and R&M results in new economic activity locally	Apply standard GVA and employment ratios ¹⁸ to projected construction and R&M expenditure
	Apprenticeships and trainees	Training opportunities created during construction phase and repairs and maintenance	Apply GVA; wellbeing impact per trainee; cost savings from reduced welfare benefits if trainees were NEET or unemployed
	Local household expenditure	Expenditure of households in the local economy supports additional economic activity (only include new households and spend retained in the local area)	Apply GVA and employment ratios to projected household expenditure
Housing association expenditure	Operational jobs and output (GVA)	Housing association operational expenditure (revenue) supports jobs and other local suppliers	Apply GVA and employment ratios for operational expenditure (as reported in the annual survey)
Private consumption	Individual occupier benefits	People who occupy housing will derive a consumption value (improved welfare). Theoretically includes all benefits for the individual (of the new homes)	Land value uplift – through the use of bespoke project information or VOA benchmarks
	Distributional benefits – for lower income groups or areas	Marginal utility of income higher for lower income groups/areas – value of housing potentially greater than market value	Apply welfare weights to land value uplift
Public finances	Local government revenue	New housing generates additional Council Tax and New Homes Bonus	Apply council tax per unit for new homes
	UK Tax revenues	House builders contribute to UK tax revenues through SDLT (Stamp Duty Land Tax),	Apply average UK tax per unit assumptions to new dwellings

¹⁸ Construction GVA: Turnover ratio taken from the Annual Business Survey (ABS) dataset; £GVA per employee (full time equivalent) also available from the ABS



Table 3.1: Affordable Housing – Economic Benefit Measures			
Benefit type	Outputs/outcomes	Logic chain/rationale	Methodology for measurement
		corporation tax, NI and PAYE and VAT	
	Fiscal savings	Public sector cost savings associated with reduced demand for healthcare, addressing crime, educational attendance – absenteeism...and other social benefits associated with improved housing	Apply unit cost saving assumptions for individuals of new homes
Productivity	Labour supply	Improvement of housing offer can support employment through increase in labour supply where labour supply is constraining economic growth	GVA impact (wage premium) associated with proportion of new housing supporting employment growth
	Industry capacity, productivity, resilience	Increased capacity and productivity by promoting MMC – modern methods of construction	GVA associated with increased employment, productivity and pipeline certainty
	Agglomeration	Benefits for residents/businesses as a result of new individuals or firms locating in the area	Apply agglomeration elasticity to business GVA; use standard uplift to account for benefits (e.g. 10%)

3.3 Measuring social impacts

3.3.1 Potential social benefits

The improved stability provided by Affordable Housing has the potential to generate a range of welfare benefits and improved health and wellbeing (both physical and mental) which has the capacity to lead to further impacts such as improved attendance at school or college, greater attainment levels and increased participation in the labour market. These impacts also have the potential to reduce anti-social behaviour and crime, resulting in less demand for public services delivered by the Local Authority, the Police, Criminal Justice Service, Young Offenders Institutes, and the Fire Service for example.

The potential public sector cost savings that could be realised therefore relate to both the exchequer and local authorities, through:

- **fiscal savings** – from reduced welfare benefits and or other savings made as a result of unemployed or NEET individuals moving into employment;



- **reduced local authority spending** – particularly funding associated with the provision of social care provided for older people, children and other vulnerable groups including homeless residents; and funding for schools to address issues such as persistent truancy and permanent exclusions; and
- **reduced demand for other public services** – to deal with crime and ASB; and health and wellbeing providers (including both primary and secondary care – e.g. GPs, hospitals, NHS, CCGs).

The provision of Affordable Housing can also generate community benefits and social capital through the provision of new community services and facilities and the development of community cohesion and less social exclusion, as well as offering lower income households greater choice and more disposable income to reduce fuel and other poverty associated with more expensive private rented accommodation.

3.3.2 Measures

The following table (Table 3.2) provides a summary of the social benefits that could be realised through the provision of Affordable Housing, a description of the projected outputs and outcomes that could be measured and the methodology that would need to be applied to assess the scale of the impacts.

Table 3.2: Affordable Housing – Social Benefit measures			
Benefit type	Outputs/outcomes	Logic chain/rationale	Methodology for measurement
Welfare	Improved health and wellbeing	Moving from poor housing to decent/affordable homes leads to a range of social benefits associated with improved health and wellbeing – for example improved educational attainment and employment.	Apply an average wellbeing gain for those moving from poor to decent housing
Local economic output	Participation in the labour market (Jobs/GVA)	Greater stability provided by affordable housing leads to improved physical and mental health and wellbeing which in turn facilitates improved attendance at school/college; enhanced attainment; and ongoing participation in the labour market (job retention)	Apply average salary/GVA per worker (economic benefit) – requires baselines to assess change/increase in participation
Public finances	Fiscal savings	Unemployed residents or NEETs moving into employment	Apply average JSA/ESA/ or other benefit saving associated with individuals who were previously unemployed and NEET



Table 3.2: Affordable Housing – Social Benefit measures			
Benefit type	Outputs/outcomes	Logic chain/rationale	Methodology for measurement
	Reduced Local Authority spending e.g. social care	Greater independence of older people and other vulnerable groups (e.g. homeless) through the provision of specialist housing, leading to improved health and wellbeing	Apply an average wellbeing gain and reduction in public sector costs for those moving to specialist housing (reduced demand for day/residential care; homeless support)
	Reduced demand for public services	Stability provided through affordable homes leading to improved physical and mental health and wellbeing and reduction in demand for services (GPs, hospital visits)	Apply average cost saving per household – reduction in health services (GP, outpatient appts)
Community Benefits/social capital	Crime and anti-social behaviour	Well-designed housing schemes associated with reductions in ASB and fear of crime	Apply average wellbeing gain/cost saving per household
	Community services and facilities	House building also provides local community benefits through financial and other contributions	Reflected in part in land value uplift, but only cost of provision. Potential to quantify actual benefits from new community infrastructure
	Community cohesion	Well-designed housing schemes encourage community building, increased community cohesion, helping to tackle social isolation	Apply an average wellbeing gain per household and measure improved social inclusion outcomes
Income/distributional impacts	Reduction in (fuel) poverty	Provision of better quality, more sustainable, and more affordable housing will lead to more choice/greater benefits for lower income households	Apply an average fuel bill saving per household



