



Great Western Hospitals
NHS Foundation Trust

Green Plan

2021 – 2024

Foreword

The Great Western Hospitals NHS Foundation Trust's Green Plan outlines the actions and initiatives we aim to deliver to address our sustainability and net zero targets. Sustainability is fundamental to maintaining high quality care; to help us meet the needs of today without compromising the needs for future generations.

The Trust has already undertaken many steps to address issues such as climate change, air pollution and waste through our previous Sustainable Development Management Plan and the new Green Plan builds upon this previous work.

Our environment has a direct impact on our health, since the corona virus pandemic this has become even more apparent. The virus has placed unprecedented pressure on all areas of the NHS, we must tackle the climate emergency with the same level of significance if we are to safeguard our future from the impacts of climate change.

All our staff will need to play their part in delivering this Green Plan for the Trust to be a truly sustainable organisation.

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1. Introduction

The Great Western Hospitals NHS Foundation Trust is a major acute care hospital which provides a number of services including medicine and surgery, services for women and children, accident and emergency, diagnostic and clinical support services. The main site is based in Swindon, close to junction 15 of the M4 motorway and approximately 2.7 miles (4.3km) from Swindon city centre. There are currently 533 core beds plus an additional 38 extra beds.

The trust is also a key provider in primary and community care services and operate from multiple sites supporting the populations of Swindon, as well as neighbouring counties. The Trust has additional offices at North Swindon District Centre, manage 4 GP practices as well as West Swindon Health Centre, Swindon Health Centre and outpatient services at Severnake and Eldean.

The Trust employs over 5,000 staff and operates 24 hours a day, 7 days a week, 365 days a year.

Across Bath and North East Somerset, Swindon and Wiltshire (BSW) the current population is 874,000 which is anticipated to grow to over 1 million by 2026. The geography is a mixture of large rural areas and densely populated city centres with many diverse communities with varying health and care needs. The Trust's aim is to ensure that everyone receives the high-quality care they need, regardless of where they live across BSW.

1.1 Organisation Vision

The Trust's vision is to deliver great joined up services for local people at home, in the community and in hospital, helping them to lead independent and healthier lives. A sustainable health and care system is achieved by delivering high quality care and improved public health without exhausting natural resources or causing severe ecological damage.

A summary of the Trust's carbon footprint is shown within this plan, the Trust is committed to reducing the carbon footprint to reach Net Zero by 2040 for direct emissions and by 2045 for indirect emissions also.

In line with the NHS Constitution the Trust has included sustainability within the definition of quality included in pillar 4 of the Trust's five-year strategy. This showcases how the Trust is continually improving the patient experience whilst using resources efficiently and working towards carbon reductions. The full strategic strategy of all pillars can be found on the Trust's website.



Figure 1. Our four strategic pillars.

2. Targets

1. To measure our annual Carbon Footprint and set future interim targets for reduction.
2. To be Net Zero Carbon by 2040 for our NHS Carbon Footprint, with an ambition to reach an 80% reduction by 2028 to 2032.
3. To understand and further reduce our indirect scope 3 emissions within the NHS Carbon Footprint Plus.

3. Progress to Date

3.1 Sustainable Development Assessment Tool

Within the preceding Sustainable Development Management Plan (SDMP), the Sustainable Development Assessment Tool (SDAT) was used to help Trusts measure their sustainable development progress towards the UN Sustainable Development Goals. Although these have been replaced with the Green Plan these documents form the foundations of this Green Plan and they have previously been used as a benchmarking tool to compare progress between different healthcare organisations.

Within the previous financial year 2020/2021 the Trust scored 34% with the breakdown of scores within each sub-category shown within the below figure.

