



GREEN PLAN 2021 - 2022

Foreword

The last year has been unprecedented. The Covid-19 pandemic, has not only had a serious effect on health and healthcare services but by extension, the impact we have on the environment. We have seen large increases in the amount of waste we have generated from personal protective equipment, infectious waste and from the enhanced cleaning regimes necessary to maintain a safe environment for patients and staff.

There have however been some helpful environmental changes as a consequent of the numerous lockdowns and Covid restrictions. fewer vehicle on the roads has meant better air quality, there has been a huge surge in support for our staff with generous donations of bicycles when public transport was unavailable and all of us have learnt to really appreciate the benefits of our outdoor spaces for health and wellbeing (and social distancing!) We have also embraced the benefits of the digital world, meeting friends and family and work colleagues via our screens, enabling clinical staff to interact with patients to deliver tele and video outpatient clinics and helping many of our staff to work from home and stay safe.

This year also saw the appointment of a consultant to assist us in the production of our Carbon 2030 Route Map; the things we need to do to enable the Trust to reach its ambitious carbon net zero goal over the next 9 years. NBT was also chosen as one of three UK hospital sites to be a host for a Nature Recovery Ranger courtesy of the Centre for Sustainable Healthcare, a post that will commence in early

2021-22 and which will enable us to continue to enhance the biodiversity and health benefits of our estate.

During the year ahead we will be working with our partners in the Integrated Health system to develop a Green Plan which will identify the areas where we can collaborate for maximum effect and benefit across the region to deliver cost savings, carbon savings and environmental improvements.

We aspire to be a leader in sustainable health and we are determined to be an anchor in our community, helping to deliver a carbon net zero future for the benefit of everyone.



Maria Kane
Chief Executive



Michele Romaine
Trust Chair

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1. Introduction

To support the co-ordination of carbon reduction efforts across the NHS and the translation of this national strategy to the local level, the 2021/22 NHS Standard Contract set out the requirement for trusts to develop a Green Plan to detail their approaches to reducing their emissions in line with the national trajectories.

In developing a Green Plan, each organisation should:

- review progress since the organisation's last Green Plan (or equivalent), to determine what facets have worked well and which need renewed focus or a different approach
- take into account the national targets (and interim 80% carbon reduction goals) for the NHS carbon footprint and carbon footprint plus, as well as learning from trusts which are already aiming to exceed these ambitions
- engage widely with internal stakeholders and key partner organisations to inform sustainability priorities and identify areas for productive collaboration
- develop and refine SMART (specific, measurable, achievable, relevant and time-bound) actions focused on early efforts to directly reduce carbon emissions
- develop systems and processes to measure and report on progress against plans and commitments, annually.

Given the pivotal role that integrated care systems (ICSs) play, this has been expanded to include the expectation that each system develops its own Green Plan, based on the strategies of its member organisations.

The new Green Plan guidance for 2021 recommends that the document be a 3-year strategy however as North Bristol NHS Trust is in the process of developing a Carbon Route Map to help identify the key areas of actions and timescales to set out the necessary journey to be carbon neutral by 2030, we have chosen to create this longer-term document once this piece of work is complete. As such this report sets out our progress over the 2020-21 financial year and our work programme for 2021-22 only.

The next Green Plan document will cover the following areas of focus:

- Workforce and system leadership
- Sustainable Models of Care
- Digital Transformation
- Travel & Transport
- Estates & Facilities
- Medicines
- Supply Chain & Procurement
- Food & Nutrition
- Adaptation



134,888 tonnes
of carbon



of solar power generated

26,110
kWh

2020/2021 at a glance...



826 actions taken
by our Green
Impact Teams

1+ tonnes of
wasted furniture
diverted from
landfill through
using Warp It



53% of staff commute by active or
sustainable modes of travel

7,146 kWh of
public/staff EV
charging



2. Drivers for change

Sustainable healthcare in the NHS is predominantly driven through local and national policy, legislative and mandated requirements and healthcare specific specifications from the Department of Health and NHS England.

The previous Sustainable Development Strategy for the health and care sector expired in 2020. Later last year the NHS published the *Delivering a 'NHS Zero' National Health Service* report and committed the NHS to becoming the world's first net zero health service. The document provides a clear plan with credible milestones to achieve this by 2040.

It detailed a number of early steps that will be taken to decarbonise:

1. Our care
2. Our medicines and supply chain
3. Our transport and travel
4. Our innovation
5. Our hospitals
6. Our heating and lighting
7. Our adaptation efforts
8. Our values and our governance

In addition to this there are a large number of other drivers for sustainable development within the NHS, as set out in Figure 1 below.



Figure 1: Drivers for Sustainable Development for NBT

3. Our Vision

Our Sustainable Development Policy sets out our aspiration to be a leader in the field of sustainable healthcare through committed leadership, innovation, culture change and system wide engagement and development.

We are committed to embedding sustainable development across our sites and services and will deliver our Policy commitments through our Green Plan by;

- Maximising the environmental, financial and health opportunities associated with sustainable development and the co-benefits to our staff, patients and the local community.
- Valuing the importance of protecting our natural environment for the benefit of the physical and mental health and well-being of our community, now and in the future.
- Striving to improve staff and patient experience by moving towards more sustainable models of care and workplace practices.

3.1 Climate Emergency Declaration

In October 2019, North Bristol NHS Trust joined University Hospitals Bristol and Weston NHS Foundation Trust, alongside our civic partners, Bristol City Council, North Somerset Council, South Gloucestershire Council and the West of England Combined Authority, to declare a Climate Emergency. By making such a declaration, we hope to lead the healthcare sector in collective action to ensure the future health and wellbeing of our city. As part of the declaration, we committed to the ambitious Bristol One City Plan goal of Carbon Net Zero by 2030.