3.4 Measuring environmental impacts

3.4.1 Potential environmental benefits

The remaining category of potential associated with Affordable Housing relate to the potential environmental or infrastructure benefits related to placemaking and amenity benefits – from open/green spaces, development of brownfield sites and the quality of the local surroundings; environmental benefits arising from the remediation of contaminated land, greenfield savings and improvements in energy efficiency; and transport benefits which have the capacity to lead to economic impacts (associated with journey time impacts), social impacts (arising from existing commuting and other users, accidents, physical activity and journey quality) and environmental impacts related to transport from noise, air quality, greenhouse gases and the landscape.

3.4.2 Measures

The following table (Table 3.3) provides a summary of the environmental benefits that could be realised through the provision of Affordable Housing, a description of the projected outputs and outcomes that could be measured and the methodology that would need to be applied to assess the scale of the impacts.

Table 3.3: Affordable Housing – Environmental Benefit measures			
Benefit type	Outputs /outcomes	Logic chain/rationale	Methodology for measurement
Placemaking and amenity benefits	Open/Green spaces	Range of wellbeing benefits associated with provision of open/green space. Must also reflect loss of green space where appropriate	Apply average amenity value per ha to new open/green space or willingness to pay value where it is possible to estimate the number of users and local beneficiaries
	Development of brownfield sites	Amenity benefits associated with development of brownfield land currently in poor condition	Apply average amenity value/ha to redeveloped brownfield land in poor condition
	Quality of place	Improvement in quality of place leads to increased values in the surrounding area.	Apply average uplift to properties within impact area
Environmental benefits	Remediation of contaminated land	Environmental benefits associated with remediation of contaminated land	Assume cost reflective of benefits of remediation (bespoke appraisal required to capture full benefits)
	Improvements in energy efficiency	Development of more sustainable homes results in increased energy efficiency. Only enhancements above the baseline.	Apply carbon values to reduction in energy emissions per sustainable home



Table 3.3: Affordable Housing – Environmental Benefit measures			
Benefit type	Outputs /outcomes	Logic chain/rationale	Methodology for measurement
	Greenfield savings	Redevelopment of brownfield land can allow for prevention of loss of greenfield sites. Would need to be supported by spatial growth analysis	Apply average amenity value/ha to saved greenfield site
Transport benefits	Economic impacts	Housing schemes have potential to result in transport impacts affecting business users. Could include agglomeration, labour supply and business user benefits. Consideration needed for potential negative effects (e.g. local congestion)	Calculate journey time impacts for existing users
	Environmental impacts	Transport effects of housing schemes have potential to result in consequential environmental impacts	Calculate impact on noise, air quality, greenhouse gases and landscape
	Social impacts – existing users	Housing schemes could result in transport benefits and/or costs to existing commuting and other users of the network	Calculate impact on existing commuting and other users, accidents, physical activity and journey quality
	Social impacts – new users	New households may benefit from improved access to transport infrastructure and/or reduced distance to work/local facilities – likely to be reflected in amenity benefits/LVU	As above for new users



4 Assessing the impact of Housing Horizons

4.1 Introduction

This section of the report presents the results of the modelling that has been undertaken to quantify the projected economic impacts that could be realised if Housing Associations achieve the targets set out in Housing Horizons – the 20 year vision for housing associations in Wales. At this stage it has only been possible to assess a limited number of potential social and environmental benefits, as these impacts require more detailed baseline evidence and information that can only be gathered on a site by site basis, however case studies have been provided to exemplify the type and scale of benefits that could be achieved. As the strategy is implemented, it is recommended that further work be carried out to collect additional data that could be used to update the impact analysis to capture more of the social and environmental benefits arising.

The economic modelling has been based on the delivery of 75,000 new Affordable Homes over a 20 year period from 2017-2036 (i.e. the development of 3,950 per annum) and many of the assumptions underpinning the calculations have drawn on evidence and trends over the last 10 years, presented in the most recent Socio-Economic Impact of the Housing Association and Community Mutual Sector Report (2017/18)¹⁹, prepared by Beaufort Research ('the Beaufort Report'). For example, we have assumed that 90% will be available for social rent with the remaining 10% delivered for intermediate rent or low cost home ownership. As the modelling extends over a 20-year period, where possible we have also calculated the Net Present Value (NPV)²⁰ in line with guidance set out in the HMT Green Book, by applying a discount factor of 3.5%. The results of the modelling, and the specific assumptions underpinning them, are presented in the following section.

