



UK HEALTH  
ALLIANCE ON  
CLIMATE CHANGE

# Greener hospitals, healthier communities

## Why NHS anchor institutions should prioritise environmental sustainability

BRIEFING

OCTOBER 2018

The **UK Health Alliance on Climate Change** brings together doctors, nurses and other health professionals to advocate for responses to climate change that protect and promote health. Its membership comprises many Medical and Nursing Royal Colleges, Faculties of Health, the British Medical Association, the British Medical Journal, and the Lancet.

### KEY MESSAGES

- The impact of the NHS on health goes beyond its provision of treatment and care; in the process of delivering healthcare, the NHS impacts a range of social, economic and environmental outcomes indirectly, alongside its direct impact on public health.
- The NHS can drive positive economic, social and environmental outcomes through changing how it employs, procures, and uses land and other assets, as well as how it travels and burns carbon.
- This potential is particularly high at a local level where hospitals and other healthcare sites act as 'anchor institutions' – by being physically located within a community, their activities have a significant impact upon social, economic and environmental outcomes within the local area.
- The NHS should prioritise sustainability when realising the positive potential for hospitals and other healthcare sites to act as anchor institutions.
- More support is needed to realise the NHS's potential to drive more positive economic, social and environmental outcomes, including through strengthening the Social Value Act, an audit of low-carbon energy generation potential on NHS facilities and an NHS Clean Air Fund to support an increase in more sustainable transport use across the NHS.

IN THE PROCESS OF DELIVERING HEALTHCARE, THE NHS IMPACTS ECONOMIC, SOCIAL AND ENVIRONMENTAL OUTCOMES. THE NHS<sup>1,2</sup>:



1 Reducing the use of natural resources in health and social care: 2018 report, Public Health England, NHS England, Sustainable Development Unit. <https://bit.ly/2Ra7ujl>

2 NHS Surplus Land – 2017/18 England [PAS], <https://bit.ly/2zIWzXP>

## The health impact of the NHS – first and second order impacts

The impact of the NHS on health goes beyond its provision of treatment and care. As large employers, purchasers and capital asset holders, hospitals, trusts and other healthcare providers across the NHS have a significant impact on the local economies and communities in which they operate. That is, in the process of delivering healthcare, the NHS impacts a range of social, economic and environmental outcomes indirectly, alongside its direct impact on public health. These can be categorised into first and second order impacts:

- **First order impacts:** Impacts resulting from the delivery of healthcare – e.g. the benefit of improved mobility from a hip operation. These benefit individual patients as well as local communities, through improvements in public health.
- **Second order impacts:** Impacts resulting from the process of delivering healthcare through, for example,

purchasing, employment and asset use. These may be social, economic or environmental – e.g. the effect on air quality resulting from car journeys on NHS business or to access NHS services.

First and second order impacts can be positive or negative. While policy rightly focuses on ensuring positive first order impacts are maximised, there is likely a large latent potential for more directed policies to increase positive second order impacts to improve public health through driving positive social, economic and environmental outcomes.<sup>3</sup> Accordingly, there is an increasing focus on how to maximise the positive potential of the NHS as an ‘anchor institution’ – an institution, such as a hospital, that is physically located within a community and, through its activities, has a significant impact upon social, economic and environmental outcomes within the local area.<sup>4</sup> The NHS and its components have purview over large economic, human, intellectual, and institutional resources, and so have the potential to bring significant, and measurable, benefits to local communities by maximising the positive second order impacts of their activities.

## How the NHS can drive local social, economic and environmental outcomes

- **Employer:** The NHS employs over 1.6 million people in the UK, constituting around 30% of public sector workers, and around 5% of all those in paid work.<sup>5</sup> Therefore, NHS employment policies impact the quality, pay and working conditions of a large section of the population.
- **Purchaser:** Healthcare organisations are major producers and purchasers of goods and services, spending around £20 billion per year, through which the NHS has an impact on economic, social and environmental factors.<sup>6</sup> For example, an analysis of the Leeds City Region found that if ten anchor institutions (including clinical commissioning groups and hospitals) moved an additional 10% of their total spend locally, this could drive an additional £168–£196 million into the Leeds economy.<sup>7</sup>
- **Capital estate holder and developer:** NHS hospitals alone own roughly 1,200 sites worth £9 – £11 billion.<sup>8,9</sup> In 2018, 718 plots of land totalling 1,749.4 hectares were declared as surplus to requirements, with

166 NHS Trusts reporting plots of surplus land.<sup>10</sup> Land is a valuable asset whose productive use can drive positive economic, social and environmental outcomes.

