



Estates and Facilities

Context

Buildings

As the NHS is one of the UK's largest estate owners and with new hospitals, practices, and facilities continually being built and refurbished this creates a considerable challenge in aligning with net-zero carbon targets. Traditional construction has a large environmental impact, and conventional hospital design is often not conducive to optimal energy efficiency. Net carbon zero should be considered from the outset in early hospital design and construction to ensure both the embodied and operational GHG emissions of new builds and refurbished hospitals are reduced. Moreover, new developments need to increase biodiversity by 10% as set out in the New Environment Bill 2021¹³, which will contribute to much needed biodiversity recovery.

Energy

GHG emissions from fossil fuels combined with the rising cost of energy and issues of uncertain supply means all NHS organisations need to ensure they are reducing energy demand and decarbonizing energy sources, while ensuring a sustainable supply.

Building energy is responsible for 14% of the total carbon footprint of the five NHS Trusts in SEL, 10% of the primary care carbon footprint, and 2% of CCG offices emissions. Although the actions needed to meet the NHS's carbon targets must be more wide-ranging, estates and facilities services are a key contributor to carbon emissions that are in the direct control of the NHS, and over which cost-effective actions can be taken.

Waste

It is important to reduce waste, because of the environmental damage it does, its associated GHG emissions, and the emissions released during the manufacturing of new items. NHS organisations have a legal duty to dispose of waste safely and appropriately as well as adhering to the principles of the waste hierarchy: reduce, reuse, recycle, energy recovery, disposal. Where reduce and reuse are not feasible, NHS organisations must ensure correct waste segregation. Ensuring correct waste segregation is also important for reducing not only carbon emissions but also costs because clinical waste streams are more expensive and more carbon intensive than recycling and domestic waste streams.



Achievements to date

Buildings

- The ICS Estates programme is committed to supporting the improvement of sustainability and has drafted a set of principles for engagement and adoption at a system and organisational level. In addition, in early 2022/23 there will be a review of all primary care estates to identify opportunities for sustainability improvement.
- Many of the Trusts are incorporating sustainable design principles into new builds and refurbishments through standards like BREEAM (see Case-study 3).

Case-study 3



Sustainable building design principles at Maudsley Hospital (SLaM)

At Maudsley Hospital, sustainability principles have been integrated into the design of the Douglas Bennett House (DBH) and Children and Young Persons building (CYP). The buildings have been devised to improve wellbeing and reduce stress through biophilic design while increasing energy efficiency. The CYP building will have three roof terraces with planters, green roofs, and a children's playground, and DBH will have lightwells to increase natural light in the building which would otherwise require artificial lighting. The aim is for the buildings to achieve a BREEAM 'Excellent' rating through energy efficiency systems and solar panels on the roof of DBH.

Energy

NHS Trusts have made considerable progress in reducing GHG emissions from their estate by increasing energy efficiency, such as:

- optimising Building Energy Management Systems (BEMS)
- heating-ventilation-air-conditioning (HVAC) improvements
- LED lighting, either switching to LEDs or replacing less efficient lighting with LEDs when required during routine maintenance activities. All Trusts have made considerable changes with respect to LED lighting, for example, Oxleas have rolled out LEDs to approximately 80% of their estate

KCH has successfully applied for £3.2 million funding to support low-carbon heating solutions and LED lighting in the Golden Jubilee building



South East London ICS

Three out of the five NHS Trusts have moved to 100% renewable electricity tariffs while the other Trusts plan to move when their current contract is scheduled for renewal. It is important to note that at the time of writing the cost of renewable energy guarantees of origin (REGOs) has increased considerably and, with the limitations on capital spend, the ability to install on-site renewable energy generators has become more challenging. The Trusts' renewable energy position is not guaranteed.

There is an ask for the NHS at a national level to support access to affordable renewable energy while this continues to be an area of focus at a local level. Oxleas has developed a heat decarbonisation plan supported by funding from the Low Carbon Skills Fund (see Case-study 4).

Case-study 4

Oxleas Heat Decarbonisation Plan

Oxleas recognised that the greatest challenge they are likely to face in meeting their NHS carbon footprint targets is the decarbonisation of their heating systems. Oxleas obtained grant funding from the Low Carbon Skills Fund (LCSF) to develop Heat Decarbonisation Plans (HDP) for 5 key sites within their large estate portfolio which will be critical in understanding the technical and financial implications of replacing fossil fuels with low-carbon alternatives. It is anticipated the plans will be completed and approved by 31 March 2022.