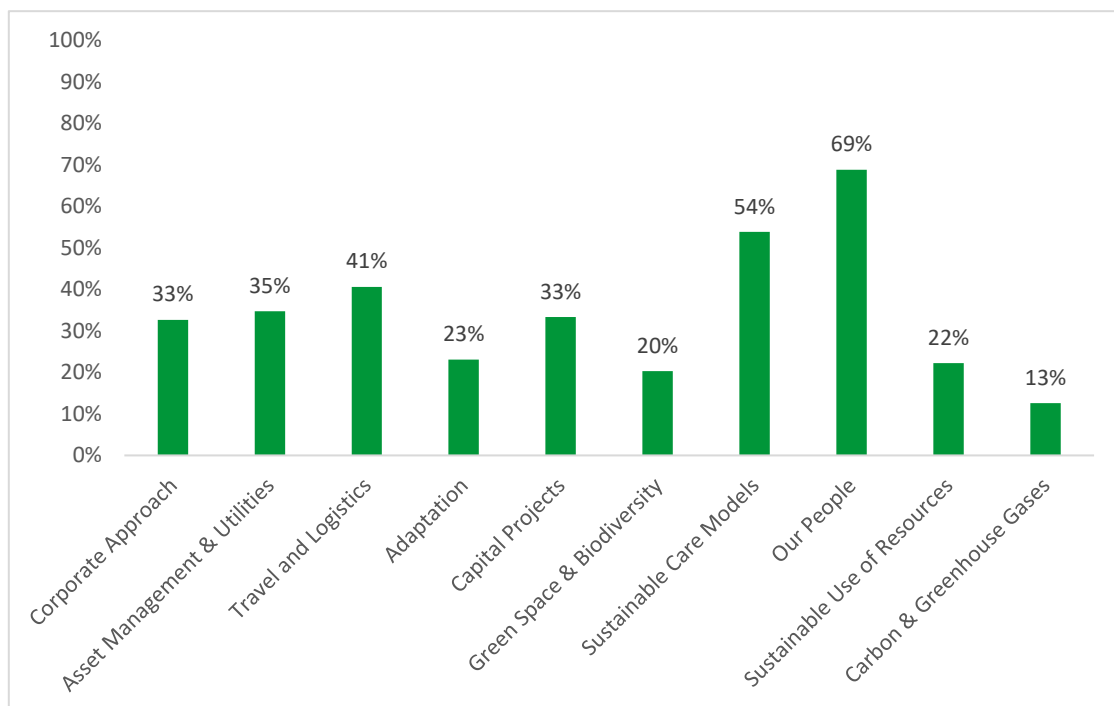


Figure 2. The Trust's scores in each sub-category of the SDAT.

The main outcomes of the SDMP and SDAT have included:

- Uptake of virtual clinics.
- New build capital projects targeting BREEAM Excellent certification.
- Increase in agile working and staff working from home.
- The installation of LED Lighting across the Trust.
- The establishment of a Sustainability Steering Group and a Theatre and Maternity Sustainability Working Group.

3.2 Carbon Footprint

The Trust has a significant Carbon Footprint. This encompasses the main site but also community sites that the Trust operates out of. It is important to note that there are some sites that the Trust is unable to obtain information for, therefore data for these sites have not been included in the footprint. These sites would add inconsequential emissions to the footprint and all substantial areas have been included.

The Trust's Carbon Footprint has been measured for scope 1 and 2 emissions and the Trust is working towards measuring the Carbon Footprint Plus which includes all scope 3 emissions. These scopes are defined as:

- Scope 1 - activities owned or controlled by an organisation that directly release emissions straight into the atmosphere.
- Scope 2 - emissions being released into the atmosphere associated with the consumption of purchased electricity, heat, steam and cooling.
- Scope 3 - emissions that are a consequence of operational actions, which occur at sources which an organisation does not own or control.

The Trust's NHS Carbon Footprint encompasses specific scope 3 emissions including energy generation, business travel, waste, water and metered dose inhalers. The Trust is working towards measuring these scope 3 emissions and will set interim targets for reduction to track progress towards the target of Net Zero by 2040 for the NHS Carbon Footprint.

Work is underway to further understand full scope 3 emissions for the Trust's Carbon Footprint Plus. The nature of scope 3 emissions means it is challenging to accurately measure, nevertheless these emissions are likely to be far larger than scope 1 and 2 emissions combined which is why it has been included as a key target.

