

Background paper for Cost of Living Scrutiny Committee Report

How does housing contribute to good public health outcomes?

Date: December 2014

A. Summary of evidence base for housing and health

'Inadequate homes are a waste of energy, a health hazard, and (given today's levels of national wealth) a shameful relic for their part in fostering persistent, avoidable, social inequity.'
(Dear & McMichael 2011)

Housing is a key determinant of health, and growing academic evidence supports this position. Housing not only directly affects our physical and mental health, but it is also associated with the less tangible concepts of 'place', 'home', and 'community'.

Housing affects health through three main pathways: internal housing conditions, area characteristics and housing tenure, all of which have been shown to have independent effects on health (Shaw 2004). The principal health effects of poor housing are summarised in the matrix below.

These health effects of housing are not distributed evenly across the population, and their prevalence is influenced by a number of contextual factors.

Groups most vulnerable to detrimental health effects of housing:

- Older people, especially people who are frail
- Private rental sector
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- Young children
- Disabled people and those with health conditions

Poor housing can have a long-standing detrimental effect on children's health. E.g. damp and mould can trigger respiratory disease and once sensitised, a child is likely to be affected for life).

Children in bad housing conditions are more likely to have mental health issues such as anxiety and depression, to contract meningitis, have respiratory problems, experience long-term ill health and have impairments, experience slow physical growth and have delayed cognitive development (Harker 2006).

Low income households, lone parent families and minority ethnic communities are over represented in poor and marginal housing, compounding their situation.

Demographic and policy context:

- Ageing population
- Migrant health
- Austerity and Welfare Reform

Health effects of housing

	Cardiovascular disease	Respiratory disease	Mental health and wellbeing	Accidental injury	Infectious disease	Other health effects	Effects on wider determinants of health
Cold home	Cold raises blood pressure and increases risk of blood-clotting, both of which increase the risk of heart attack or stroke	Cold air can narrow airways, making it harder to breathe	Impacts on mental wellbeing, increasing risk of isolation and depression	Increased risk of falls or accidents in the home	Increased risk of colds and 'flu	Hypothermia Exacerbates existing conditions such as arthritis and rheumatism	Fuel poverty / economic disadvantage Poorer educational attainment Increased carbon emissions of low energy efficiency homes
Mouldy and damp home		Asthma, coughing & wheezing				Exacerbated skin problems	
Lack of adaptions			Loss of independence, can become prisoners in own home	Risk of falls		Extra issues for carers, and health and social care services	

Poorly maintained home				Risk of falls Carbon monoxide poisoning Other accidents in the home	Risk of food poisoning		
Overcrowded home		Weak relationship with respiratory conditions	Friction & conflict between residents; lack of privacy		Weak relationship with meningitis		
Temporary home			Stress, lack of social networks, anomie				
Poor security / safety			Fear of crime	Increased risk of a fire			Increased risk of burglary
Lack of greenspace			Impacts on wellbeing and quality of life				Reduced physical activity
Noisy home			Impacts on stress, wellbeing and quality of life			Poor sleep quality	
Smoky home		Increased risk of asthma and other serious respiratory conditions		Increased risk of fire		Increased risk of cancer, cot death, middle ear infections	

		such as bronchitis and pneumonia					
Home in a poorly maintained neighbourhood			Fear of crime, poor quality of life, lack of pride in neighbourhood, or sense of place/belonging				Increased crime

B. Derby City housing & health profile

Demographics and housing needs

Derby has a population of 241,420, living in 104,458 households. From a 2011 baseline, Derby's population is expected to increase by 10.8% by 2028.

In March 2014 there were 3,864 applicants on Derby's waiting list for social housing, at a time when there are approximately 3,400 empty properties in Derby (of which some 1,700 had been empty for 6 months or longer).

Substantial population ageing means Derby will need adequate specialist housing, housing with care or care provision.

The private rental sector in Derby is increasing. According to a recent report, by 2040 people who rent will be more than twice as likely to be living in poverty compared to homeowners (JRF 2014).

Derby's Housing Stock

Derby's housing stock is predominantly low-rise, and is made up of older and larger dwellings than the national average. Of Derby's housing stock, nearly 60% of dwellings are over 50 years old and nearly 18% are 100 or more years old. With regard to 'unhealthy housing' – most recent house condition survey data, in 2006, identified some 18,000 dwellings in Derby as lacking thermal comfort and over 8,000 classed as having a Category 1 hazard to health (under the Housing Health + Safety Rating System).

Within Derby, there is a concentration of social rented properties in Sinfin, Arboretum and Derwent wards (> 30%). Private renting is notably above average in Arboretum and Abbey wards (2011 Census).