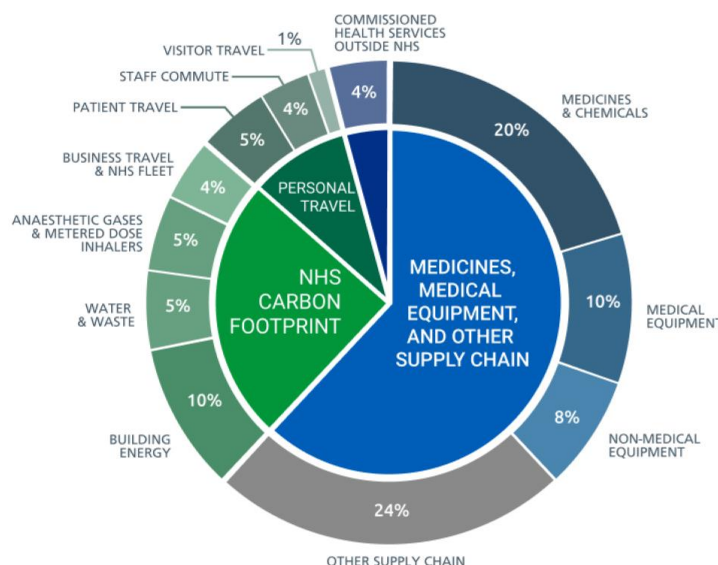


Figure 2: Sources of NHS Carbon Emissions

3.2 Trust Strategy 2019-2024

One of the 4 areas of focus in our Trust Strategy is *Being an Anchor in Our Community*. Anchor institutions are those that are rooted in their local communities but can choose to invest in and work with others locally and responsibly to have an even greater impact on the wider factors that make us healthy:

- Purchasing more locally
- Using buildings and spaces to support communities
- Working more closely with local partners
- Widening access to quality work
- Reducing environmental impact



4. Governance

Our Green Plan is approved by Trust Board on an annual basis, with a six-monthly progress report submitted half-way through the year.

Sustainable development is championed by the Trust's Chair Michele Romaine and the Director of Estates, Facilities and Capital Planning, Simon Wood.

Simon Wood chairs the Sustainable Development Steering Group which meets quarterly. The steering group consists of our Trust Chair, specialist Public Health Advisers, Senior Management, our PFI partner and representatives from the local community and Trade Unions.

The group drives forward the sustainable development agenda at the Trust by setting objectives, reviewing progress and delivering assurance on a regular basis. The group promotes collaborative working with external partners to bring external benefits to the trust and support the local community.

The Sustainable Development Unit (SDU) is a small team of specialists providing advice and support across the Trust to assist in the delivery of sustainable development.

To further support the delivery of the policy commitments, the Trust has an active network of Environmental Awareness Reps (EARs) and Green Impact teams spread throughout the organisation to raise awareness, engage and enthuse the wider workforce.

In 2021-22 we will recruit Sustainability Advocates from each Division/Directorate to provide a single point of contact through which we can cascade information, consult on sustainability priorities and collaborate on plans to deliver improvements and resilience.

NBT is also a member of the Bristol, North Somerset and South Gloucestershire Integrated Care System (ICS) along with other major health and care providers in the region. Over the next year the ICS will deliver its first ICS-wide Green Plan. The ICS Sustainability and Health Group, which NBT chairs, will be instrumental in developing this.



Figure 3: Sustainable Development governance at NBT

5. Communications and Engagement

Our vision to be a leader in the field of sustainable healthcare requires system-wide engagement and development through simple and effective communication.

This year has seen more digital engagement than in previous years due to the inability to bring people together in large groups. We have fully utilised our outdoor spaces and been fortunate in being able to continue engagement on subjects such as biodiversity enhancement, green spaces for health, growing food and exercise outdoors.

We have continued to produce monthly newsletters to raise awareness of the Trust's sustainability initiatives and ways to get involved. We have updated many of our communication tools and created new ones incorporating QR codes to allow instant access to more information on a range of topics.

In early 2021, we started a 'Count Us In' campaign to engage staff with the United Nations Climate Change Conference (COP26); we asked staff to commit to a personal carbon-reduction step (e.g., eating seasonal food, repairing and reusing, walking and cycling more).



By enhancing our digital engagement, we were able to reach new audiences and continue to engage with interested staff members.

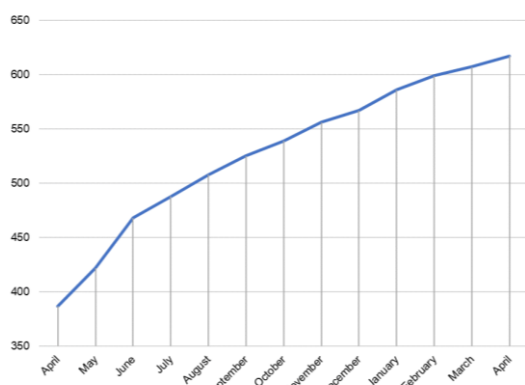


Figure 4: Increase in @NBTSustHealth Twitter followers account from April 2020 - 2021

Engagement Activities 2020-21

- Bristol Bites Back Better
- Gardens for Health Week
- Clean Air Day
- Cycle to Work Day
- Green Impact Awards
- Travel to Work Survey
- Staff Wellness in Nature Sessions
- Well for Winter campaign
- A Green Surgery Challenge Team formed
- Fairtrade Fortnight 2021
- International Women's Day
- Digital EnvironMenstrual Training Talk
- Launched a 'Count Us In' COP26 Campaign
- 12 monthly SDUpdate e-newsletters
- 118 Tweets
- 4796 visits to our Twitter profile

Planned Engagement Activities 2021-22

- Develop and run interim Green Impact Engagement scheme
- Support Greener NHS Campaign
- Run campaigns for; No Mow May, Greener NHS and Plastic Free July
- Launch Nature Recovery Round-up newsletter
- Update and increase the catalogue of sustainability videos
- Increase digital engagement on social media
- Set up an LED Lightbulb Library for staff
- Create and sell a greeting card collection
- Run an Accessible Allotment Gardening Event

6. Sustainable Development Assessment Tool (SDAT)

The Sustainable Development Assessment Tool (SDAT) was the national benchmark used by Public Health England and NHS England to measure improvement across the health and care system.

The assessment determines progress against the implementation and delivery of sustainable development across the health and care system and was designed to help the NHS and other healthcare organisations understand their work, measure progress and create the focus of and action plans for their Green Plans.