4.2 Economic benefits

4.2.1 Construction

(i) Wales-level analysis

Based on an average cost per home of approximately £156,200 as set out in the Beaufort Report, investment of £11.7 billion (£8.6 billion NPV) will be required to deliver a total of 75,000 zero carbon affordable homes. The distribution and scale of development across the regions is likely to be in the order set out below, based on the most recent *Welsh Government Housing Need and Demand report*²¹:

- North Wales 15,000 (20%);
- Mid and South West Wales 17,250 (23%);

¹⁹ Socio-Economic Impact of the Housing Association and Community Mutual Sector 2017/18, Beaufort Research/Houston Economic Consulting, November 2018

²⁰ The social time preference discounting rate of 3.5% has been applied in line with Green Book Guidance

²¹ Brown, M. (2019) 'Estimates of Housing Need in Wales by at a national and regional level', Welsh Government



- South East Wales 42,750 (57%);

Table 4.1 below presents the economic impacts of the construction activity associated with the provision of the new homes over the 20-year period from 2017 to 2036. In line with the requirements of the brief, two scenarios have been presented. The first assumes that 90% of all construction expenditure will be retained in Wales in line with the current trends presented in the Beaufort report, and the second scenario presents the results if 95% of all construction spend was retained in the country. The construction jobs include direct, indirect and induced employment²², while the Gross Value Added (GVA)²³ includes direct and indirect GVA associated with supply chain activity.

As shown, the construction activity will generate £7.2 billion GVA by 2036 (£5.3 billion NPV) and support 30,205 FTE construction jobs and 11,715 training opportunities (e.g. apprenticeships) over the 20-year period.

Table 4.1: Economic outputs - construction of new homes (2017-2036)			
	Total (20-year period)	Currently retained in Wales (90%)	Projected retention in Wales (95%)
Construction jobs (FTE)	30,205	27,185	28,695
Training opportunities	11,715	10,544	11,129
Gross Value Added	£7.2 billion	£6.5 billion	£6.9 billion

The results also demonstrate that if the proportion of all construction expenditure which is retained in Wales is increased to 95% (compared with the current level of 90%) this would generate a further:

- £360.6 million GVA;
- 1,510 FTE jobs; and
- 586 training opportunities.

The construction activity has the potential to deliver a range of apprenticeship and training opportunities for individuals in the local labour market, with an investment of £1 million construction spend supporting one full time equivalent training opportunity. If these opportunities are targeted towards disadvantaged and excluded groups, and 25% of all places are taken up individuals who were previously unemployed or NEET, exchequer savings in the region of £38.5 million could be realised through benefit savings (£28.2 million NPV). If 90% of spending is retained in Wales, exchequer savings would total £34.6 million. This would increase by a further £1.9 million if more spend was retained in Wales and additional training opportunities were created.

²² For direct jobs, the construction cost per person year of £57,789 has been taken from the Homes and Communities Agency Best Practice Note. For indirect and induced employment, a multiplier of 1.49 has been applied to the construction employment cost. This multiplier is taken from the Welsh Economy Research Unit’s 2010 Input Output Unit. The GVA multiplier ratio is worked out from the Welsh Economy Research Unit data and equals 1.62.

²³ A construction GVA:Turnover ratio of 0.38 has been applied, taken from the most recent Annual Business Survey



Table 4.2: Exchequer savings resulting from the construction of new homes (2017-2036)			
	Total (20-year period)	Currently retained in Wales (90%)	Projected retention in Wales (95%)
Fiscal savings ²⁴	£38.5 million	£34.6 million	£36.6 million

(ii) Regional analysis

The economic impact of the construction activity across the three regions of Wales is shown in Table 4.3 below. The apportionment of impact has been calculated based on the needs analysis found in the *'Future Need for and Demand for Housing in Wales'* published by the Public Policy Institute for Wales. The table highlights the total impact of construction over the 20-year period in each region of Wales, before considering the two scenarios where either 90% or 95% of expenditure is retained in Wales.

Table 4.3: Economic outputs - construction of new homes (2017-2036)			
	Total (20-year period)	Currently retained in Wales (90%)	Projected retention in Wales (95%)
<i>NORTH WALES</i>			
Construction jobs (FTE)	5,698	5,129	5,413
Training opportunities	2,210	1,989	2,100
Gross Value Added	£1.36 billion	£1.22 billion	£1.29 billion
<i>MID AND SOUTH WEST WALES</i>			
Construction jobs (FTE)	8,756	7,880	8,318
Training opportunities	3,396	3,056	3,226
Gross Value Added	£2.09 billion	£1.88 billion	£1.99 billion
<i>SOUTH EAST WALES</i>			
Construction jobs (FTE)	15,751	14,176	14,964
Training opportunities	6,109	5,498	5,804
Gross Value Added	£3.76 billion	£3.38 billion	£3.57 billion

Table 4.3 demonstrates that South East Wales will see the greatest impact from construction activities in terms of jobs, training opportunities and GVA, whilst the North Wales will see the smallest impact.

The fiscal savings of affordable housing provision which accrue from each region are displayed in Table 4.4.

²⁴ Public sector cost savings of £13,139 (JSA Benefits) have been taken from the New Economy Unit Cost Database.



Table 4.4: Exchequer savings resulting from the construction of new homes (2017-2036)			
	Total (20-year period)	Currently retained in Wales (90%)	Projected retention in Wales (95%)
North Wales	£7.26 million	£6.53 million	£6.90 million
Mid and South West Wales	£11.2 million	£10.0 million	£10.6 million
South East Wales	£20.1 million	£18.1 million	£19.1 million

4.2.2 Repairs and maintenance

(i) Wales-level assessment

Based on data from the Beaufort Report, the 2018 Global Accounts and the ‘Better Homes, Better Wales, Better World’ report²⁵, investment of £8.8 billion (£6.2 billion NPV) will be required over the 20-year period to deliver ongoing repairs and maintenance activity for all affordable homes maintained by the Housing Associations. This includes the existing stock and the 75,000 new additional homes planned, where all existing homes will be brought to EPC A standard.