To meet the decent home standard, a home must meet minimum safety standards for housing (using the Housing Health and Safety Rating System), be in a reasonable state of repair, have reasonably modern facilities and services and have efficient heating and effective insulation. Any home that does not meet all four criteria will fail the standard.

Of private sector dwellings in Derby, 31% were identified as non-decent and 22% as lacking thermal comfort. Experian plc data from 2010 identifies 12,093 of the private sector stock as being privately rented, around half of which are likely to be non-decent.

The council housing stock has achieved the target for fuel-poor homes to be EPC (energy performance certificate) level E by 2020, with many homes in the D and E bracket. This is due to heavy investment with grant support for wall, loft and window insulation programmes. However, the figures across the city give a more representative picture of the scale of the challenge.

In developing our own energy efficiency database and portal, Derby City Council has procured over 40,000 EPCs for the city. The latest DCLG EPC figures for the Derby LA area (covering about 50% of domestic properties) suggests, if extrapolated, that over two-thirds of properties in Derby are below an A-C rating. The 2030 target for improving to Level C, extrapolated from the data we currently hold, would involve improving 75% of the properties in Derby in the next 15 years.

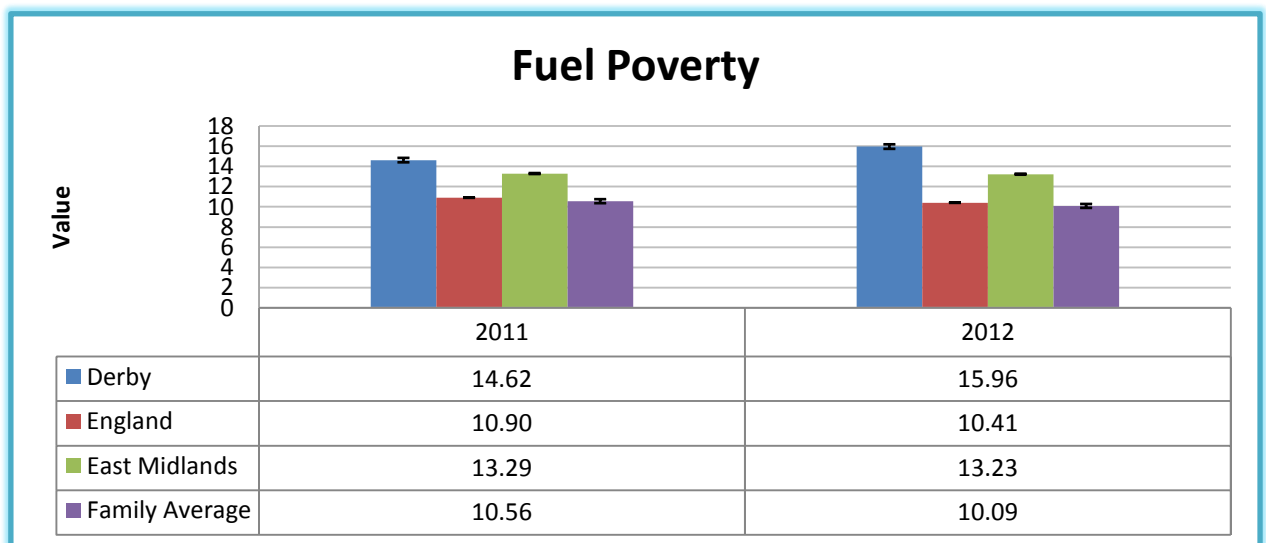
Fuel poverty

The Government has recently set out a new definition of fuel poverty. Under this definition, a household is said to be in fuel poverty if:

- they have required fuel costs that are above average (the national median level); and
- were they to spend that amount they would be left with a residual income below the official poverty line

A social gradient in fuel poverty exists; those on lower household incomes are more likely to be at risk of fuel poverty (PHE 2014). As such, fuel poverty causes avoidable inequalities in health.

