A public Health Perspective on Health, Housing & Place Based Prevention

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key Strategic Challenge

Retrofitting housing and neighbourhoods for healthy and sustainable communities
Issues: Housing as ‘Place’

- Retrofitting housing and neighbourhoods for healthy and sustainable communities
- Key Evidence – Housing & Health
- Insights from current public health practice
- Climate Change – “This changes everything” (Naomi Klein)-Green New Deal: Energy, Buildings transport
Housing and Public Health

KEY EVIDENCE
Good housing is a sound evidence based health investment with a high ROI

Return on investment
Housing interventions to keep people warm, safe and free from cold and damp are an efficient use of resources. Every £1 spent on improving homes saves the NHS £70 over 10 years.
The quality of people’s housing has a similar impact on health as smoking or alcohol. BRE (2015)
Housing can promote and improve health and wellbeing

HOW HOUSING CAN IMPROVE HEALTH AND WELL-BEING

There are many opportunities to promote health by addressing housing conditions including:

- Toxic materials such as asbestos
- Overcrowding
- Indoor air pollution
- Water, sanitation and hygiene
- Indoor temperature
- Insulation
- Accessibility
- Home injury hazards
- Noise

Healthy housing is becoming more important in light of:

- Urban growth
- Ageing populations
- Climate change

HEALTHY HOUSING FOR A SUSTAINABLE FUTURE

#EnvironmentalHealth
Improving housing to improve health requires multi-agency strategy/action

LET’S WORK TOGETHER FOR HOUSING CONDITIONS THAT PROMOTE HEALTH

To improve housing conditions we need to:

1. Define standards, regulations and building codes that protect residents’ health

2. Work across national, regional and local government levels

3. Collaborate across sectors such as housing, health and energy

4. Involve partners from the public, private and civil society sectors including public health professionals, social housing services, consumer protection agencies, architects, urban planners, construction industry, policy-makers, home owners

Measures to reduce health risks from poor housing include changes to the built environment and the introduction of loans and subsidies to support these changes.

These WIN-WIN strategies are fundamental to achieving the Sustainable Development Goals.

World Health Organization

HEALTHY HOUSING FOR A SUSTAINABLE FUTURE  #EnvironmentalHealth
Poor housing (below decent home standards) are a major determinant of population health and inequality.

One in five households with a working age member are living in non-decent homes.

A decent home: meets the current statutory minimum standard for housing; is in a reasonable state of repair; has reasonably modern facilities and services; provides a reasonable degree of thermal comfort.

3.16m households

Homes for people of working age
Private rented housing is the biggest housing / health risk

**THE ISSUE**

One in three homes in the private rented sector are not a decent standard.

This is equivalent to 1.3 million.

95% of housing stock is not visitable by disabled people, including wheelchair users.

**WHY IT MATTERS**

- The availability and affordability of high quality, appropriate housing can reduce the demands on social care and health services.
- Poor housing lowers educational attainment and increases the likelihood of unemployment and poverty in later life.
- Conditions like TB, meningitis, respiratory illness and psychological distress are more common in overcrowded homes.
- Overcrowded homes are associated with exposure to tobacco smoke, accidents, disturbed sleep, slow growth. They all increase risk of coronary heart disease in later life.

**WHAT CAN BE DONE?**

Public bodies and local partners can:

- Put in place formal arrangements between partner organisations (e.g. NHS, fire, social care) to ensure health impacts of housing stock are considered.
- Prevent issues from occurring by ensuring the housing market is sustainable and appropriate for the needs of the population.
- Include housing professionals as part of the wider Public Health workforce so that opportunities to improve health through the provision of housing services can be exploited.
Children are at particular health risk in private rented housing

Most non-decent homes lived in by families with children are in the private sector

A decent home: meets the current statutory minimum standard for housing; is in a reasonable state of repair; has reasonably modern facilities and services; provides a reasonable degree of thermal comfort

Homes for children and families

1.14m households

48.2% owner occupied

16.3% social rented

35.5% private rented
Housing is a particular issue for Veterans -32% rent -38% with private landlord
HMOs are concentrated in low income areas disproportionately attracting high need residents.