Table 4.5 below outlines the economic benefits arising from the repairs and maintenance activity. As shown before, these benefits have been modelled based on current activity, which suggests that 80% of all repairs and maintenance expenditure is retained in Wales, followed by a second scenario whereby this percentage is increased to 95%. The repairs and maintenance activity associated with affordable housing provision in Wales will generate a total GVA of £5.4 billion (£3.8 billion NPV) and support 35,297 FTE repairs and maintenance jobs²⁶. A further 8,845 training opportunities/apprenticeships will also be supported.

Table 4.5: Economic outputs – repairs and maintenance activity (2017– 2036)			
	Total (20-year period)	Currently retained in Wales (80%)	Projected retention in Wales (95%)
Jobs – repairs and maintenance (FTE)	35,297	28,237	33,532
Training opportunities	8,845	7,076	8,403
Gross Value Added	£5.4 billion	£4.4 billion	£5.2 billion

If 95% of all repairs and maintenance expenditure is retained in Wales (versus the current level of 80%) this is expected to generate a further:

- £817 million GVA;

²⁵ Repairs and maintenance investment for new homes is assumed to total £939 per home, based on an existing R&M figure less 25% of new homes. For existing homes, investment per home is taken to be higher at £1,252 per home, based on 2018 global accounts. An average whole house retrofit figure of £30,000 has been assumed to bring existing stock up to EPC A rating.

²⁶ For direct jobs directly generated from R&M, the employment cost of £37,338 has been taken from the Homes and Communities Best Practice Note. The Construction GVA:Turnover ratio of 0.38 has been applied to R&M for investment in new and existing homes. To calculate the indirect jobs created by R&M, the same multipliers from the Welsh Economy Research Unit were applied as those used for the construction phase. The same assumptions apply for training opportunities as under the construction phase as well.



- 5,295 additional FTE jobs; and
- 1,327 training opportunities.

The repairs and maintenance activity also has the potential to deliver a range of apprenticeship and training opportunities for individuals in the local labour market, with an investment of £1 million spend supporting one full time equivalent training opportunity. If these opportunities are targeted towards disadvantaged and excluded groups, and 25% of all places are taken up by individuals who were previously unemployed or NEET, exchequer savings in the region of £13.1 million could be realised through benefit savings (£20.5 NPV). If 80% of spending is retained in Wales, exchequer savings would total £million. This would increase by a further £4.4 million if more spend (95%) was retained in Wales and additional training opportunities were created.

Table 4.6: Exchequer savings resulting from the repairs and maintenance activities (2017-2036)			
	Total (20-year period)	Currently retained in Wales (80%)	Projected retention in Wales (95%)
Fiscal savings	£29.1 million	£23.2 million	£27.6 million

(ii) Regional analysis

The regional distribution of the impacts associated with the repairs and maintenance activity can be found in Table 4.7 below.

Table 4.7: Economic outputs – repairs and maintenance activity (2017-2036)			
	Total (20-year period)	Currently retained in Wales (80%)	Projected retention in Wales (95%)
NORTH WALES			
Jobs – repairs and maintenance (FTE)	5,799	4,639	5,509
Training opportunities	1,443	1,162	1,380
Gross Value Added	£0.89 billion	£0.72 billion	£0.85 billion
MID AND SOUTH WEST WALES			
Jobs – repairs and maintenance (FTE)	8,176	6,541	7,767
Training opportunities	2,049	1,639	1,946
Gross Value Added	£1.26 billion	£1.01 billion	£1.20 billion
SOUTH EAST WALES			
Jobs – repairs and maintenance (FTE)	21,323	17,058	20,257
Training opportunities	5,343	4,275	5,076
Gross Value Added	£3.29 billion	£2.63 billion	£3.12 billion



Like the construction activity, the South East will see the greatest increase in jobs, training opportunities and GVA as a result of the repairs and maintenance activity.

Table 4.8 shows the potential fiscal savings from repairs and maintenance according to region.

Table 4.8: Exchequer savings resulting from the repairs and maintenance activity (2017-2036)			
	Total (20-year period)	Currently retained in Wales (80%)	Projected retention in Wales (95%)
North Wales	£4.77 million	£3.82 million	£4.53 million
Mid and South West Wales	£6.73 million	£5.38 million	£6.39 million
South East Wales	£17.6 million	£14.0 million	£16.7 million

4.2.3 *Housing Association operations*

(i) **Wales-level assessment**

The day-to-day operation of the Housing Associations over the 20-year period will result in total expenditure of £12.8 billion (£9.1 billion NPV)²⁷. This is based on the current estimate of 9,138 FTE jobs (2018/19) and a projected increase in FTE jobs of 1.5% per annum over the twenty year period.²⁸ This expenditure and the level of jobs (FTEs) relates to the total Housing Association expenditure less spend on the regeneration activities (i.e. construction, repairs and maintenance, and community initiatives and training). The operational expenditure will cover core activities such as housing management for example.

Housing Association operations will generate a total of 11,770 direct jobs and £8.0 billion GVA. Assuming a multiplier of 1.37²⁹ is applied, the operations will also indirectly generate GVA of £3.0 billion over the twenty-year period and support an additional 5,061 jobs. The economic impact of the ongoing operations is shown in Table 4.9 below and has been presented in the scenario where 95% of expenditure is retained in Wales.

Table 4.9: Economic impacts – CHC Housing Associations operations (2017-2036)		
	Total (20-year period)	Expected retention in Wales (95%)
Jobs supported	16,831	15,989
Gross Value Added	£11.0 billion	£10.5 billion

In addition to the ongoing housing management functions, construction and repairs and maintenance activities, housing associations in Wales also currently deliver a number of community regeneration initiatives with investment of £23 million. If a similar level of funding

²⁷ These figures have been calculated using a figure of £998m as the baseline taken from the Beaufort Report.
²⁸ An increase in employment of 1.5% p.a. has been assumed based on estimates provided by CHC using the Global Accounts, the Beaufort Report and internal HR benchmarking
²⁹ Multipliers have been used to calculate the indirect impacts associated with the Housing Association Operational Expenditure. These include 1.43 for FTE jobs and 1.37 for GVA – both taken from the Welsh Economy Research Unit Input Output tables.