- **Road user:** around 3.5% of all road traffic in England is attributed to NHS-related travel, resulting in around 7,285 tonnes of nitrogen oxide (NOx) and 330 tonnes of particulates that impose an estimated economic cost of £345 million.<sup>11</sup> As such, the NHS can play a leading role in improving air quality by reducing unsustainable transport use.
- **Carbon user:** nearly 40% of public sector emissions are from the NHS. The NHS is making significant progress in decarbonising – the health and social care carbon footprint has reduced by 18.5% in between 2007 and 2017, equivalent to the annual emissions from Mauritius or Cyprus.<sup>12,13</sup> Meanwhile, some indicators of NHS clinical activity have increased by 27.5% over the same period.<sup>14</sup> This signals an effective ‘decoupling’ of clinical growth from carbon emissions, in the same way that the UK economy has grown while its emissions have fallen.<sup>15</sup>

<sup>3</sup> Meeting the Procurement Challenge, Briefing Paper Issue 001 2013, NHS Supply Chain <https://bit.ly/2P2VM9k>

<sup>4</sup> Sladek E. 2017, Higher Education’s Anchor Mission: Measuring Place-Based Engagement, The Democracy Collaborative. <https://bit.ly/2lw0HNE>

<sup>5</sup> ONS [2018] ‘Public sector employment, UK: June 2018’, statistical bulletin, 11 September 2018. <https://bit.ly/2z01hn9>

<sup>6</sup> Meeting the Procurement Challenge, Briefing Paper Issue 001 2013, NHS Supply Chain <https://bit.ly/2P2VM9k>

<sup>7</sup> Devins D, Gold J, Boak G, Garvey R and Willis P. 2017, Maximising the local impact of anchor institutions: a case study of Leeds City Region, Joseph Rowntree Foundation. <https://bit.ly/2NdXva6>

<sup>8</sup> Sir Robert Naylor’s NHS Estate and Property Review, 2016, Page 9. Deloitte. <https://bit.ly/2RcZONL>

<sup>9</sup> Sir Robert Naylor’s NHS Estate and Property Review, 2016, Page 6. Deloitte. <https://bit.ly/2RcZONL>

<sup>10</sup> NHS Surplus Land – 2017/18 England [PAS], <https://bit.ly/2ziWzXP>

<sup>11</sup> Reducing the use of natural resources in health and social care – 2018 report. Public Health England and NHS England. <https://bit.ly/2Ra7ujl>

<sup>12</sup> Reducing the use of natural resources in health and social care – 2018 report. Public Health England and NHS England. <https://bit.ly/2Ra7ujl>

<sup>13</sup> CAIT – Historical Emissions Data (Countries, U.S. States, UNFCCC), World Resources Institute. <https://bit.ly/2QmRKZw>

<sup>14</sup> NHS Digital Hospital Episode Statistics <https://bit.ly/2OqWUq7>

<sup>15</sup> Reducing UK emissions, 2018 Progress Report to Parliament, Committee on Climate Change, June 2018. <https://bit.ly/2Ku6Cww>

# NHS anchor institutions should prioritise sustainability

Climate and other environmental change is the greatest threat to global health, while the actions needed to prevent climate change – including increases in active travel over vehicle use and more sustainable, nutritious diets – are also those that improve health.<sup>16</sup> In acting as an anchor institution, the NHS can play a major role in reducing its environmental impact – and improve health outcomes and save money in the process, as these case studies show.

## Case Studies

### Saving lives with solar

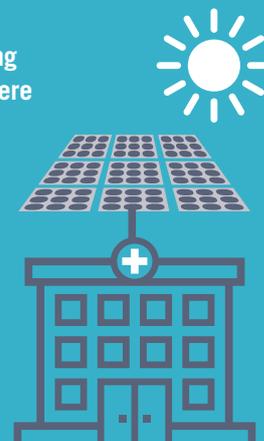
In 2016, Southern Staffordshire Community Energy (SSCE) launched a share offer in partnership with a University Hospitals of North Midlands (UHNM) and the Beat the Cold charity to fund the installation of solar panels on hospital buildings and to improve the welfare of local residents living in fuel poverty.

Over 1,000 roof-mounted solar photovoltaic (PV) panels were installed and commissioned on seven buildings across both hospitals. The £335,600 project has been entirely funded by investment from members of public, who receive a 4.5% average rate of return. The electricity generated by the panels receive a guaranteed 20-year 'Feed in Tariff' income from the Government, which will accumulate into a 'Community Fund'. This fund is diverted to Beat the Cold in order to assist local and vulnerable patients who are suffering from, and/or their illness is exacerbated by, fuel poverty and living in cold and damp homes.

By utilising vacant roof space to generate electricity in this way, UHNM are facilitating both energy and community resilience – both of which will have a positive financial benefit to the Trust.