Fuel Poverty continues to drive winter deaths (England 10%, North West 13.1% BwD 16.5% in 2017)

**Fuel Poverty**

A household is considered to be fuel poor if:
- they have required fuel costs that are above average (the national median)
- were they to spend that amount, they would be left with a residual income below the official poverty line

Households most at risk:
- Older properties/lack of cavity insulation
- Private rented
- Lone parents
Homelessness is rising – low income areas have higher rates of deaths amongst homeless people

Figure 84 - Factors indicative of vulnerability or complex needs

Homelessness
Mental ill-health
Anti-social behaviour
Ex-offenders
Social exclusion
Substance Misuse
Poverty

Figure 85 - Sparkline of Rough Sleeping estimates for BwD (2010-2018)

For every year from 2010 to 2017, the borough estimate had been 0, 1 or 2 people, but in 2018 it shot up to 15. Each local authority works this out by the method considered most suitable for their area. In Blackburn with Darwen, an informed estimate is made by partner agencies.

Deaths of homeless people

OHS has issued new, experimental estimates of deaths among homeless people going back to 2013. Decedents under 75 who can be identified as homeless from the death certificate (i.e. as being of no fixed abode, or in emergency accommodation, shelters or hostels) are counted as ‘identified deaths’. A further estimate is made of how many are likely to be homeless, but could not be ascertained as such from the death certificate. Nationally, the combined estimate of deaths among homeless people has risen by half between 2013 and 2018. Deaths among homeless people have also risen sharply in Blackburn with Darwen (Figure 86), to reach 11 in each of the last three years. There is no official count of homeless people in general, so the only way of expressing their deaths as a rate is to divide by the entire population of the borough. When this is done, Blackburn with Darwen has the second highest rate out of more than 300 English districts in 2018, and for all six years combined (excluding City of London). It had the highest rate of all in 2017.

What the papers say …

Homelessness can be both a cause and a consequence of ill-health. A large study in Birmingham has found that homeless people:

- Have high rates of mental health problems, alcohol & substance misuse and hepatitis C
- Have almost 60x the A&E attendance rate of the general population
- Have the multimorbidity rates of people 25-30 years older
- Are at risk of fragmented care

LIVE WELL
Housing can define residents ‘environmental burden of disease’ – especially in relation to poor Air Quality. Poor Air Quality accounts for 29,000 deaths in the UK - 4% of all deaths in Cumbria and Lancashire.
Insight: Health and Wealth: A Reciprocal relationship

Pennine Lancashire Health risk and health system cost is ‘housing, place & income based’

Individual disease management strategies may have very limited population health impacts
Are house prices / sales in the past year a guide to health need / life chances?
i.e. low social mobility, private rented, high NHS use, minimum wage low income LSOAs
Can digital Neighbourhood mapping down to LSOA provide insights to wider household based interventions for the NHS?

Digital Neighbourhood Mapping Tool Pennine Lancashire
https://aecunningham.shinyapps.io/PLMaps/
We need to create housing based neighbourhood prevention integration as part of PCN development

2.0
The Pennine Lancashire Place-Based Prevention Framework

“Preventing avoidable illness, hospital admissions, long-term loss of independence and poorer quality of life, is not just common sense, in the long run it’s the only way to balance the books.”

Dominic Harrison
Director of Public Health, Blackburn with Darwen
Housing and neighbourhoods need to be developed as Community Centred Public Health & ‘Recovery Communities’ led by PCNs.
THIS CHANGES EVERYTHING – CLIMATE CHANGE AND THE ‘GREEN NEW DEAL’
What is the ‘Green New Deal’ and how might it improve housing and health?

The Green New Deal in the North West

How we can tackle the climate emergency and leave no one behind

What is the Green New Deal?