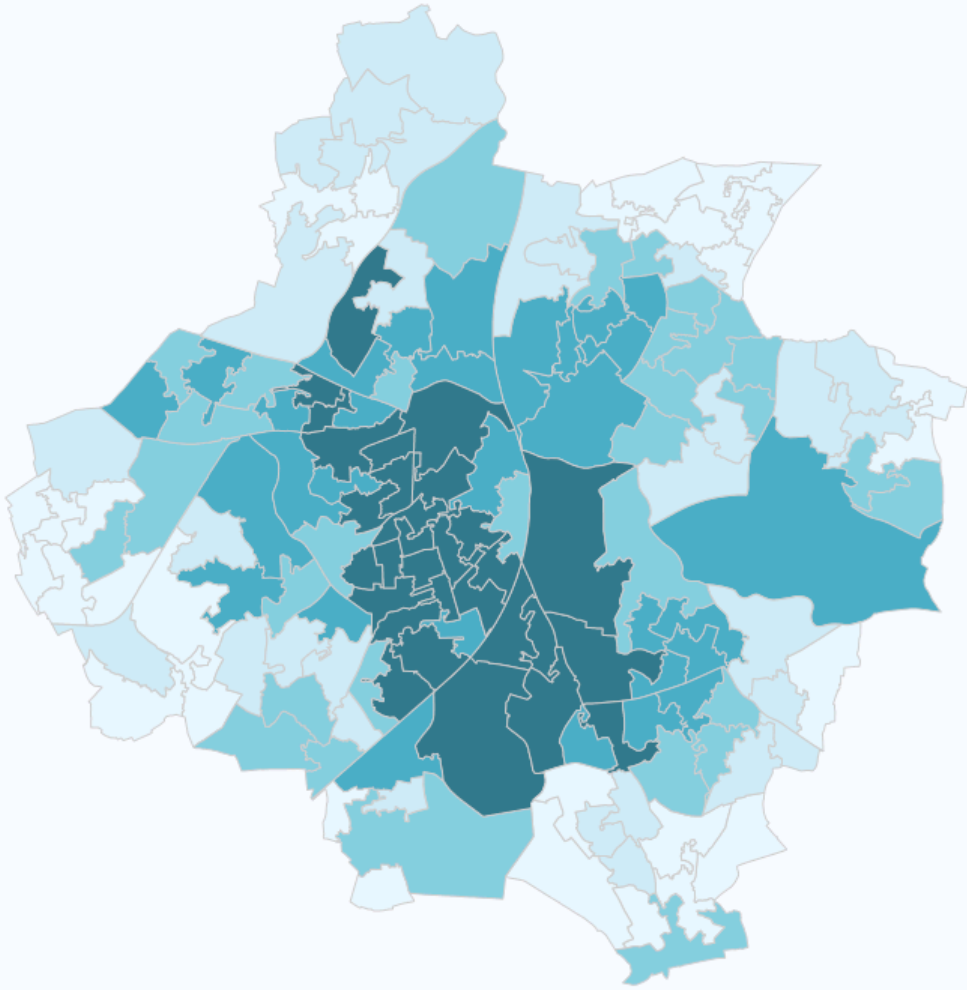
Fuel Poverty is significantly higher in Derby than the national and regional levels. Whereas fuel poverty is declining nationally and regionally, it is increasing in Derby.



In 2012, a total of 16,663 households were deemed to be in fuel poverty across the city, with some clustering in certain neighbourhoods as shown in the map below. In eight inner-city areas in Derby, there are fuel-poverty rates of over a third of households.

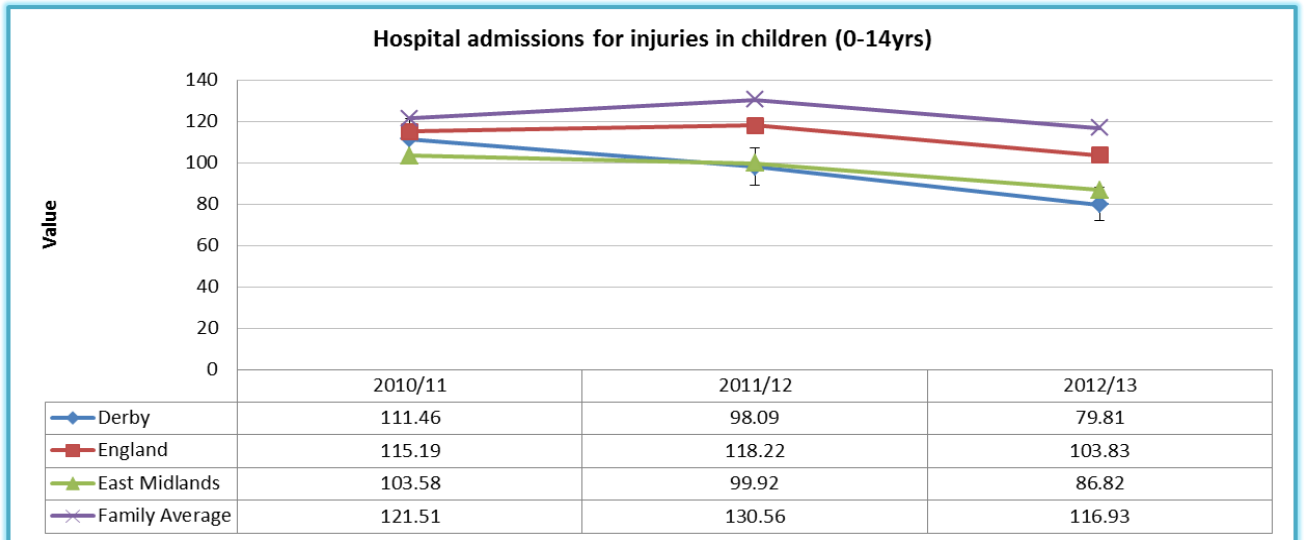
LSOA Code	Estimated number of households	Estimated number of Fuel Poor Households	Proportion of households fuel poor (%)
E01013567	643	253	39.3
E01013481	596	221	37.1
E01013486	585	216	36.9
E01013484	709	260	36.7
E01013565	551	196	35.6
E01013568	765	270	35.3
E01013570	694	236	34.0
E01013485	654	221	33.8