SDAT consists of ten areas which are assessed against four cross-cutting themes; governance and policy, core responsibilities, procurement and supply chain and working with staff. During 2020-21, North Bristol NHS Trust achieved an overall score of 67%, which is a 4% improvement from 2019-20.

The Tool was withdrawn in early 2021 in anticipation of a replacement being more closely aligned to the NHS Net Zero ambitions and is due to be released later in 2021.

**NORTH
BRISTOL
NHS TRUST**
67%

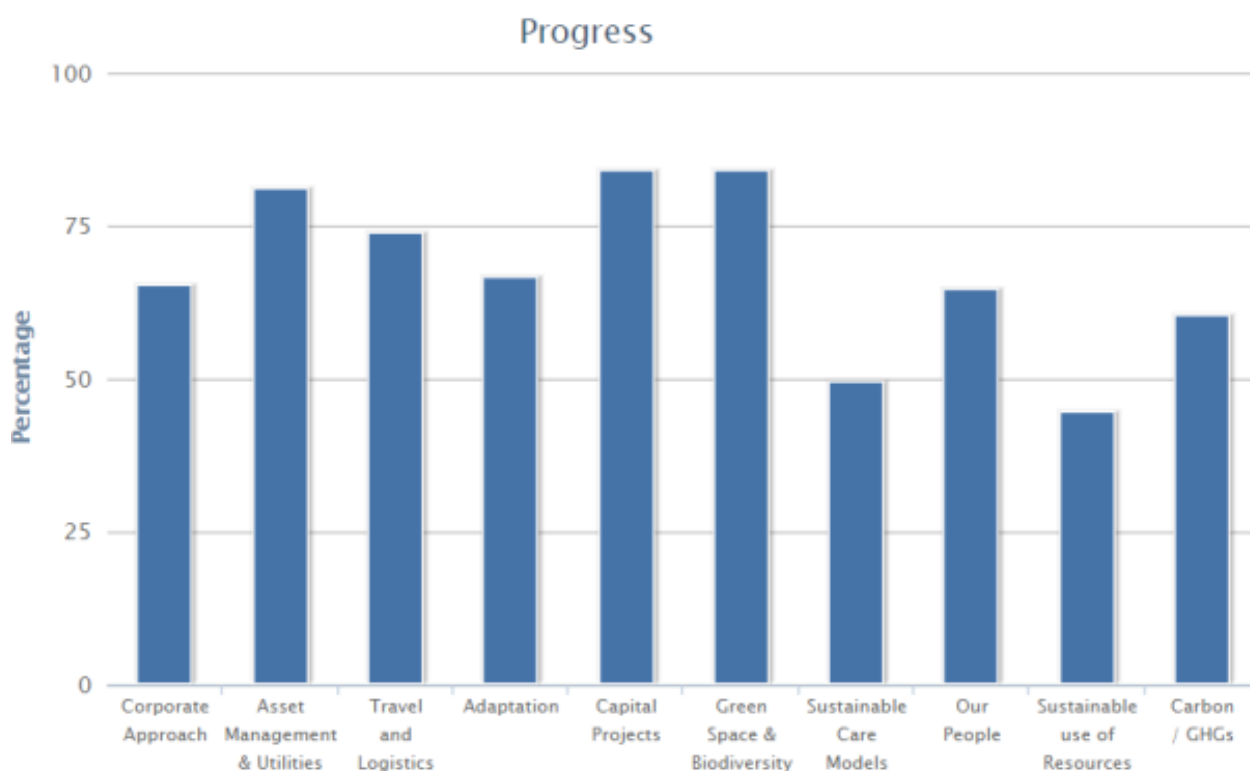


Figure 5: North Bristol SDAT Assessment 2020-21

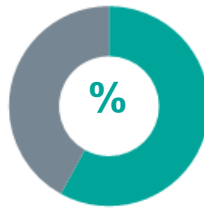
7. Corporate Objectives

North Bristol NHS Trust has developed ten key objectives in line with the SDAT themes laid out in the diagram below.

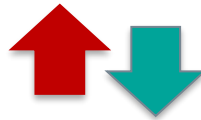
Each objective has a set of actions for the year ahead to drive forward sustainable development at NBT.

The following pages outline the Trust's progress against each theme undertaken in 2020-21 and our plans for the year ahead.

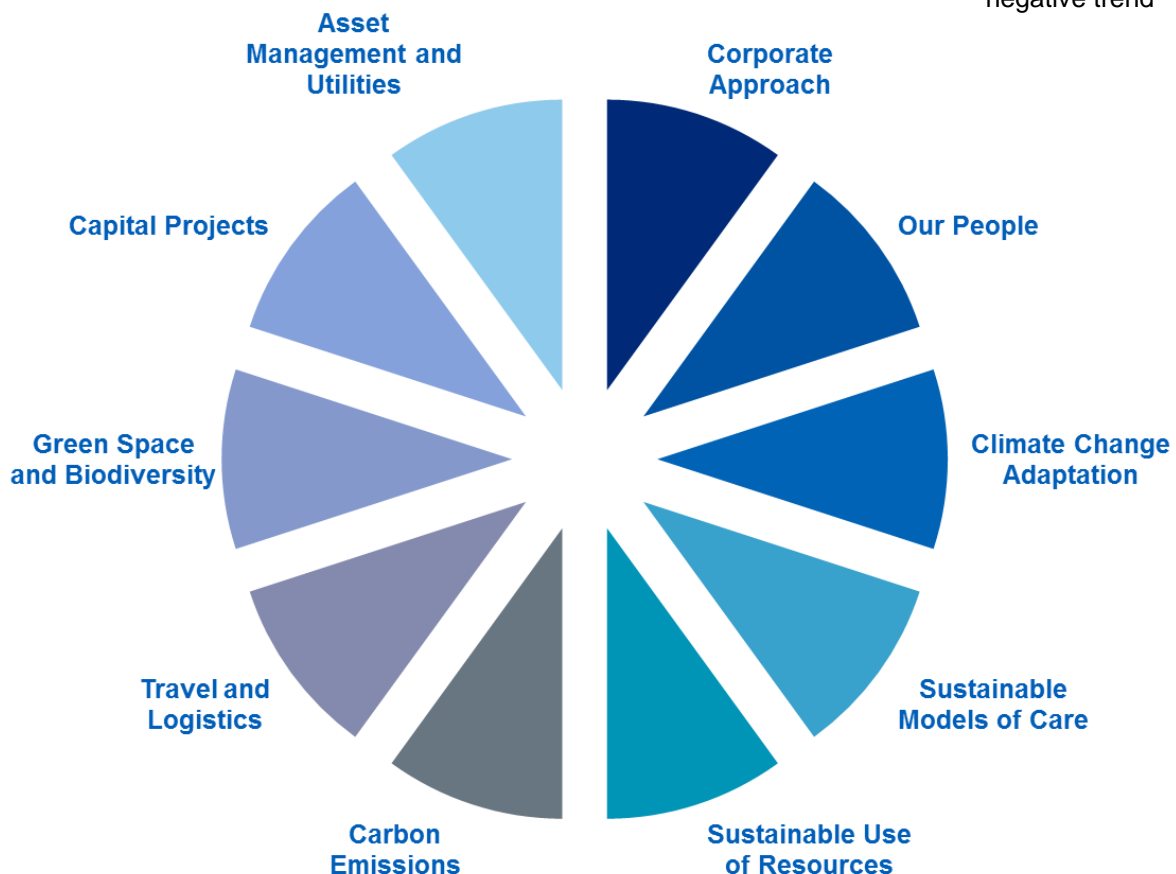
At the top of each page, we have reported our SDAT progress score against each theme. This will be the last report using these metrics as a new assessment tool in line with the NHS Net Zero Plan report is anticipated shortly.