The GND is a plan to rapidly transform our broken economic system into one which can simultaneously avert the climate and nature crises, redistribute wealth and reverse inequality, provide hundreds of thousands of future-fit jobs, put workers and communities first, and raise the standard of living for all. This can all be achieved through a radical overhaul of our financial institutions, a broad package of new policies and, most importantly, a huge mobilisation of investment – up to 5% of GDP annually for the next ten years. That’s around £100 billion in the UK, or £750 billion in the EU. There are six core principles a GND must live up to:

- **Recognising the Emergency**: Facing up to the enormous scale of the climate and nature emergency with unprecedented, rapid and radical action, starting now.
- **Making a Fair Contribution**: Supporting global climate justice and taking action in our own communities, rather than simply offsetting our emissions to the developing world.
- **A Just Transition**: Putting workers and those in need first, ensuring inclusivity and diversity, creating good quality jobs for all and redistributing wealth to where it’s needed most.
- **Public Money for Public Goods**: Ensuring that public investment in new infrastructure benefits that can be shared by all, from cleaner air and water to improved health and wellbeing.
- **Localising Democracy**: Devolving more powers to local areas, enabling participatory decision-making and encouraging new forms of public ownership.
- **Rethinking Success**: Abandoning our attachment to endless economic growth by measuring what’s more important, like security, equality and wellbeing.
Green New Deal: Energy & New Jobs

**Energy**

A Green New Deal in the North West means a rapid transition to a smart, zero carbon energy system that creates thousands of jobs—a true ‘Green Powerhouse’ in the North, with no more fossil fuels or expensive nuclear in sight.

**WHAT’S THE PROBLEM?**

- Fossil fuel investments will be approved
- Misallocation of transport and housing need requires investment
- Excessive, unnecessary new nuclear being financially supported over cleaner renewables
- Solar projects risk going unused
- Climate change is a financial burden
- Community energy and public ownership remain small

**Energy in the North West — Notable Projects**

- Barrow, Waters and Wind of Wishaw
- Derwent
- Primary School
- Chester West
- Halton
- Wirral

**Key**

- Wind power
- Solar power
- Hydrogen production & storage
- Coal
- Coal (underground 2020)

**BEST PRACTICE**

**Energy 4 All**

Energy 4 All is a co-operative in Barrow-in-Furness founded to help communities set up their own green energy co-operatives. It has successfully launched a family of 27 member co-operatives with a total of 15,000 members and raised around £27 million from community share offers. The organisation is part of RE:Scop MEC, an EU Horizon 2020 funded project that is helping to mobilise citizens and municipalities to create citizen energy communities.

**HYSchools**

HYSchools is a EU Framework-funded project led by Manchester Metropolitan University, in partnership with five other European countries. HYSchools aims to help schools understand the quality of hydrogen Fuel Cell Technology (HFT), education by giving teachers increased confidence to teach students about the applications of HFT and equip them with the future skills required by this growing sector.

**EXPAND AND ACCELERATE**

Across northern England, up to 46,000 jobs in low carbon energy could be created in the next 10 years, and as many as 10M by 2050. This is what the GND can achieve.

**The North West** is the UK’s second biggest region for offshore wind capacity after the East of England, with over 400 wind turbines in place off the coast of Liverpool and Cumbria. More progress can be made – Liverpool City Region believes it can triple the volume of energy being generated by offshore wind in Liverpool Bay by 2024, capitalising on the projected 17,000 jobs the industry could support in the UK by 2025.2

**The North West is a successful adopter of offshore wind, but it was effectively blocked at scale by the Conservative government in 2015. Lancashire and Cumbria are both in the top ten countries in England for onshore wind generation,** but despite the fact that it is by far the most cost-effective source for new electricity, just 29 additional turbines are currently in the pipeline for installation across the whole of the North West.

For each installed megawatt of onshore wind power, £300,000 is thought to stay in the local community.

**Solar power provides a significant opportunity for our homes and businesses. Greater Manchester’s plan to become a carbon-neutral city region by 2030 requires more than 50% of its households – over 600,000 in total—to have solar panels fitted over the next ten years, as well as an additional 4,350 on commercial rooftops or ground-mounted installations.** A substantive mobilisation of finance and new incentives is needed to get us there.