Source: <https://www.gov.uk/government/statistics/2012-sub-regional-fuel-poverty-data-low-income-high-costs-indicator>



Injuries in the home

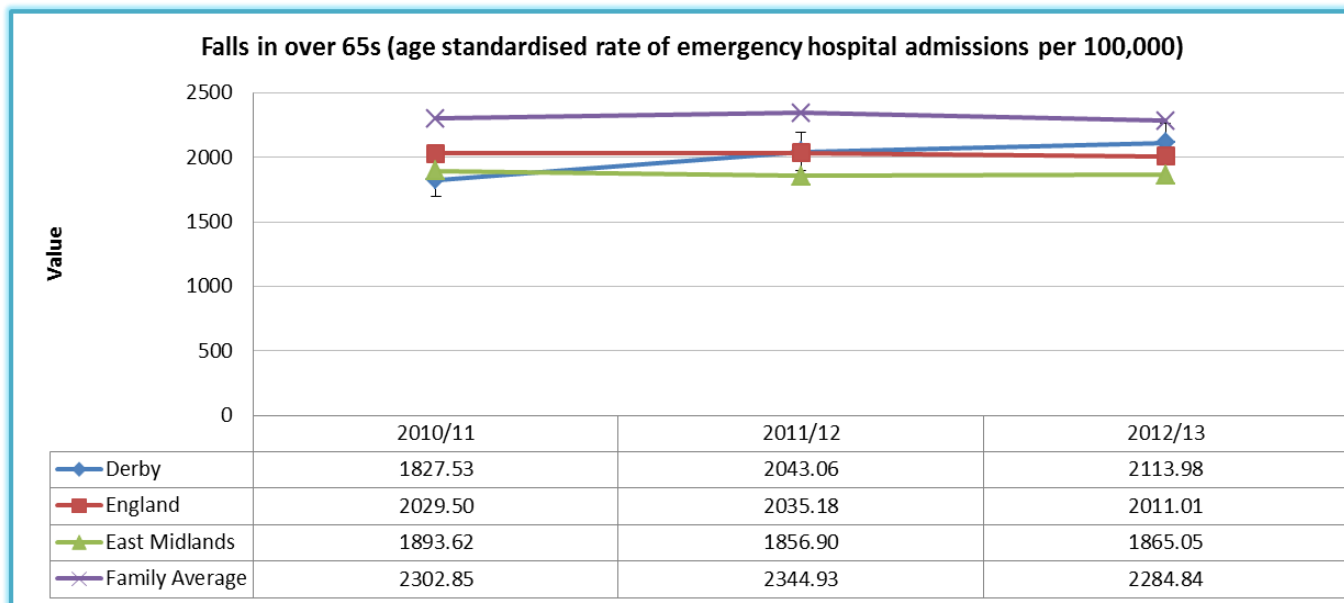
Derby has had a significantly lower rate of hospital admissions for childhood injuries than nationally since 2011/12 and our rate is declining.



Falls in the over 65s

Hospital admissions have been used as a proxy for the prevalence of falls injuries. These are only the tip of the iceberg in relation to the health and well-being burden of falls.

Derby's rate of emergency hospital admissions for falls in the over 65s was significantly higher than the regional rate in 2012/13 (but in line with the national rate) and, after taking the changing age profile of the population into account, our rate has been increasing at a faster rate than nationally or regionally.