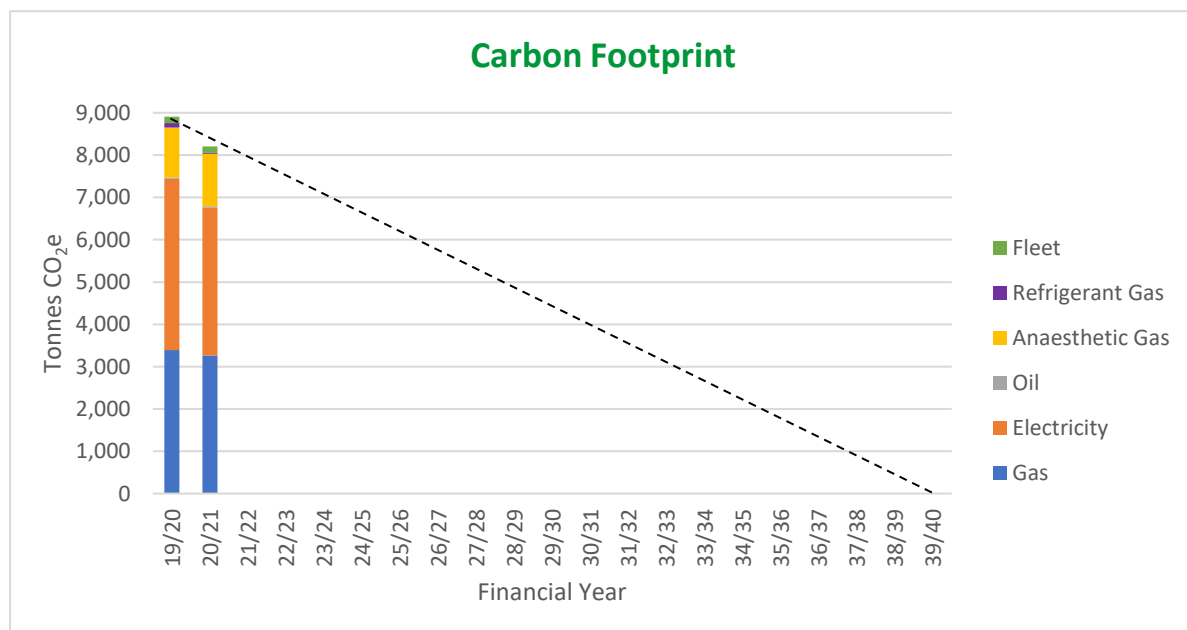


Figure 3. Carbon footprint.

4. Green Action Plan

4.1 Estates and Facilities

The Trust has a corporate risk register which includes the impacts of climate change and being able to respond to extreme weather conditions, in addition to environmental impacts on health. In order to address this risk, and to meet the NHS target of net zero for the NHS carbon footprint by 2040 and net zero for indirect emissions by 2045, the Trust will first look to calculate these carbon footprints and introduce further efficiencies.

The Trust has already installed LED lighting across the Great Western Hospital site which has reduced the electrical demand for lighting by approximately 30%. A combined heat and power plant (CHP) has also been installed and once commissioned this will allow the Trust to further reduce direct carbon emissions. In addition, all electricity supply contracts are 100% renewable tariffs as of April 2021.

The new Urgent Treatment Centre and Integrated Front Door new build developments will both have a BREEAM Excellent target. When in use, they will be supplied by the new Energy Centre which uses air source heat pumps to help decarbonise the heating demand.

Actions:

- Maintain climate change on the corporate risk register and look to develop the climate change mitigation and adaptation strategy including plans for heatwaves and flooding.
- Follow the principles of Be Lean, Be Clean and Be Green in alignment with the Estates 'Net Zero' Carbon Delivery Plan.
- Monitor water consumption and reduce areas of high consumption where feasible.
- Increase recycling and composting where possible.
- Achieve at least BREEAM Excellent ratings for all new buildings and BREEAM Very Good for refurbishment projects.