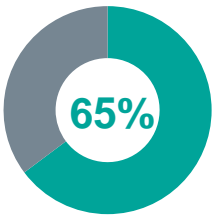


2020-21 SDAT score
 Further action required



Arrow indicates increase/decrease since 2019-20 and colour indicates positive or negative trend





7.1 Corporate Approach

The best health and care is not the work of an individual, a single team or even one organisation. Partnership and collaboration is fundamental. The Trust strategy recognises the opportunity we have to make the best use of NHS resources for patient care and to develop sustainable services for the long term. Through our position as a large and established organisation acting as an anchor in our local community we accept our responsibilities for sustainable development, local product sourcing, and population health and illness prevention.

Our Sustainable Development Policy underpins our decision making process, which now includes Sustainability Impact Assessments for all key decisions and a Carbon Assessment Tool for use during the completion of annual business plans.

We continue to work with local community organisations and wider civic partners via our Sustainable Development Steering Group, through engagement events and by collaborating at neighbourhood, city-wide and regional levels. North Bristol NHS Trust represents health on the Bristol One City Environmental Strategy Board and has contributed to the Bristol One City Climate Strategy in recognition of the many ways in which healthcare both contributes to and can provide solutions to mitigate and adapt to the impacts of climate change.

OBJECTIVE 1

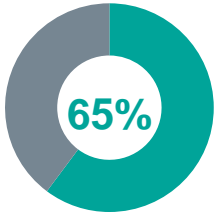
The Trust aspires to be a leader in sustainable healthcare

We have:

- Commissioned Eunomia to develop a 2030 Carbon Route Map
- Continued to work collaboratively to deliver the Bristol One City obligations
- Worked with partners across the Bristol, North Somerset and South Gloucestershire region to baseline our sustainability performance

We will:

- Recruit Sustainability Advocates from each Trust division/directorate
- Update business case templates to make consideration of sustainability impacts more integral
- Work with partners both locally and regionally to identify opportunities to collaborate on the sustainability agenda
- Create a 2022-25 Sustainable Development Strategy, informed by the Carbon Route Map outcomes
- Work with our Integrated Care System partners on a region-wide Green Plan



7.2 Our People

The Trust recognises that a healthy, happy and resilient workforce is key to ensuring we operate sustainably, and as such, every single member of staff has an important role to play in helping us achieve this. The Trust's Sustainable Development Unit run our activity programmes to engage people on the health and wellbeing benefits of more sustainable lifestyles.

During 2020/21 we completed our fifth year of running our staff engagement scheme Green Impact, 32 teams registered with 21 teams achieving an award. The scheme provides innovative ways for staff to get involved in sustainability in the workplace and celebrates those that do. In 2021-22 we will look to develop the specification for a joint engagement scheme with University Hospitals Bristol and Weston with the aim of this being extended across our Integrated Care System.



Over the next year we will also participate in the new *For a Greener NHS* engagement campaign including regional events to encourage wider collaboration and awareness-raising across all NHS sites.

OBJECTIVE 2

Engage our staff, patients, visitors, stakeholders and our wider community on sustainable development

We have

- Completed the fifth year of our staff engagement scheme, Green Impact
- Offered outdoor, socially distanced activities at locations across our sites such as at the staff allotment and other green spaces

We will

- Re-tender our staff engagement scheme jointly with University Hospitals Bristol and Weston NHS Foundation Trust and launch an enhanced scheme (use of Mobile Apps) available to more staff
- Host a Nature Recovery Ranger post courtesy of the Centre for Sustainable Healthcare and provide a wide range of health and wellbeing events linked to green spaces and nature
- Ensure greater engagement with the local community on sustainability activities at the Trust and the use of our green spaces for health and wellbeing
- Launch leadership training in Sustainable Development
- Link NBT activity to the wider *For a Greener NHS* engagement scheme
- Develop a campaign to engage people ahead of COP26

Our People Case Studies

Wellness in Nature

“Useful experience to remember to slow down, breathe and rest the mind.”

Feedback from previous participant.



Join us for an outdoor mindfulness session; involving sensory activities and contact with nature to help support your wellbeing.

Wellness in Nature Sessions

These sessions were launched in summer 2020 as another support mechanism for staff health and wellbeing. They offer staff the chance to spend a brief period in one of the more peaceful areas of the Southmead Hospital site, engaged in an activity that brings calm and enables a focus on nature. This helps reduce stress and anxiety and allows a brief but complete break from the working environment. The sessions were so successful that they have been extended.