(as a proportion of overall income) is ringfenced for Community Regeneration projects over the next 20 years, a total of £458 million (£326 million NPV) would be made available to support these projects which have the capacity to support 15,930 jobs and training opportunities³⁰ for local residents (using 2018 data as the baseline).

Assuming 25% of these opportunities are filled by previously unemployed residents, this would result in public sector cost savings of £52.3 million, using the same methodology applied during both the construction and repair and maintenance phases.

(ii) Regional analysis

Table 4.10 demonstrates how the number of jobs supported and GVA arising from CHC Housing Associations operations will vary across the three regions of Wales.

Table 4.10: Economic outputs – CHC Housing Associations operations (2017-2036)		
	Total (20-year period)	Expected retention in Wales (95%)
NORTH WALES		
Jobs supported	1,463	1,390
Gross Value Added	£1.00 billion	£0.95 billion
MID AND SOUTH WEST WALES		
Jobs supported	3,397	3,227
Gross Value Added	£2.31 billion	£2.20 billion
SOUTH EAST WALES		
Jobs supported	6,909	6,564
Gross Value Added	£4.70 billion	£4.47 billion

4.2.4 Summary of the Total Economic Impacts

Based on the preceding sections a summary of the key economic impacts associated with the delivery and maintenance of the new Affordable Homes are provided below. By 2036 total investment of £33.3 billion (£23.9 billion NPV) in the housing stock will result in 75,000 new affordable homes, taking the total overall Affordable Housing stock managed by CHC members to 235,000.

Table 4.11 provides a summary of the number of jobs, training opportunities and GVA that will be generated by both the construction and ongoing maintenance and management activity, assuming 95% of expenditure is retained in Wales. These activities include both direct, indirect and induced employment where relevant.

³⁰ In terms of community regeneration effects, there are currently 800 training and employment opportunities to be created in line with the Beaufort report – this report gives a figure of 1,700 with an allowance being made for 900 jobs associated with construction-related training. 25% are NEET, with public sector savings totalling £13,139 as in the construction phase.



Table 4.11: Economic impacts – construction, repairs and maintenance and housing association activities with projected retention in Wales (2017-2036)

Outputs/Outcomes	Construction	Repairs and maintenance	Housing association operations
Jobs (FTE)	28,695	33,532	15,989
Training opportunities	11,129	8,403	-
Gross Value Added	£6.9 billion	£5.2 billion	£10.5 billion

The delivery of the 19,532 training opportunities related to the construction and repairs and maintenance activities have the capacity to generate a further £64.2 million exchequer savings with a 95% retention as a result of 25% of the opportunities being taken up by unemployed and NEET individuals.

This section of the report also highlighted the regional distribution of the economic impacts arising from the new affordable housing provision across Wales. Table 4.12 summarises the impacts from the modelling if 95% of the housing association expenditure is retained in Wales. When considering the number of jobs, training opportunities and GVA, the impact of affordable housing provision will be the greatest in South Wales.

Table 4.12: Economic impacts by region – construction, repairs and maintenance and housing association activities with projected retention in Wales (2017-2036)

Outputs/outcomes	Construction	Repairs and maintenance	Housing association operations
NORTH WALES			
Jobs (FTE)	5,413	5,509	1,390
Training opportunities	2,100	1,380	-
Gross Value Added	£1.29 billion	£0.85 billion	£0.95 billion
MID AND SOUTH WEST WALES			
Jobs (FTE)	8,318	7,767	3,227
Training opportunities	3,226	1,946	-
Gross Value Added	£1.99 billion	£1.20 billion	£2.20 billion
SOUTH EAST WALES			
Jobs (FTE)	14,964	20,257	6,564
Training opportunities	5,804	5,076	-
Gross Value Added	£3.57 billion	£3.12 billion	£4.47 billion



4.3 Assessing social impacts

4.3.1 Wellbeing impacts

Using wellbeing valuation data and findings from the work carried out by HACT and Daniel Fujiwara in 2013³¹, which assessed the Social Impact of Housing Providers, it is estimated that the provision of 75,000 new Affordable Homes, has the capacity to generate improved wellbeing impacts for individuals valued at £191.4million. This figure has been calculated by inflating the 2013 unit cost figure to a value of £1,119 per home. This wellbeing value is generated as a result of moving from poor quality private rented properties to good quality Housing Association.

4.3.2 Social care

In order to measure the potential social care impacts, high-level estimates suggest that if 2% of the new homes were provided for specialist elderly accommodation, social care savings in the region of £12 million³² could be realised through reduced demand for specialist social care provided by the Local Authorities. Similarly, if 2% of the existing stock were converted for specialist elderly accommodation, this could result in a further £126.2 million social care savings.

4.3.3 Fuel Poverty

The delivery of 75,000 new affordable homes has the potential to generate fuel bill savings in the order of £611.9 million.³³ Retrofitting all of the existing stock in line with findings of the Better Homes, Better Wales, Better World Decarbonising existing homes in Wales Report³⁴ will generate savings in the region of £1,176 million.

4.3.4 Other social impacts – Health, Education, Crime

At this stage it has only possible to provide a snapshot for a limited number of potential social impacts that could be achieved through the delivery of 75,000 new homes in Wales. There are a number of other impacts, particularly those related to improved health and wellbeing which have the potential to generate significant public sector cost savings as a result of investment in better quality, suitable accommodation.