4.2 Travel and Transport

The Trust has a number of active travel incentives, these include: cycle to work, bus and train ticket schemes and car sharing schemes. There are also options for secure cycle parking and changing facilities including showers and lockers available to staff who cycle or walk to work. Since the start of the pandemic flexible home working arrangements have been promoted, where practical, which has reduced commuting mileage and indirect carbon emissions.

A Travel Plan has also been developed for the main site with various action plan measures being incorporated by the Travel Plan Coordinator. In addition to this the Trust has also issued their first staff travel survey to help understand current needs and possible enhancements to active travel measures and this survey will be rolled out annually.

No idling signs have been installed in drop off and waiting areas and nitrous oxide monitoring stations have been installed to monitor the local air quality.

Actions

- 90% of the NHS fleet to use ultra-low and zero emission vehicles by 2028.
- Ensure all vehicles purchased or leased are ultra-low emission (ULEV) or zero emission vehicles (ZEV's) including vans under 3.5 tonnes.
- Salary sacrifice scheme for vehicles only allows for ULEVs or ZEVs.
- Maximise efficiencies in the transport of goods and services commissioned by the organisation, such as patient transport, courier services and deliveries.
- Continue to monitor air quality and maintain no-idling signs and participate in the cleaner air hospitals framework.
- Maintain a cycle-to-work lead.

4.3 Supply Chain and Procurement

The Trust's supply chain is a significant part of the NHS Carbon Footprint Plus. While the Trust does not control these emissions directly, the NHS has purchasing power to work with suppliers to encourage change. The long-term NHS target is to no longer purchase from suppliers who are not net zero within the next decade.

All paper within the Trust for office and non-office areas is from 100% recycled sources. The Trust also incorporates principles of the circular economy by refurbishing walking aids as part of the existing reuse scheme.

The Trust has signed the NHS England Single-Use Plastics Pledge and will continue to reduce single use items. So far, they have introduced reusable clinical trays for theatre, the restaurants at the Hospital use Vegware products and the Trust is working towards using reusable cups rather than plastic cups.

As a Private Funded Initiative (PFI), the Trust will work in partnership with The Hospital Company and Serco to align collective sustainability targets at the Great Western Hospital main site.

Actions

- Include a 10% minimum social value weighting from April 2022 in line with the supply chain roadmap announced by NHS England and NHS Improvement.
- Further reduce single use plastics in clinical and non-clinical areas.
- Incorporate circular economy principles.
- Aim for 40% of all walking aids to be refurbished by 2025.
- Ensure resources and learning is shared within the Integrated Care System (ICS) to drive sustainable procurement.

4.4 Food, Catering and Nutrition

The government's EatWell plate low in heavily processed foods with seasonally and locally sourced fruits and vegetables is a low-carbon diet and has lower associated rates of colorectal cancer and heart disease. The Hospital Food Review announced in 2019 will help encourage sustainable procurement and lower waste alongside new national standards for healthcare food for patients, staff and visitors by NHS England and NHS Improvement being launched in 2021.

While these programmes will impact the food supply chains in the coming years, at the Trust all sites have a digital meal ordering system installed for patients to use. The menu is currently updated twice a year with seasonally available ingredients and a plant-based menu is also available for patients.

The restaurants at the Hospital use Vegware, plant-based food packing, which can be composted. The Trust are exploring how these products can be composted off-site as providing on-site composting is not feasible. Alongside this, patient meals are served in aluminium containers which are recycled.

Actions

- Develop a food waste solution off-site for compostable food packaging.
- Maintain low levels of food waste and consider a food waste solution off-site.
- Ensure a plant-based menu is readily available for staff.
- Explore whether the menu could be changed four times a year with seasonally available ingredients.

4.5 Medicines

Prescribing and use of medicines and medical products form a significant part of emissions within the NHS. The majority of these emissions are from manufacturing and the supply chain but anaesthetic gases and inhalers are also key areas where improvements can be made.

Anaesthetic gases used in surgery, such as desflurane and nitrous oxide, have high carbon footprints. The Trust has been working with the anaesthetists to use a lower carbon alternative such as sevoflurane, where clinically appropriate. This has resulted in the Trust being one of the lowest consumers of desflurane, which is monitored via the Model Hospital platform.