Across all 5 areas of well-being measured there was an improvement in how staff felt following the activity, in particular, feeling focused on the present, connected to nature and connected to others.



Staff & Patient Allotment

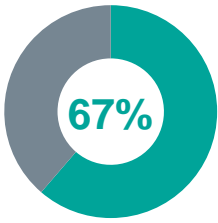
Launched just before the pandemic began, the staff and patient allotment has yet to be officially opened however from the first day of use, it has been bringing benefits for staff in terms of exercise, mental wellbeing, learning opportunities, a socializing space, and most importantly, a delicious source of fresh fruit and vegetables.

A group of staff volunteers visit regularly to plant, weed, water and we plan to have regular community groups visiting for led sessions. We have been harvesting a wide range of produce including radish, kale, tomatoes, watermelons, runner beans, broccoli, peas, rocket, carrots, and potatoes.



Green Impact – Head Injury Therapy Unit

The HITU team have been involved with green impact for several years but in 2020 they reinvigorated their ambitions to make their department more sustainable and improve team wellbeing. HITU organised mindfulness sessions, relaxing walks, and vegan and vegetarian team lunches. They made sustainable strides to cut out plastic waste and reduce energy consumption across the whole Unit. They also used their wonderful eco-therapy garden to include the benefits of nature into their patient’s journeys to recovery.



7.3 Climate Change Adaptation

The Trust is committed to adapting to the impacts of climate change by working to deliver a healthy, resilient, and sustainable healthcare system ready for changing times and climates.

This year we have been updating our Estates Strategy and one of the three key principles is that our estate should be: sustainable – flexible, resilient, and provide net zero carbon facilities.

We are also in the process of updating our Sustainable Design Guide which highlights the importance of climate change-resilient design as well as design and operation principles which minimise our contribution to climate change.

We are pursuing the completion of climate change risk assessments with our partners across the Integrated Care System although this work has been delayed whilst the region addresses the pandemic.

We have also worked with NHS Improvement and England this year to share our experiences of creating the UK’s first ICS-wide climate change adaptation plan and have shared our risk assessment template with other NHS organisations wishing to make progress in this area.

OBJECTIVE 3

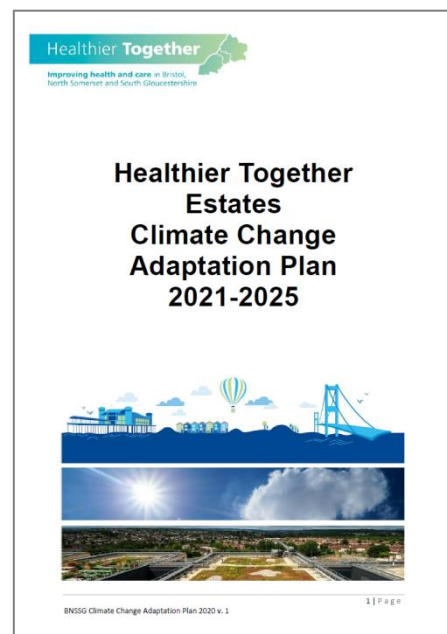
We will adapt our sites and services ready for a changing climate

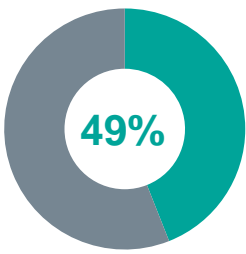
We have

- Seen the adoption of the NBT-produced Healthier Together Climate Change Adaptation Plan across the BNSSG region

We will

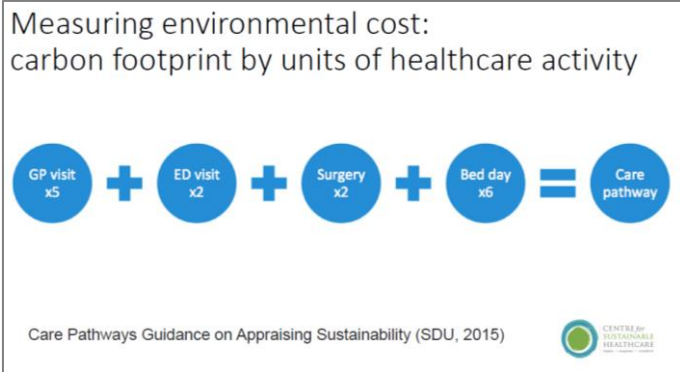
- Pursue the recruitment of climate change leads and completion of the Climate Change Adaptation Plan risk assessment by each member of the Healthier Together partnership
- Report to the Bristol One City Health and Wellbeing Board on the progress in this area
- Create a Board Assurance Framework entry for Climate Change Adaptation to ensure that risks to NBT are identified and sufficiently mitigated.
- Update NBT Climate Change risk assessment and consult with our Divisions/Directorates





7.4 Sustainable Models of Care

The Trust seeks to make the best use of NHS resources for patient care and develop sustainable services for the long term.



The unusual nature of 2020-21 has meant that some of the work we undertake to identify and promote more sustainable care pathways or Trust operations has taken a back seat to the urgency of our Covid-19 response. We have focused our efforts instead on identifying the sustainability and staff and patient health and wellbeing benefits of our Fresh Arts programme and Biodiversity workstream.

OBJECTIVE 4

We will adopt sustainable models of care across our services

We have

- Co-ordinated the delivery of a SusQI workshop with the Academic Health Science Network for the Bristol, South Gloucestershire and North Somerset Sustainability Transformation Partnership.

We will

- Identify SMoC examples from business planning CAT output and map carbon emissions improvements for at least one example per Division
- Increase promotion of SusQI through our Green Impact Scheme and Sustainability Advocates

However, in November 2020 NBT helped co-ordinate a regional workshop on Sustainable Quality Improvement to raise awareness of the co-benefits of addressing both quality and sustainability of improvement projects.