Green hydrogen can play a vital role in our energy future and provide thousands of jobs. There is a large cluster of industrial gas users in Chesterfield ready to switch from natural gas, needy steel furnaces could be used to store hydrogen at scale and our regional universities are leading the latest cutting-edge research. The most important benefit to a thriving, green hydrogen economy in the North West isn’t technological, or even financial, but educational. Hydrogen energy is not currently taught at any stage of the education system, from schools, to college, to apprenticeships, to professional training.

The electricity network is changing for the better. As more small-scale renewables are added to the network and smart technologies give homes and businesses a ‘two-way’ relationship with the electricity grid, the power of big energy suppliers will wane. Individuals and communities will have the opportunity to feed into the energy system as well as draw from it.

The challenge is that electricity demand will increase as we electrify heating and transport. Investing in new network infrastructure won’t be affordable. Instead, regional network operators like Electricity North West must help communities use less electricity, saving lower bills, lower carbon emissions and less need for new network capacity.

Decarbonising the energy system as much as possible will ensure communities can take a leading role in driving the transition. For example, Denmark and Germany have some of the highest rates of wind power in Europe, partly because of extensive community ownership of wind farms.

There are more than 300 active community energy projects across the UK, supported by over 80,000 member households. Community energy has been found to deliver eight times the value of projects managed by private companies.3 But the North West has a relatively low number of community energy organisations and the cutting and withdrawal of national subsidies for small-scale renewables has made it much more difficult for projects to start off the ground.

**WHAT NEEDS TO BE DONE?**

- **Establish a ‘Just Transition Commission’ which uses an alliance of Local Enterprise Partnerships (LEPs) to bring the public sector employers and unions together to map out impacts on fossil fuel reliant jobs, and target green investments accordingly.**
- Put a hold on coal power plants until the full environmental impacts and costs of each proposal are properly understood.
- Reverse the de-facto ban on onshore wind by providing national planning guidance and allowing developments to compete for national subsidies.
- **Require all new homes to include fully built back solar PV systems in place unless lack of feasibility is proven private finance is found for housing, homes (like Syndrome).**
- Substantially reverse the rise in VAT on solar technologies and offer discounted business rates for renewable installations.
- Develop a UK-leading green hydrogen economy, ensuring every public funding for large infrastructure projects is focused on electrification.
- **Start a large-scale vocational training programme for workers in affected industries, such as gas engineers.**
- Use the North West Local Energy Hub – created to increase public sector capacity to bring forward local energy solutions – to provide community energy and public ownership.
- **Make energy saving a national priority (see Buildings and Industry sections).**

"100,000 northern green energy jobs by 2050"
Buildings: retrofit, insulate, provide green energy, create 35,000 jobs

A Green New Deal in the North West means eradicating fuel poverty and ensuring everyone has warm, comfortable buildings to live and work in – cutting emissions, saving money on bills and slashing costs for the NHS in the process.

WHAT’S THE PROBLEM?
- Fuel poverty higher than anywhere else in the country
- 25 million UK homes have no boiler
- Substantial homes still being built
- National policies either ineffective or completely missing
- Local authorities held back by lack of funding and support
- Private landlords not held to account

BUILDINGS: retrofit, insulate, provide green energy

The energy efficiency of our housing is a national disgrace. Most of our homes were built without insulation and are among the most expensive to heat in Europe. At least 11.400 people die each year from cold homes. Retrofitting our homes costs the NHS £10 billion a year, and the impacts on the wider economy in terms of lower productivity and missed work or school days are estimated to be as much as £15 billion.

Feeding our homes costs the NHS £10 billion a year, and the impacts on the wider economy in terms of lower productivity and missed work or school days are estimated to be as much as £15 billion.

HOLDING US BACK
- Inefficiently heated homes
- Over 3 million homes need energy retrofit
- Over 3 million homes need energy retrofit

EXPAND AND ACCELERATE

The energy efficiency of our buildings stock in the North West is the most obvious way of tackling the climate emergency while at the same time delivering social justice for all. Well-insulated, warm homes mean healthier and happier residents and, by extension, a more productive economy and less public spending on healthcare. They are also cheaper to heat, saving residents money on fuel bills.