### Impact<sup>18</sup>

- **Community owned solar panels on hospitals – reducing the negative effects of reliance on non-renewable energy**
- **Returns of approximately 5% – the share offer was only open to members of the local community, putting the profit back into the area**
- **The profits of the initiative are set to be over £300k – to go to 'Beat the Cold'**
- **As a result of the funds coming from the initial share offer, there was no capital costs to the NHS for this initiative**
- **Over its twenty-year lifetime, the initiative is expected to save the hospitals over £600k in energy costs**



### Transforming travel in a community Trust<sup>18</sup>

Sussex Community Foundation Trust is the main provider of community health across West Sussex, Brighton and Hove. Daily, it treats over 9,000 patients, with more than 8,000 of these visits taking place in the patient's home. Annually, this represents a cost of over £3 million to the Trust for over 6 million miles travelled.

After considering the second order impacts on health from transport, including air pollution and the contribution to climate change, the Trust created a 'Travel Bureau' to address the economic and environmental cost of the Trust's staff and patient travel. Staff can now book one of 15 low emission pool cars, which enable them to travel to work actively or on public transport whilst still having a vehicle available for work inaccessible by active travel. The Bureau also offers a booking service for bus and rail tickets, interest free season ticket loans, maps and cycle ways, and a route-planning service for clinical staff travel

to a new location. Additionally, the Trust now works with local authorities to improve facilities to promote cycling across the Trust's sites and has implemented an electric bike sharing scheme which enabled staff to visit patients across the region they serve, whilst avoiding traffic and parking difficulties.

### Impact

Within a year of its launch, the scheme:

- Approximately 1 million miles were saved
- There was a £500,000 reduction in transport costs
- Staff time with patients increased
- There was a measured improvement in local air quality

<sup>16</sup> Wang H and Horton R, 2015, 'Tackling climate change: the greatest opportunity for global health', The Lancet, 386(10006), pp.1798-1799.

<sup>17</sup> Southern Staffordshire Community Energy, SSCE Share Offer. <https://bit.ly/2bhphDA>

<sup>18</sup> Transforming travel in a community trust, Sustainable Development Unit. <https://bit.ly/2OX1yJo>



## Policy recommendations

The NHS is already making remarkable progress in reducing its environmental impact. This progress can be enhanced if the NHS prioritises sustainability in realising the positive potential for hospitals and other healthcare sites to act as anchor institutions, as the following two case studies show.

### 1. **Strengthening the 2012 Public Services (Social Value) Act.**

The Social Value Act requires public bodies to consider how the services they commission and procure might affect the economic, social and environmental well-being of the area. Commissioners are required to factor social value in at the pre-procurement phase, allowing them to include social value in the design of the service from the outset. As Lord Young identified in his review of the Act, awareness and take-up of the Act's requirements is mixed.<sup>19</sup> In the case of the NHS, it is estimated that only 25 (13%) clinical commissioning groups (CCGs) have demonstrated a 'highly committed, evidenced and active' use of the Act, while only 13% of Sustainability and Transformation Plans (STPs) mention social value.<sup>20</sup> As such, we recommend the government should adopt Lord Young's recommendation to strengthen the Act to require public procurement decisions to "account for" social value, instead of simply having a duty to "consider it".

### 2. **An audit of the potential of low-carbon energy production on NHS facilities.**

As outlined in the Naylor Review, the NHS holds around £2.7 billion in unused land assets. The government should undertake a comprehensive review to understand the potential economic, social and environmental benefits that could result from the

installation of clean energy generation on this unused land. This potential value should be compared to the value of selling land assets from the proposed Naylor Review recommendations to understand the net impact of policies for the use or disposal of NHS land.

- ### 3. **Reducing air pollution from NHS travel.**
- The NHS can play its part in reducing air pollution, leading by example. Moving to more sustainable modes of transport can reduce carbon emissions as well as air pollution and improve convenience and safety, saving time and money, and improving health outcomes.<sup>21</sup> In order to realise these benefits, the Department of Health and Social Care, NHS England and the devolved administrations should give commissioners and providers support to reduce their emissions, and protect their employees and patients from dangerous pollutants. This should include guidance on how to use procurement rules to require the adoption of ultra low emission vehicles by those companies and providers using transport on NHS business<sup>22</sup>, and the creation of an 'NHS Clean Air Fund' to support the adoption of more sustainable transport, funded through fines and/or contributions from when industries are found to be breaching emissions regulations, on the 'polluter pays' principle.

<sup>19</sup> Social Value Act Review, 2015, Cabinet Office. <https://bit.ly/2R3EOcm>

<sup>20</sup> HEALTHY COMMISSIONING: How the Social Value Act is being used by Clinical Commissioning Groups. Social Enterprise UK and National Voices. <https://bit.ly/2ojj3IN>

<sup>21</sup> NHS Confederation and NEF, 2007, Taking the Temperature-Towards an NHS response to Global Warming, London

<sup>22</sup> Tomson C, 2015, Reducing the carbon footprint of hospital-based care, *Future Hosp J* (2) (57–62)



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