³¹ <https://www.hact.org.uk/sites/default/files/uploads/Archives/2013/02/The%20Social%20Impact%20of%20Housing%20FINAL.pdf>

³² 2% of new homes are allocated as specialist elderly accommodation within the model, with savings from reduced residential care totalling £8,000 per specialist home. 2% of existing homes are also allocated as specialist accommodation, with a conversion rate of 650 per annum. The saving of £8,000 per home applies here also. http://data.parliament.uk/DepositedPapers/Files/DEP2012-1192/HealthBenefitsLifetimeHomes_final.pdf

³³ Bill savings for new homes apply to 100% of the new homes per annum, with an assumed saving of £900 per annum. This figure is based on the average UK household energy bill of £1184 (Ofgem 2019) and 'best practice refurbishment' which indicates that savings of 80-90% could be achieved from a whole house retrofit: MHCLG, Energy Efficiency Experimental Statistics 2018: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/792413/EPB_Cert_Statistics_Release_Qtr_4_2018_NB7_corr.pdf

³⁴ Better Homes, Better Wales, Better World; Decarbonising existing homes in Wales. Report to Welsh Ministers from the Decarbonisation of Homes in Wales Advisory Group, July 2019



For example, research by Shelter³⁵ has identified a number of ways in which poor quality housing, homelessness and temporary accommodation has negative impacts on education outcomes. The research concluded that homelessness has a particularly severe negative effect, with homeless children two to three times more likely to be absent from school, and those in temporary accommodation missing up to one quarter of the school year due to the disruption caused by moves into and out of temporary accommodation. Those who have to move schools also miss out on the stability that attending a settled school can provide, in terms of relationships with teachers and friends.

Overcrowding and poor housing conditions also have a negative impact on education attainment, partly due to higher levels of ill-health, which cause children to miss more school time, but also due to the lack of a suitable place to study within the home, and the effects of poor housing on parenting, due to higher levels of stress and depression.

Providing more good quality, affordable housing will help to address these issues and reduce the number of children in Wales affected by them. A scoping exercise for a Health Impact Assessment undertaken of the Scottish Government's commitment to deliver 50,000 new affordable homes highlighted the potential for educational benefits for children if their families were able to access accommodation more appropriate for their needs³⁶. Research shows that housing and education are linked via pathways such as noise, crowding, and pollutants and toxins. Importantly, the strong connection between education and health means that the impact of housing on educational attainment is likely to have a long-term effect on health and productivity.

As referred to earlier in this report, further work will be needed as Housing Horizons is implemented to capture more detailed demographic data for Housing Association residents with a view to capturing the wider social impacts of Affordable Housing more fully.

Wellbeing benefits – Tai Calon's Employment and Skills team

Tai Calon's Employment and Skills team have been delivering activities and projects since February 2014. Over time the variety and volume of programmes have significantly increased. There is now a broad range of employment programmes that cater for tenants and residents ranging from those that are close to the labour market and need a little support to those furthest away from the labour market with multiple and complex barriers. Recently, the team have developed projects that link physical activity, sport and wellbeing to enhance people's motivation, self-confidence, resilience and employment prospects.

The projects being delivered utilise a range of funding streams including core funded, national government programmes (DWP / JCP) and contractor donations leveraged through community benefit clauses.

In 2018-19 the following employability/health & wellbeing projects were delivered:

- 'Get On Track' in partnership with the Dame Kelly Holmes Trust
- Prudential bike ride London in partnership with Dame Kelly Holmes Trust

³⁵ Chance of the Lifetime The impact of bad housing on children's lives, Shelter, 2006

³⁶ 50,000 Affordable Homes: A Health Impact Assessment, Scottish Health and Inequality Impact Assessment Network (SHIAN), June 2017



- ‘Business Class’ in partnership with Careers Wales, Business in the Community and Ebbw Fawr Learning Community
- Sports skills camp with the Gwent Dragons
- ‘Foot in the door’ in partnership with Ffilm Cymru
- Weekly Job Club
- Voluntary Work Experience programme
- Bespoke employability support sessions

As a result of these programmes, 300 tenants and residents of Blaenau Gwent were engaged with, 40 work placement opportunities were provided and 10 people supported into sustainable employment. The main obstacles encountered were ensuring the delivery programmes did not duplicate existing provision and also encouraging external partners to take advantage of the programmes due to a perception that they would lose out on potential outcomes. The main learning for Tai Calon is that there are very few ‘quick fixes’ with a large cohort of people facing numerous and complex barriers whilst accepting that for many, paid employment is not a realistic short term goal. As a result, the programme delivery has been heavily focused on building confidence, resilience, motivation and self esteem as a foundation to moving on to whatever the next step is for each individual.

Future plans are to continue to deliver the programmes that are proving to generate positive outcomes and building on the already excellent partner networks to ensure our tenants and residents are able to take full advantage of any opportunities that arise.

4.4 Assessing environmental impacts

4.4.1 *Carbon Savings*

The carbon savings associated with the construction of 75,000 new net zero carbon homes is likely to be in the region of £285.9 million, based on an average saving of 5 tonnes of carbon per home p.a. and the current social value of carbon of £12.75 per tonne. If all of the existing housing association properties were improved to an EPC A rating in line with the recommendations set out in the Better Homes report on Decarbonising Welsh Homes it is envisaged that a further £230.2 million carbon savings could be achieved.

However, this will in turn require investment in the region of £4.8 billion, based on an average cost per home of £30,000.

4.4.2 *Other environmental impacts – placemaking; transport; energy efficiency*

As many of the potential environmental benefits associated with the delivery of new Affordable Homes will depend on the design of the specific developments in question, projecting impacts for the entire 75,000 new stock of homes is more difficult.