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WHAT DO WE NEED TO DO?
- Declare the state of housing a national emergency and deliver a radical, multi-billion pound national deep retrofit scheme, working with local government and community groups to negotiate every house, street-by-street, starting with those in fuel poverty.
- Use fiscal measures to offer homeowners favourable financial incentives such as green mortgages, low or 0% interest loans and buying shares in the building rather than the occupier.
- Provide more resources to local authorities so they have the capacity to lead local delivery and zone renovations into commercial packages to attract additional investment, as well as retrofit their own buildings to a heating standard.
- Tighten Minimum Energy Efficiency Standards (MEES) to make sure private landlords can only let energy efficient buildings.
- Establish vocational training schemes to build skills in the construction supply chain, and promotional campaigns to mainstream the construction sector’s image
- Immediately incentivise a national Zero Carbon Homes standard to force builders to deliver fit-for-purpose new homes, ensuring that local authorities can go over and above these standards if desired
- Prioritise retrofitting and bringing back into use the North West’s empty homes ahead of new housing projects
- Use local planning rules to require developers to consider heat networks and other low carbon heating when building in dense urban areas
- Develop energy efficiency standards for commercial buildings and establish strict disclosure requirements for large businesses, while increasing advice and guidance for SMEs

LEADING THE WAY

Salford Energy House 1.0 & 2.0
Built at the University of Salford in 2011, Salford Energy House was the world’s first full-scale brick terraced house constructed inside an environmentally controllable section chamber, allowing companies large and small to test energy efficiency measures in almost any weather condition. In 2021, the university will open Energy House 2.0. Backed by £3.2 million in EU funding, the new, larger facility will allow all of the buildings to be constructed, tested and demolished. The EU funding will give small businesses free access to the facility to develop exciting new innovations.
Transport: Housing-commuting-shopping.

Roadbuilding is incompatible with the climate emergency. The Transport Secretary is the UK’s biggest source of carbon emissions, with road transport the main contributor. Despite declining climate emergencies, many local authorities are still pushing for multi-billion pound road investments. Between 2015 and 2020, the government spent £11 billion on new roads in the North West, leading to the biggest increase in road capacity for the region since 1970. This expertise is usually incurred in the name of saving congestion, but building new road space simply encourages increased traffic.

Electricity of road travel will not be enough to solve the problem of transport emissions. Research shows that in most local areas, the most efficient transport is a car, followed by walking and cycling, and then by bus and rail.

WHAT’S THE PROBLEM?

- Transport policy assumes that cars will dominate despite climate emergency
- Air pollution killing thousands of people every year
- Rail and bus services expensive, inefficient and serve shareholders rather than passengers
- Air travel using unsustainably
- Cycling and walking underfunded
- Local authorities unable to sustain project, see Clean Air Zones

**THIS has to STOP**

"Bus use has plummeted by 40%"

The government has already cut the number of bus services, and the number of passengers on buses has dropped by 40%.

"A green transport revolution would directly create 27,000 net jobs in the North West"

What needs to be done?

- Push for a new Clean Air Act to enshrine in law the right for all to breathe clean air
- Use HS2 and redirect its original £46 billion budget to improving local rail services in the north
- Ensure the national road strategy starting in 2020/21 focuses on existing infrastructure and redesigning streets for walking, cycling and public transport, by embedding a "road user hierarchy" into transport planning
- Require all local and national transport and planning departments to prioritise the climate emergency when assessing proposals
- Bring public spending on walking and cycling up to at least £10 per capita per year, on a par with leading 'cycle-friendly' countries
- Ensure new housing developments are designed with sustainable transport in mind to reduce traffic loads for walking and cycling, and are well connected by public transport
- Devolve further powers to local authorities so that every council has the option of franchising local bus services
- Provide towns and cities with the £35 billion they need to enable well-funded CAZs which support lower income families and businesses
- Push for a frequent flyer levy at the national level and introduce fiscal measures to reverse the cost difference between short haul air travel and rail travel
- Use Manchester City Council’s position as a stakeholder in Manchester Airport to drive positive change
Housing and neighbourhoods are the key to improving population health

Kings Fund: Population Health Strategy: (Key= managing incidence as well as managing prevalence)