For inhalers, the propellant in metered-dose inhalers used to deliver the medicine comprise most of the emissions. As dry-powder inhalers (DPIs) may be clinically equivalent for many patients a significant uptake of these along with greener disposal of used inhalers will help to reduce emissions. The supply chain is also working towards reformulating the inhalers to use low carbon propellants.

Actions

- Maintain desflurane in surgery to less than 10% of its total volatile anaesthetic gas use, by volume.
- Reduce nitrous oxide waste and work towards zero emissions of anaesthetic gases.
- Transition to lower carbon inhalers, such as dry powder inhalers where appropriate, in line with the commitment of a 50% reduction by 2028.
- Review inhaler disposal schemes and encourage patients to return inhaler devices to pharmacies for sustainable disposal by the supplier.

4.6 Sustainable Models of Care

The new service model within the NHS Long Term Plan is likely to include a focus on sustainability and emissions reduction; therefore this section focuses on carbon reduction opportunities, across all clinical services, in the way care is delivered. For example, earlier and quicker testing, detection and intervention for cancer via rapid diagnostic centres aims for quicker treatment which provides a greater level of patient care. This simultaneously reduces carbon emissions by avoiding consultation and emergency department visits as patients have access to the treatment quicker.

As a healthcare provider the Trust recognises the importance of promoting sustainable models of care with services delivered to the highest standards. For the first three quarters of 2021 over 28% of first consultations and over 41% of follow-up consultations were conducted via telemedicine or telephone appointments. The Trust is committed to delivering digital appointments where possible while maintaining an outstanding level of care. In addition, outpatients will not be required to travel, resulting in appointments being more readily available without travel time considerations and lower emissions from transport.

Actions

- Where outpatient attendances are clinically necessary, at least 25% of outpatient activity should be delivered remotely, resulting in direct and tangible carbon reductions.
- Prevent unnecessary journeys through preventative medicine and enhanced digital care.
- Encourage all teams to engage in finding solutions to continuously improve the way care is delivered.
- Default preferences for lower carbon options where practical.

4.7 Digital Transformation

Digital systems are transforming the way in which resources are used by reducing carbon emissions through less printing, postage and paper record storage.

The Trust is already making progress by rolling out Electronic Document and Records Management System (EDRMS) into outpatient areas. Over the coming months there will be continued progress towards digital clinical records with the long term aim to have a shared network of electronic patient records across Bath and North East Somerset, Swindon and Wiltshire.

To align with digitalisation, a third of printing devices have been removed and the existing printers are Energy Star rated, both measures have led to a reduced power consumption.

Agile working patterns have resulted in up to 13% of staff being able to work from home, further reducing the power consumption during peak working hours.

Measures to reduce infrastructure energy demands from servers and network equipment are also taking pace as part of the Infrastructure Investment Programme. This will be developed over the next year, at the end of which the Trust will have implemented more power efficient equipment solutions.

Actions

- Digitalise clinical records, clinical and operational workflow and communications, aided by digital messaging and electronic health and care record systems.
- To roll out Electronic Document and Records Management System (EDRMS) into outpatients.
- To reduce equipment and infrastructure energy requirements.
- Engage with the implementation of NHSX's What Good Looks Like framework within our ICS.

4.8 Workforce, Networks and System Leadership

To embed sustainability successfully, it must become part of all processes, it must be a consideration of all activity, behaviours, change management and strategy, and must fall within all remits, planning and operation. Sustainability must be all considered as everyone's responsibility.

The Trust recognises that staff engagement and behaviour change is critical to implement sustainable models of care. This comprises of two key areas, the first is through targeted training so staff have a wider understanding of the Net Zero targets. Secondly the Trust has bi-monthly Sustainability Steering Groups where sustainability objectives are discussed and staff are encouraged to put forwards any ideas they may have. This will further be developed with Sustainability Champions across the Trust, who will be aware of key objectives and will help to implement change.

The Trust are also part of Bath and North East Somerset, Swindon and Wiltshire's (BSW) Sustainability and Transformation Plan (STP). This platform facilitates collaboration with STP partners to work towards delivery of the Green Plan actions to meet these targets, while sharing best practice along with ways in which roll outs could be improved.