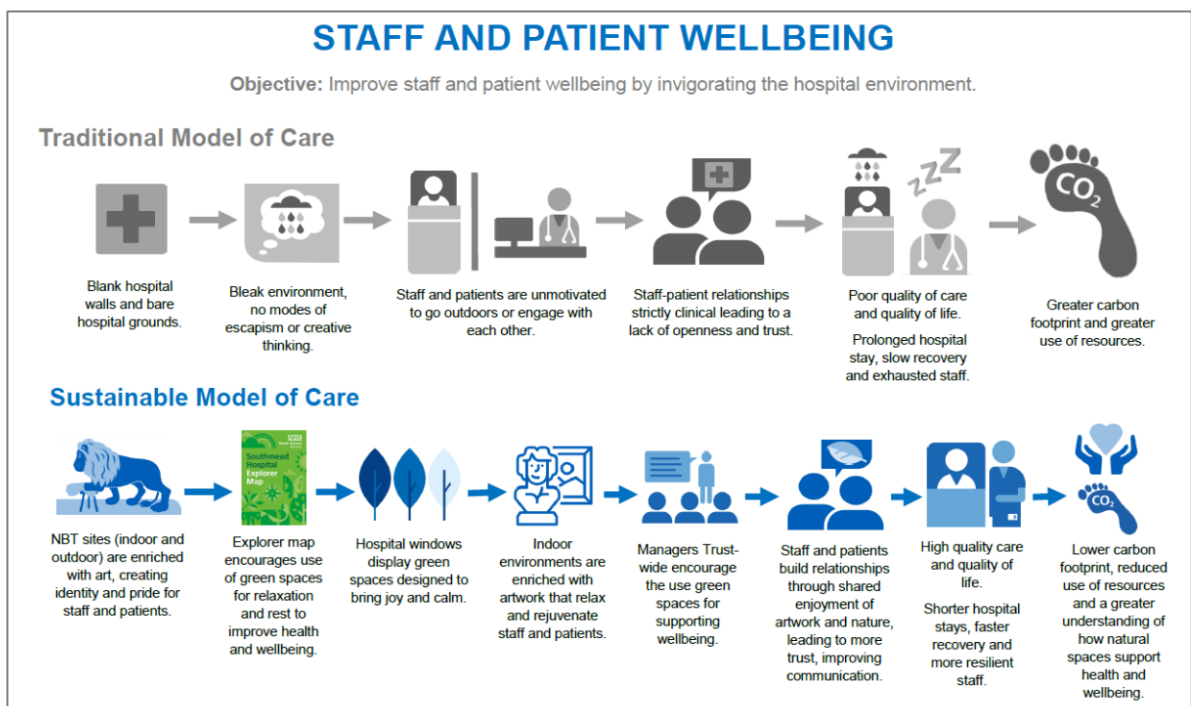
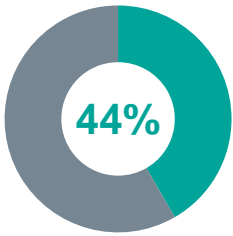


Figure 6: Example of a Sustainable Model of Care Infographic used for awareness-raising



7.5 Sustainable Use of Resources

We seek to make the best use of NHS resources for patient care and develop sustainable services for the long term.

We are supplementing our existing work on plastics by looking more closely at the types of plastic we consume that are not covered by the NHS Plastic Pledge (catering plastics).

We have joined forces with University Hospitals Bristol and Weston to design a pan-Bristol awareness campaign encouraging staff to suggest areas for plastic reduction.



OBJECTIVE 5

We will manage our resources sustainably, reducing our direct environmental impacts across our healthcare services in energy, waste, water, food and anaesthetic gases

We have

- Started a project with Health Care Without Harm looking into the plastics used in healthcare
- Accepted a large donation of plastic-free sanitary products within our Women's and Children's division and promoted an *Environmenstrual* webinar to staff to highlight the environmental impacts of period products
- Continued to reduce anaesthetic gas use

We will

- Measure the carbon emission reduction potential of waste disposal methods as part of the commissioning of the Carbon Route Map
- Investigate toilet flush volumes and tap flow rates in the Science Quarter Buildings
- Reinstate the Trust-wide Waste Compliance Group
- Commission a Waste Strategy
- Continue to make progress with the NHS Plastics Pledge
- Promote the use of the BNSSG *Environmental impacts of inhalers guide*
- Continued promotion of the use of TIVA where appropriate over volatile alternatives
- Work on the recommendations of the Fleet Review
- Introduce further digital solutions to reduce paper consumption
- Set up a Medical Gas Waste group and undertake a review of Nitrous Oxide waste

7.5.1 Energy Consumption

Total energy consumption has decreased by 256,724 kWh since last year, which is within the bounds of normal variation. Electricity consumption dropped by 1,017,125 kWh and gas and oil consumption increased by 303,054 kWh and 464,370 kWh respectively. The significant increase in oil consumption was due to increased generator demand for the Pavilion and COVID testing site at Monks Park Way.

Despite a rise in emissions, the carbon footprint associated with this consumption has reduced due to decarbonisation of the national electricity grid (meaning a greater percentage of renewable energy is being generated nationally and fed into the supply that NBT then uses).

The Trust appointed an Energy and Carbon Manager in late 2020 to drive forward progress on improving our energy efficiency. The Carbon Route Map which we plan to commission will also highlight the key priorities to help us reach our Carbon 2030 net zero goal.