The following case studies provide examples of the types of environmental benefits – including placemaking, transport, energy efficiency - that could be achieved through careful planning at the design stage.

The case studies demonstrate a number of examples of good practice in Wales, but also recognise good practice from elsewhere. If housing associations in Wales are to achieve their vision and deliver 75,000 homes, there will need to be an increase in the scale and pace of delivery over the coming years. Some of the case studies recognise examples of good practice which are brought about by larger scale developments elsewhere which may provide examples of what the Welsh sector can achieve through larger scale development.

As with the other social benefits, it is recommended that further work be carried out during the implementation of the strategy, alongside the construction and retrofitting activities to capture the wider environmental impacts arising.

(i) Placemaking / Amenity Benefits – Loftus Garden Village, Newport

The development of affordable housing can lead to amenity benefits if it is accompanied by appropriate investment in placemaking that leads to the development of high quality new neighbourhoods. Research has demonstrated that in mixed tenure developments early investment in infrastructure, local amenities and public space creates better places, which encourages take-up of the new properties and delivers higher returns, leading to faster development of more new homes by the private sector³⁷.

For example, based on a modelled site of 3,000 new homes, of which 30% are affordable, Savills estimate that increasing infrastructure spend from £30,000 to £45,000 per unit, to allow for upfront placemaking investment in features that provide a sense of place and community, such as schools, public realm, retail and community facilities, can increase sales values and therefore land value by around 25%.

Pobl Group's Loftus Garden Village is based on the site of the former Royal Ordnance Factory and STC and Pirelli Cables Factory in Newport, and was delivered in partnership with Welsh Government, Newport City Council and Lovell

The land for the site was owned by Welsh Government and after long negotiations sold at a reduction on the agreed value - £2.15m against a value of £3.15m. This effective £1m subsidy allowed Pobl to deliver the site without any Social Housing Grant, and ensured the high proportion of affordable homes.

The site features 250 high quality arts and crafts style homes – ranging from one bedroom apartments to four bedroom family homes – for open market sale, shared ownership, social and intermediate rent on a 16 acre brownfield site near the city centre.

The development includes:

- 60% affordable housing
- 32 social rented homes

³⁷ Development: The Value of Placemaking, Savills World Research UK Development, 2016



- A housing co-operative of 19 homes at the heart of the village

The site incorporates over 50,000 sq. Ft of green space – more than 60% of the whole site – with over 100 trees planted and a Storytelling Circle to provide a safe area for children. It was recently awarded Best Residential Development at the Wales Property Awards..

(ii) Transport Benefits – Upton Sustainable Urban Extension, Northampton and Kilnwood Vale in Crawley

Patterns of settlement development and housing growth have varied over time in the UK. As car ownership became more common, and major road building programmes were undertaken during the 1950s and 1960s, housing development became more dispersed, with large-scale housing estates developed on the edge of urban areas, at lower densities than within the urban core. This continued in the 1980s and 1990s with housing developments increasingly car-dependent and located along the road network, resulting in people travelling greater distances for work and leisure, and leading to increased levels of congestion.

The relatively low housing densities in these suburbs meant that providing a frequent, comprehensive and affordable public transport service was very difficult, and the distance between residential areas and employment, retail and leisure opportunities did not encourage active travel options such as walking or cycling³⁸. Recognition of the negative effects of low density housing development led to an increasing focus on re-development of brownfield land within urban areas, higher densities and a balance of housing, jobs and services, reducing the need to travel.

The Upton Sustainable Urban Extension, in Northampton, is a development of 1,382 homes, of which 22% are affordable. During the design phase, efforts were made to ensure the development supported sustainable transport. Following a consultation process, improvements were made to the proposed road network, the housing density was increased and improved provision was made for public transport, walking and cycling.

A new bus route has been provided, connecting the new development with Northampton town centre and railway station, with buses running every 20 minutes during the daytime. The developer was required to fund the bus service, with the frequency of services increasing as more houses were completed³⁹.



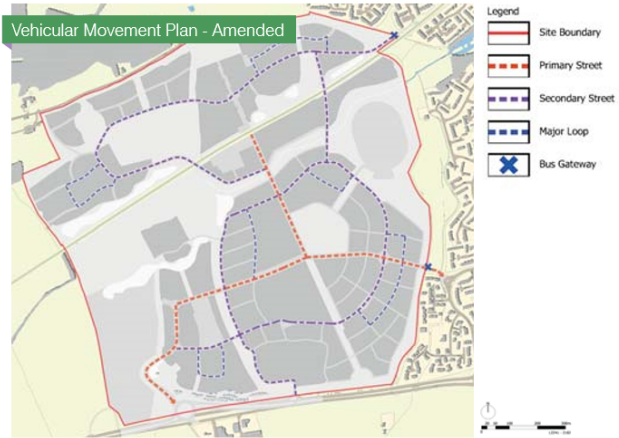
³⁸ Settlement Patterns, Urban Form & Sustainability An Evidence Review, RTPi Research Paper, May 2018

³⁹ Upton, Northampton, Transport for New Homes, 2018, <http://www.transportfornewhomes.org.uk/wp-content/uploads/2018/10/Upton-Northampton.pdf>



Kilnwood Vale in Crawley is a development of around 2,500 new homes, of which 25% will be affordable. The development is currently under construction and the local planning authorities have worked with the developers to promote sustainable travel and minimise the additional car journeys generated by the new homes.

This is reflected in the design of the site. There are three access roads, two of which are only to be used by buses, and the third has a bus lane, giving buses priority over private cars. Roads within the development are wider and straighter than is typically the case in new housing developments, making them easier to navigate by bus, and have bus shelters providing real-time information on services, and raised kerbs for ease of access. The bus service was introduced at a very early stage to ensure it was available as soon as residents began to move into the new housing. The service connects to fast trains to London at Crawley station, and the developers were required to contribute to increasing the frequency of the service to Crawley and Horsham.