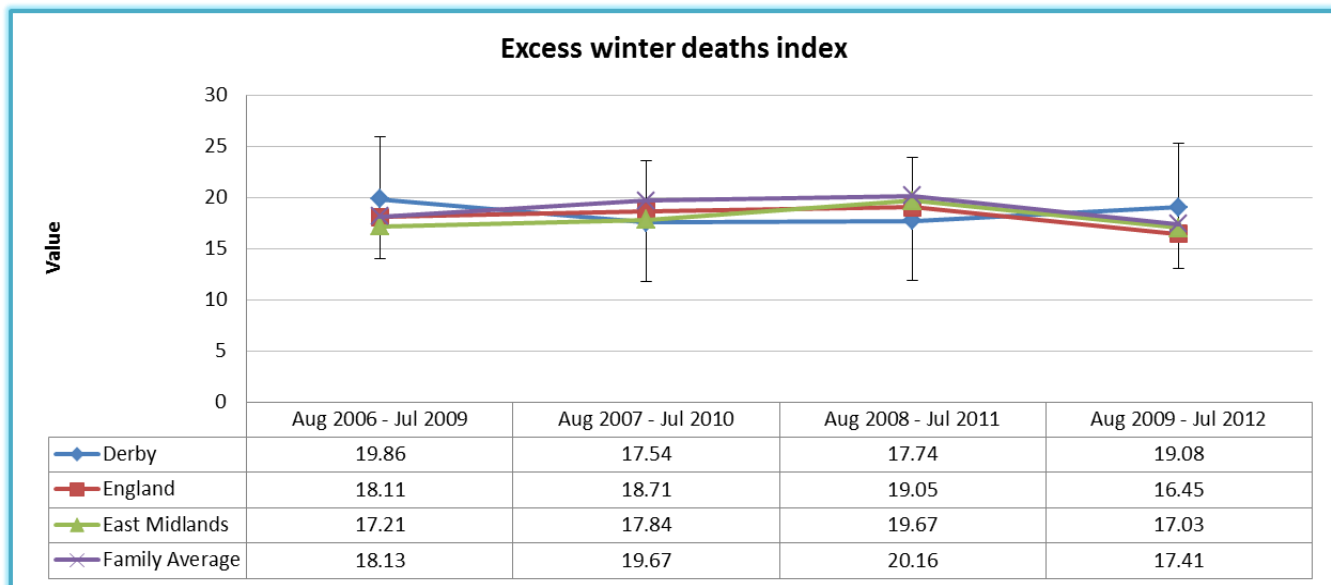
Excess Winter Mortality

The number of excess winter deaths depends on the temperature and the level of disease in the population as well as other factors, such as how well equipped people are to cope with the drop in temperature. As outlined earlier, cold homes have greater detrimental health effects than any other housing factor.

Most excess winter deaths are due to circulatory and respiratory diseases, and the majority occur amongst the older population.

Mortality during winter increases more in England and Wales compared to other European countries with colder climates than ours, suggesting that many more deaths could be preventable in England and Wales.

Derby's excess winter mortality is not significantly different from national or regional levels (confidence intervals are wide because of small numbers).

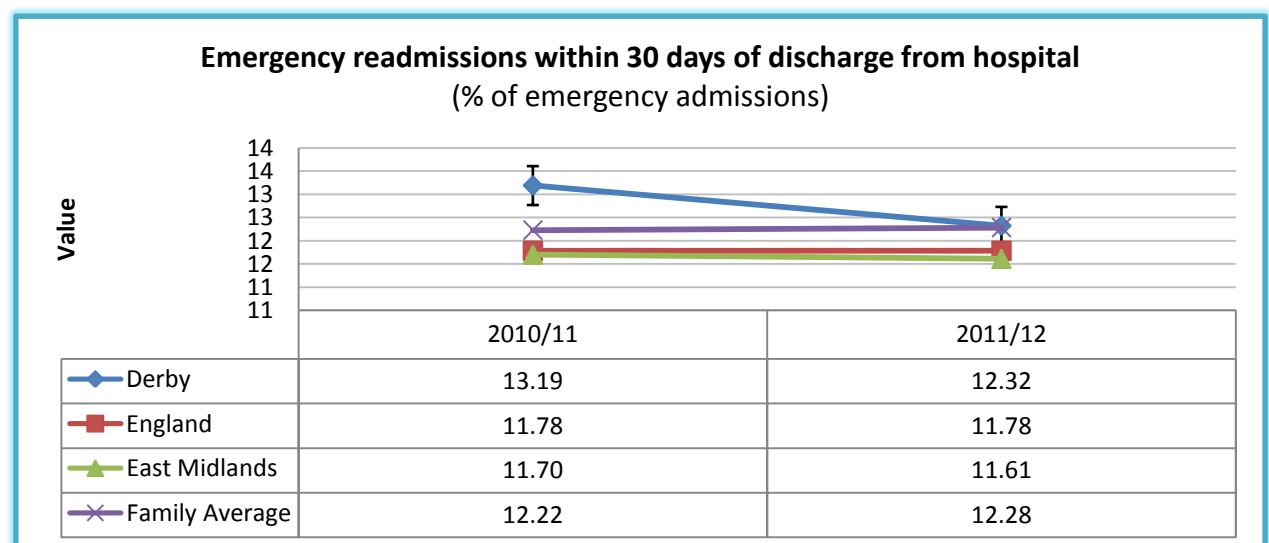


It should be noted that the number experiencing excess winter morbidity, as opposed to mortality, will be much higher and will have greater cost impacts across the system. However, we do not have data on this.