Actions

- To ensure a board member is responsible for net zero targets and Green Plan.
- Continue to develop Green Teams and Sustainability Champions across the Trust to collaborate and to help deliver the Green Plan targets.
- To provide new staff at induction with the Trust's sustainability and net zero targets and objectives and to encourage all staff to undertake the net zero carbon e-learning training.
- Communicate to all staff the vision and goals to achieve the Green Plan and Net Zero Carbon targets.

5. Green Plan Governance

The delivery of the Green Plan is through the Estates Management Board and the designated board level net zero lead is the Director of Finance, who has overall accountability for the implementation of the Green Plan. This plan has had input from senior staff from a wide range of disciplines and functions including estates and facilities, procurement, clinicians, finance, transport and human resources. The plan has also been informed by the existing sustainability groups and networks as shown within the below figure.

Bath and North East Somerset, Swindon and Wiltshire (BSW) Partnership is the Trust's Integrated Care System (ICS). This Green Plan will be consolidated with other Green Plans by the ICS to form system-wide strategies to help co-ordinate and catalyse net zero progress.

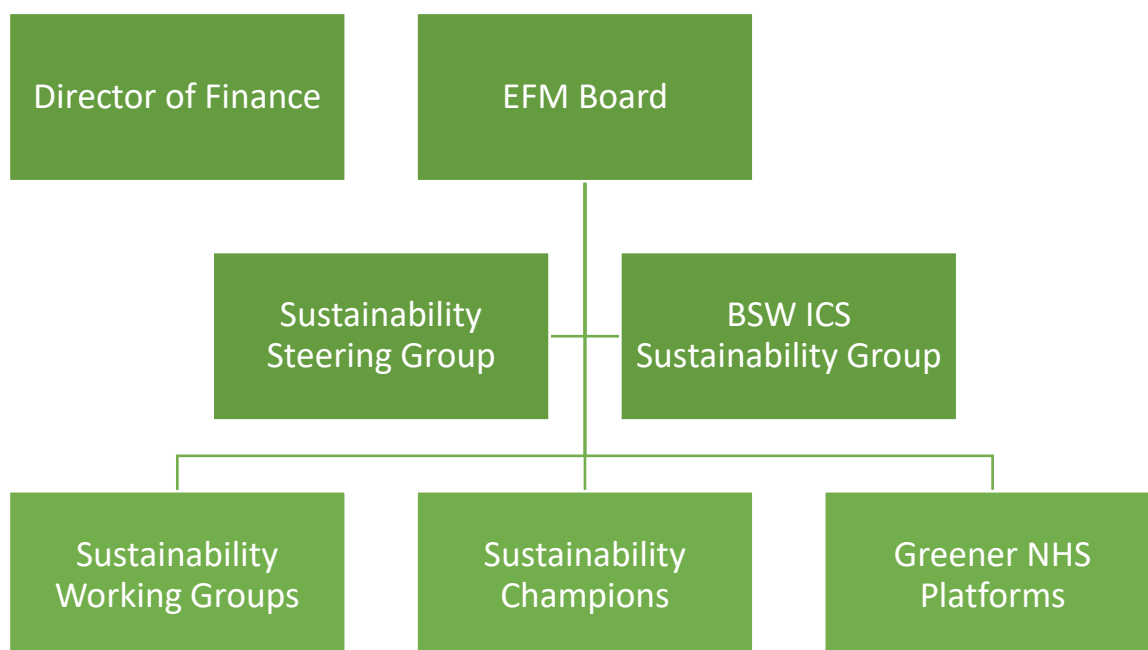


Figure 4: Governance Structure

5.1 Reporting Progress

Progress against the Green Plan will be formally reported annually to the Trust EFM Board and will consider:

- The progress made and the ability to increase or accelerate agreed actions.
- New initiatives generated by staff or partner organisations.
- Advancements in technology and other enablers.
- The likely increase in ambition and breadth of national carbon reduction initiatives and targets.