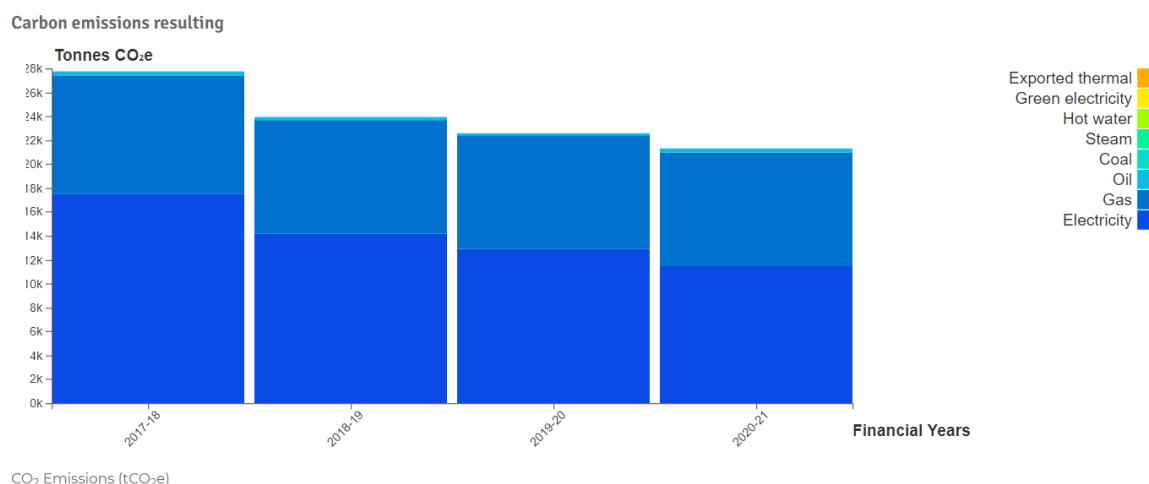
The generation of renewable energy from the solar panel arrays onsite has reduced by 7,023 kWh over the past year due to faulty panels and inverters which is currently being addressed.

Figure 7: The amount and type of energy consumed by NBT in kWh

Energy used
Energy consumption in kWh

	2017-18	2018-19	2019-20	2020-21
Electricity used	39,295,816	40,147,116	40,860,494	39,843,369
Gas consumed	46,759,825	45,390,730	45,472,381	45,775,435
Oil consumed	892,324	765,375	583,708	1,048,078
Coal consumed	0	0	0	0
Steam Consumed	0	0	0	0
Hot water	0	0	0	0
Green electricity	36,057	44,396	33,133	26,110
Total	86,984,022	86,347,617	86,949,716	86,692,992

Figure 8: The carbon emissions related to NBT's energy consumption in tonnes of CO₂ equivalent



7.5.2 Waste and Recycling

The past year has seen the full impacts that a pandemic such as Covid-19 can have on our healthcare system. The quantities of infectious waste generated over the past year are unprecedented at NBT. Increased use of personal protective equipment (PPE), more waste being classed as infectious together with waste from essential cleaning regimes (e.g. wipes) have resulted in huge volumes of waste that have to be autoclaved, with associated financial and carbon costs.

Reduced theatre activity has resulted in less generation of incineration waste however many more materials which would usually have been recycled have been reclassified as infectious waste which has reduced our recycling tonnages.

As part of our work with Health Care Without Harm Europe we conducted a 2-day audit of two wards in the Autumn last year.

The results highlighted multiple areas where we should focus efforts to reduce consumption (and thereby waste). The top 3 plastic-containing items found during the audits were as follows:

1. Wipes – 24%
2. Nitrile gloves – 21%
3. Aprons/gowns – 16%



We intend to repeat the audits under more normal conditions to identify the true quantities of these particular waste types as increased PPE use will have affected the results.

Due to a technical issue with the website that hosts the platform we are unable to report the full extent of internal reuse savings achieved through our platform Warp-It this year however we can confirm savings of at least £22.8K.

Waste in tonnes

	2017-2018	2018-2019	2019-2020	2020-2021	Trend	
Other recovery weight	1972	1779	1585	981	-604	↓
Alternative treatment weight	700	662	586	1185	599	↑
Landfill weight	191	204	0	0	0	
Recycling weight	518	386	883	676	-207	↓
Total weight	3381	3031	3054	2842	-212	↓

Figure 9: The weight of waste generated by NBT in tonnes

Due to a technical issue with the national Sustainability Reporting Portal we are unable to provide accurate carbon emission data for our waste performance this year.

7.5.3 Anaesthetic Gases, Pharmaceuticals and Medical Devices

The consumption of anaesthetic gases, pharmaceuticals and medical devices varies in line with patient contact; the more patients we treat the more products we use.

During 2020-21 our patient contacts reduced by 75,832 (11%) compared with the previous year due to non-face-to-face appointments and reduced elective activity during Covid. For those operations where anaesthetic gases have been used, we have continued to opt for intravenous methods where appropriate rather than gaseous methods such as sevoflurane and desflurane. Intravenous anaesthetic has a considerably lower carbon footprint.

Previously the Nitrous Oxide and Oxygen 50/50 split (Entonox) use has been undefined between Maternity Manifold use and portable use (ambulances, bedside, Accident & Emergency). This year we have been able to better define the Entonox consumption across these uses which is why there is now a greater

proportion of the 2020-21 nitrous oxide consumption allocated to Maternity; this is not a sudden increase in maternity use, rather an improvement in the definition of our data.

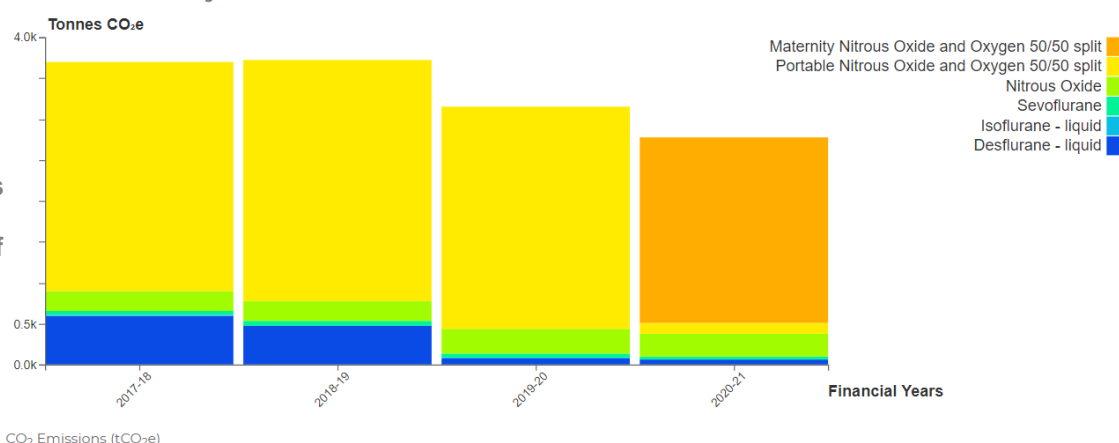
The Trust's spend on both pharmaceutical and medical devices increased by 7.7% and 17.7% respectively in 2020-21. The significant increase in pharmaceutical spend is linked to the change in mix of patients and activity and the prescribing of more drugs via the outpatient route to manage patients remotely. The significant increase in medical device spend is partially due to hosting the Nightingale Hospital and Mass Vaccination service. There was also increased investment in medical equipment in the COVID response. This included beds, monitors, respiratory equipment and spare parts to increase hospital capacity as well as equipment for monitoring patients remotely, more advanced PPE e.g. respiratory hoods and increased stock of existing equipment to allow more time for disinfection. Equipment was also supplied to the Independent Sector to protect the most vulnerable by separating patient pathways.