(iii) Passivhaus

The ambition to develop 75,000 new affordable homes in Wales provides an opportunity for Community Housing Cymru and its member housing associations to contribute to improving the energy efficiency of Welsh housing stock.

At present, energy used in the home accounts for 15% of the UK's total carbon emissions. Reducing energy demand by building more efficient, zero carbon homes, and retrofitting existing properties can bring benefits for both tenants (in terms of cost savings), the local economy (as the money saved can be spent locally) and the environment (as carbon emissions are reduced).

For example, homes which meet the Passivhaus standard are designed to use very little energy for heating and cooling, with most heat drawn from passive heat sources like the sun, human occupants, and household appliances. They have excellent insulation to minimise heat loss and mechanical ventilation systems with highly efficient heat recovery. Achieving this standard can reduce home energy use by around 90%, bringing average heating bills from £1000 per annum to £100, and can be achieved without additional construction costs if built into the design of the properties from the outset.

Exeter City Council has brought forward a number of low energy affordable housing developments in recent years⁴⁰. Passivhaus developments have also been undertaken by housing associations in rural areas, e.g. Hastoe Group's Wimbish development in Essex. In Exeter, over 100 affordable homes meeting the Passivhaus standard have been developed.

⁴⁰ Low Energy Development Information Pack, Exeter City Council (undated), <https://www.houseplanninghelp.com/wp-content/uploads/2016/09/Exeter-City-Council-Scheme-Information.pdf>



Research with residents shows that 60% have not used their heating since moving into their property, providing savings which have been used to pay for family holidays or extra-curricular activities for children, which could not otherwise have been afforded. Furthermore,



Passivhaus properties provide excellent air quality, and many residents have reported health improvements⁴¹.

The Hastoe Group properties developed in Wimbish in Essex comprise a mix of houses and flats and were first occupied in 2011. Follow-up research undertaken in 2017⁴² demonstrates that the UK's first rural, social housing Passivhaus scheme is still highly energy efficient, with residents reporting heating bills that are as low as £30 per quarter.

Data from the first six years of occupation shows that a comfortable temperature was achieved throughout the development even whilst gas consumption, and therefore heating bills, are very low, and that residents are very happy with their properties:

"Utility bills are much lower, even water bills have been reduced. Gas is very low although we are still being charged by companies for the 'standing charge'."



"We have been very comfortable and have enjoyed a constant pleasant temperature...It is a pleasure to have such large windows and triple glazing is most effective both in terms of temperature and noise levels."

The Hastoe Group has experienced lower void levels and lower rent arrears in its Passivhaus homes (almost zero in both cases), as tenants wish to retain the comfort and savings that they provide.

⁴¹ Passivhaus: Exeter City Council leading by example, Association for Public Service Excellence (APSE), 2018, <https://www.apse.org.uk/apse/index.cfm/news/articles/20181/passivhaus-exeter-city-council-leading-by-example/>

⁴² Wimbish Passivhaus Development: Performance Evaluation Jan 2018 Assessment, Linktreat Ltd, 2018, <http://www.wimbishpassivhaus.com/Wimbish-BPE-Jan-2018-Assessment.pdf>



5 Conclusions

Housing associations in Wales have a vision that by 2036 Wales is a place where good housing is a basic right for all. Housing associations in 2017 set out their ambitions to contribute towards achieving this vision. This includes:

- building 75,000 affordable homes, with all new homes reaching near zero carbon standard by 2020, and all homes to reach this standard by 2036; and
- prioritising local investment with 95p of every £1 spent by housing associations remaining in Wales.

This report was commissioned to understand what investment would be required to make that ambition a reality and what impact it would have on the economy, society and health of the people of Wales.

The findings from the report demonstrate that the key economic impacts associated with the delivery and maintenance of 75,000 new affordable homes, alongside the existing stock of 160,000 homes, will include:

- the generation of £7.2 billion GVA (£5.3bn NPV), 30,205 FTE jobs and 11,715 training opportunities from construction activity;
- the generation of £5.4 billion GVA (£3.8bn NPV), 35,297 FTE jobs and 8845 training opportunities from repairs and maintenance activity;
- the generation of £11.0 billion GVA (£7.8bn NPV) and 16,831 FTE jobs arising from housing association activity; and
- exchequer savings in the order of £67.6 million associated with 25% of all construction and repairs and maintenance training opportunities being filled by residents previously excluded from the labour market.

If 95% of the expenditure, outputs and outcomes are retained in Wales, the following results will be achieved:

Summary of total projected economic impacts – construction, repairs and maintenance and housing association activities – 95% retention in Wales (2017-2036)			
Outputs/Outcomes	Construction	Repairs and maintenance	Housing association operations
Jobs (FTE)	28,695	33,532	15,989
Training opportunities	11,129	8,403	-
Gross Value Added	£6.9 billion	£5.2 billion	£10.5 billion

Furthermore, the achievement of the targets set out in the strategy have the capacity to support a range of wider social and environmental impacts associated with improved:



- health and wellbeing as a result of greater stability provided by more affordable homes – which has the capacity to enhance educational attainment; participation in the labour market; reduce crime and anti-social behaviour; and demand for public sector services;
- amenities and community infrastructure;
- planning and transport benefits – which have the capacity to reduce adverse impacts such as noise, air quality, greenhouse gases; and
- energy efficiency and a reduction in carbon emissions.

It is recommended that further work be undertaken alongside the delivery of the strategy to capture more detailed baseline information and demographic data to assess the wider impacts arising from the development of the new affordable housing provided.