Waste

- LGT achieved a 75% reduction in waste emissions in 2020/21 compared with 2019/20, largely due to a reduction in waste sent to landfill
- All Trusts and the CCG/ICB have committed to printing for meetings only when necessary
- Many of the Trusts have undertaken staff engagement to increase recycling rates. For example, SLAM has undertaken recycling roadshows and audits across its main sites in interactive recycling awareness sessions

Commitment

- **We will optimise our resource use and reduce emissions from our estate in line with the national target of 80% reduction by 2032**



Actions for Year 1

1. NHS organisations to share best practice on energy efficiency and decarbonisation
2. NHS organisations to continue to improve energy efficiency, including switching to LED lighting
3. NHS Trusts to develop a road map for decarbonisation of heating and hot-water systems for main buildings
4. NHS Trusts to procure electricity from 100% renewable sources* (or when existing contract can be exited)
5. CCG/ICB to support NHS Trusts by lobbying on REGOs
6. Primary care to measure baseline energy use within practices
7. CCG/ICB to support primary care with actions to reduce estates-related emissions
8. ICS to make the assessment of sustainability part of the business case process and as a requirement to proceed with all estate and facility projects
9. ICS to implement sustainability criteria for refurbishments according to NHS guidance (expected during 2022)
10. NHS Trusts and CCG/ICB to reduce printing as much as possible for all meetings except for accessibility reasons
11. NHS Trusts and CCG/ICB to introduce recycling facilities in all buildings
12. NHS Trusts and CCG/ICB to undertake a campaign to increase recycling rates
13. NHS Trusts and CCG/ICB to identify potential mechanisms to increase the return of equipment, such as walking aids
14. NHS Trusts to ensure no clinical waste is sent to landfill
15. NHS Trusts to ensure that domestic waste is not inappropriately disposed of in clinical waste



Aim 1: To reduce carbon emissions from energy use

Actions for all NHS organisations (coordinated by the CCG/ICB)

- Share best practices on energy efficiency and decarbonisation (ongoing)
- Continue to improve energy efficiency, including switching to LED lighting (ongoing)

Actions for NHS Trusts

- Develop a road map for decarbonisation of heating and hot-water systems for main buildings by March 2023
- Procure electricity from 100% renewable energy sources by March 2023* (or when existing contracts can be exited)
- Conduct a feasibility study for on-site electricity generation by March 2025

Estates and
Facilities

Actions for CCG/ICB

- Support primary care with actions to reduce estates-related emissions by March 2023
- Investigate opportunities for bulk purchasing of 100% renewable electricity for general practices by March 2024

Actions for primary care

- Primary care to measure baseline energy use within practices by March 2023
- Sustainability to be incorporated into PCN estates surveys and subsequent delivery and response by March 2025
- Explore the potential for electricity self-generation at individual practices by March 2025



Aim 2: To improve the sustainability of new build and refurbishment

Actions for NHS Trusts and CCG/ICB

- Construct all new build to net-zero carbon and aim for BREEAM excellent/outstanding (or equivalent) by March 2024 (Exceptions are agreed by estate and sustainability executives.)
- Integrate green and blue space and biophilic design principles into new builds and, where appropriate, refurbishments by March 2025

Actions for ICS

- Make the assessment of sustainability part of the business case process and as a requirement to proceed with all estates and facilities projects by March 2024
- Implement sustainability criteria for refurbishments according to NHS guidance (expected during 2022)

Aim 3: To reduce carbon emissions associated with waste

Actions for NHS Trusts and CCG/ICB

- Reduce printing as much as possible for all meetings except for accessibility reasons by April 2022
- Introduce recycling facilities in all buildings by March 2023
- Undertake a campaign to increase recycling rates by March 2023
- Identify potential mechanisms to increase the return of equipment, such as walking aids by March 2023
- Identify the main reasons why patients do not return equipment and create a plan to address these barriers and increase return by March 2024
- Send any domestic waste that cannot be reused or recycled to energy recovery by March 2025

Actions for NHS Trusts

- Ensure no clinical waste is sent to landfill by July 2022
- Ensure that domestic waste is not inappropriately disposed of in clinical waste by March 2023
- Explore opportunities for remanufacturing of single-use medical instruments by March 2025