Hospital discharge and readmissions

Having a safe, warm and suitably adapted home to return to after being in hospital can play an important part in both promoting timely discharge, and preventing emergency readmission.

The right rehabilitation and intermediate care services clearly also need to be in place to support individuals to return home or regain their independence.



The graph above shows Derby's emergency readmissions rate has come down to being in line with our family average, but was in 2011/12 still significantly above regional and national averages.

Hospital/care home discharge

Lack of appropriate housing can be a contributory factor in delayed discharge from hospital. It is encouraging to note that the rate of delayed transfer of care for patients ready to leave hospital was in 2013/14 lower in Derby (7.3/100,000 population) than nationally (9.7) or regionally (12.2) (Social Care Outcomes Framework).

Wellbeing

People with warm dry homes are more likely to invite friends and family to stay overnight than those whose homes are cold and damp. These factors impact upon the extent to which social networks can operate, and the opportunities for social interaction available to individuals.

Percentage of Derby respondents 2012/13	
Low life satisfaction score	5.7
Low happiness score	11.6
High anxiety score	22.8

In 2012/13 only half of adult social care clients in Derby said they have as much social contact as they would like (a level which is in line with

national & regional levels).

Derby's adult wellbeing (for life satisfaction, happiness and anxiety) is not significantly different to national, regional or family average levels.

C. What works to mitigate detrimental health impacts of housing?

The Kings Fund have recently suggested that for every £1 spent on improving homes, the NHS saves £70 over 10 years (Kings Fund 2014).

There is significant evidence that improvements to **warmth and energy efficiency** can improve health (Thomson et al 2013). Interventions in this area included cavity wall insulation, loft insulation and installation of central heating. Removal of mouldy items combined with the elimination of water intrusion can be effective in reducing asthma symptoms (Kreiger et al., 2010).

There is also relatively strong evidence for interventions aimed at improving **area characteristics**, by for example moving people from high to low poverty neighbourhoods. This can improve mental health, reduce obesity, and impact

positively on some wider determinants of health, such as people's' experience of social disorder (Gibson et al. 2011).

DiGiuseppi et al., 2010 reviewed interventions to reduce injury in the home, and found that installed and working **smoke alarms** and **temperature regulated hot water systems** had sufficient evidence to warrant implementation.

There is mixed evidence in the area of housing improvement and **mental health**. However, it has been argued that living in poor housing can contribute to stress through a lack of control over living space and fuel poverty. It has also been found that people in homes that are warm and dry are more likely to invite friends and family to stay overnight than those whose homes are cold and damp. These factors impact upon the extent to which social networks can operate, and the opportunities for social interaction available to individuals (WHIASU 2014).

Case Study: Carmarthenshire Health Impact Study

D. What we are doing in Derby to address housing & health issues?

In Derby there are many programmes of work being undertaken by teams in different parts of the Council that benefit people's health through improving housing. An overview of these programmes is given in the table below.

	Programme	Delivered by
Housing Standards /decent homes	Private Rented Sector Housing Standards Statutory Enforcement	Housing Standards Team
	DASH Services – Decent and Safe Homes – training and accreditation services (aim to promote good property standards and management practices in the private rented sector)	Housing Initiatives Team – AHH
	Housing Renewal/Decent Homes Programme (grants for repairs and improvements to private sector properties to ensure that they meet the Decent Homes Standard - This scheme is currently not funded).	
	Healthy housing hub (see p for details)	
	Stay Warm and Healthy Winter Programme	Housing Initiatives Team in partnership with Age UK and SDCCG
	Empty Homes Service	
	Compulsory Purchase Programme	
	Derby Homes	
	Practical Guide for Green Development developed with Manchester Uni to create more sustainable homes and sites which should lead to lower running costs and less climate disadvantage.	Environment and Climate Change Team
Energy efficiency / fuel poverty	City Energy Saving Programme: solid wall insulation programme for ‘hard to treat’ properties in the private sector to reduce energy bills and carbon emissions.	Housing Renewal Team – AHH
	Healthy housing hub (including Stay Warm and Healthy Programme)	Housing Initiatives Team
	Private Rented Sector Housing Standards Statutory Enforcement	Housing Standards Team
	Derby Advice service	Derby Advice
	Derby Homes	
	Derby Home Energy Advice Service –	Climate Change

	<p>dedicated advice line for all residents, roadshows, events etc.</p> <p>Partnership Low-Energy Neighbourhoods project with Severn Trent Water in Alvaston, Chaddesden and Spondon, providing home water and energy advice through talks, home visits and events.</p> <p>Engagement with D2N2 LEP's Smart Energy Communities working group.</p> <p>Proposal to develop energy efficiency data for policy, and external portal for residents.</p>	<p>Team</p> <p>CC Team, Healthy Housing, Public Health</p>
Home adaptations / lifetime homes	<p>Our current Core Strategy includes a policy which allows the Council to negotiate for Lifetime Homes standards on sites of 40 or more dwellings. The target is to get 10% of the overall number as LTH where this threshold is met. There is also a Planning Obligations Supplementary Planning Document to negotiate provision of a range of requirements. The new Local Plan will opt for a higher number of Lifetime Homes properties with a lower threshold (developments of 15 or more dwellings). However we won't be requiring full Lifetime Homes standards.</p> <p>Disabled Facilities Grants: adaptations for disabled people to enable them to live as independently as possible in their own homes (from stairlifts/level access showers to bedroom/bathroom extensions).</p> <p>Healthy housing hub</p> <p>Derby Homes</p> <p>Handy person service -minor adaptation to people's homes to enable independence /discharge from hospital</p>	<p>Planning Policy</p> <p>Housing Renewal Team</p> <p>Housing Initiatives Team – AHH</p> <p>Strategic Housing Service - AHH</p>
Home safety & security	<p>Private Rented Sector Housing Standards Statutory Enforcement</p> <p>Housing Renewal/Decent Homes Programme (when funding available)</p>	<p>Housing Standards Team</p> <p>Housing Renewal Team</p>

	<p>Healthy housing hub</p> <p>Handyperson Service</p> <p>Derby Homes</p> <p>Home Fire Safety Checks</p>	<p>Housing Initiatives Team</p> <p>Strategic Housing Service</p> <p>Derbyshire Fire & Rescue</p>
Maintaining independence	<p>The Older Persons Housing Strategy (in development) includes objectives to:</p> <ul style="list-style-type: none"> • Move older lone tenants and older couples from large family homes into more suitable and appropriate accommodation which will meet their current and future needs. • Ensure all new developments, where possible, have an element of suitable homes for older people • Ensure the Local Plan reflects the housing needs of older people and that it promotes improved community living where residents have good access to local services and facilities. <p>Disabled Facilities Grants</p> <p>Handy Person Service</p> <p>Healthy housing hub</p> <p>Derby Homes Support Service</p>	<p>Housing Strategy & Research Team – AHH</p> <p>Housing Renewal Team – AHH</p> <p>Housing Initiatives Team – AHH</p>
Liveable communities	<p>"Building safe, inclusive, empowered and vibrant communities with a shared sense of Belonging" and "regenerating homes and neighbourhoods in a sustainable way" are 2 of the 4 priority themes in Derby's Housing Strategy 2009-14.</p> <p>Derby Homes estates management</p> <p>Community asset transfers on Council buildings which lend themselves to Community Hubs. Aiming to extend the life of a building by way of a long lease to a group, to continue or start to provide a valuable community resource run by the people best placed to know what the Community needs – themselves – and reduce the maintenance liabilities to the Council.</p>	<p>Housing Strategy</p> <p>Derby Homes</p> <p>Strategic Asset Management and Estates</p>
Preventing	Derby City Council's Homelessness Draft	

homelessness	<p>delivery plan includes a range of measures to prevent homelessness including:</p> <ul style="list-style-type: none"> - Increasing financial support and advice to prevent homelessness caused by debt and financial issues by a) Increasing referrals and signposting to the Derby Integrated Advice Partnership b) Direct support through the homeless prevention fund and repossession fund c) Continued use of the Credit Unions, maximising take-up of their services - Continued promotion of the bond scheme, tying it in with other measures to promoted financial inclusion - Mitigating the impact of benefit sanctions/limits by ensuring process in place to prevent HB being suspended unnecessarily - Completing the review of the allocations policy and implement necessary changes (such as awarding additional priority to applicants at risk of becoming statutorily homeless within 3 months) - Finalise the Information and Advice Strategy in order to coordinate advice and reduce duplication 	<p>Financial Inclusion Team</p> <p>Single Point of Entry Team</p> <p>Housing Options</p> <p>Service Transition Team</p>
Preventing care home admission	<p>Disabled Facilities Grants</p> <p>Healthy housing hub</p> <p>Handyperson Service</p>	<p>Housing Renewal Team</p> <p>Housing Initiatives Team</p> <p>Housing Standards Team</p>
Preventing overcrowding	<p>Housing Options services</p> <p>Private Rented Sector Housing Standards Statutory Enforcement</p> <p>Derby Advice services</p>	<p>Housing Options</p> <p>Housing Standards Team</p> <p>Derby Advice</p>
Preventing avoidable hospital admissions	<p>Extra care schemes. Purpose built, self-contained apartments for single older people and couples (generally 60+) . Fully accessible with communal facilities on-site (hairdresser, gym, film theatre, restaurant, shop etc.); on-site 24/7 365 responsive emergency care – as opposed to the call going to Carelink; housing and tenancy surgeries – setting up utilities etc., and support to access events and activities. Priority given to referrals from</p>	<p>We commission 3 schemes (Greenwich Gardens, Cedar House and Handyside Court)</p>

patients in hospital or care when they needn't be.	
Disabled Facilities Grants	Housing Renewal
Healthy housing hub	Housing Initiatives Team
Provision of equipment to enable people stay at home/ discharge from hospital	Derby Integrated Equipment Service
Building new care housing: currently completing 70 self-contained flats at Sunnyfields and 82 flats onsite at Bath Street, enabling independence	Housing Standards Team
Handyperson Service	

Focus on: Derby Healthy housing hub

Derby's Healthy housing hub (HHH) aims to help those most vulnerable to poor health outcomes as a consequence of poor housing and fuel poverty, through carrying out home improvements/ modifications that could reduce the risk of poor health and conceivable home accidents.

Healthy housing hub Case Study

A blind oldergentleman, otherwise in reasonable health and who wished to continue living independently.

Due to fuel poverty, he was failing to keep warm.

He had resorted to chopping wood to burn on an open fire in the living room.

His gas cooker was in poor repair –so he was lighting the gas with a match.

Without intervention, there was a strong likelihood of:

- cold-related ill health;
- personal injury whilst chopping wood;
- fire damage caused by unsighted use of open fire;
- explosion involving the defective gas cooker;
- high costs to care, health and emergency services.

We were able to:

- ✓ Line the open fire flue and install a gas fire;
- ✓ Access Community Care Grant for a new cooker;

- ✓ Establish best value energy tariff;
- ✓ Maximise his benefits income.

A range of referral routes means many people who

might otherwise miss out on initiatives offered by Derby City Council and its partners are now directly referred for support from an expansive pool of professionals and community volunteers.

‘Intelligent’ targeting significantly increases the likelihood that intervention will be instrumental in preventing, reducing, delaying or lessening the occurrence or severity of an undesirable health event, and will therefore have the greatest impact on health, well-being and cost efficiencies.

A sample (n=150) of falls clients who had been referred into the HHH between July 2012 and June 2013 demonstrated a reduction of 37% in A&E activity (n=38 to 24 attendances) and 54% in emergency admissions to hospital (n=39 to 18 admissions) in the six months post intervention when compared with the six months pre intervention.

Focus on: Derby Housing Standards Team

Housing Standards officers inspect and enforce the standards of around 350 privately rented dwellings a year. They deal with about 500 complaints per year from tenants about unsafe, unhealthy and dangerous living conditions. The private rented sector in Derby is where the poorest housing conditions are found and this sector is increasing.

The team serve some of the most deprived and vulnerable people in the city. They have duties and powers to enforce standards in various different ways if landlords don't immediately respond to requirements to remedy hazards.

Health improvement from enforcing housing standards in the private rented sector can be measured in terms of the economic benefit to the Health Service and wider society. The Building Research Station developed a tool to demonstrate this, and Derby's Housing Standards team employed them to evaluate a project they undertook at Brindley Court which involved proactively inspecting 32 flats and required landlords to improve living conditions.

Just this relatively small intervention with 32 dwellings was estimated to save the **NHS £23,191** every year and wider society something in the order of **£58,000**. The largest health cost savings were in mitigating hazards associated with excess cold (BRE 2012).

Given Derby's Housing Standards team successfully facilitate the improvement of over 225 dwellings a year, it can be extrapolated that they could be not only significantly improving the health and well-being of around 1000 people (based on an average of 4 occupants per dwelling), but also could be saving the NHS and wider society over half a million pounds each year.

E. References

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