Figure 10: The volume of anaesthetic gas used by NBT in litres

Anaesthetic gas use				
in litres	2017-18	2018-19	2019-20	2020-21
Desflurane - liquid	159	127	21	15
Isoflurane - liquid	11	7	2	6
Sevoflurane - liquid	294	273	259	187
Nitrous Oxide - gas	432,000	446,400	540,000	495,000
Portable Nitrous Oxide and Oxygen 50/50 split - gas	10,078,200	10,588,800	9,777,300	467,600
Maternity Nitrous Oxide and Oxygen 50/50 split - gas	0	0	0	8,175,000

Carbon emissions resulting

Figure 11: The carbon emissions related to NBT's anaesthetic gas use in tonnes of CO₂ equivalent



7.5.4 Water consumption

During 2020-21 our water use has increased, in the most part due to a water leak in January 2021. This was due to a failed mechanical joint which was promptly fixed.

A plan has recently been developed by Facilities Management to improve the monitoring of our water use.



Finite resource use - Water

	2017-18	2018-19	2019-20	2020-21
Water volume (m ³)	357,389	389,225	316,732	326,665
Waste water volume (m ³)	285,911	311,380	294,135	301,207
Water and sewage cost (£)	665,091	751,408	681,179	672,828

Figure 12: The volume of water used and wastewater generated by NBT in metres cubed

Carbon emissions resulting

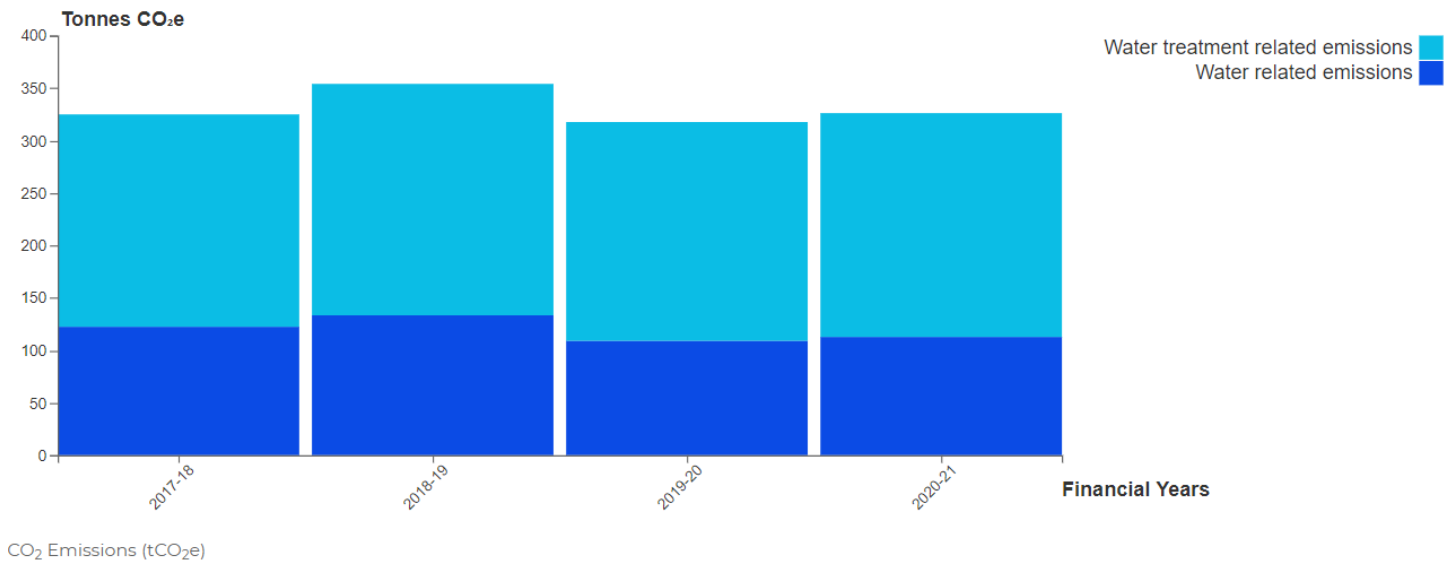


Figure 13: The carbon emissions related to NBT's water usage and wastewater generation in tonnes of CO₂ equivalent

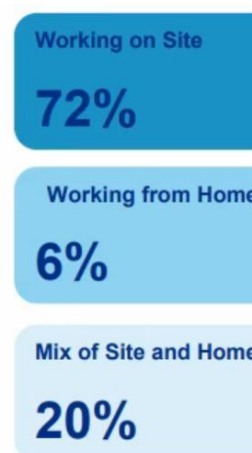
7.5.5 Fuel Consumption

Grey fleet mileage (staff using their own vehicles for business use) for 2020-21 decreased by 68,612 miles due to a reduction in clinical activity and the move to using virtual means for Trust activity such as meetings.

Mileage undertaken by Trust fleet vehicles has also decreased, by 77,042 miles. Business mileage by train and air has also decreased by 185,788 miles and 57,656 miles respectively, most likely due to the global reductions in rail and air travel during the initial months of the pandemic.

Our calculations indicate an increase in staff commuting however this is due to the fact our method is based on staff numbers and as our staff numbers have increased, so has the associated assumed mileage. In reality with a percentage of staff working from home, the staff commuting mileage will be lower but our current tool for calculating this does not take home-working into account; a factor we need to address in future years.

The 2020-21 travel survey included a question about home working which highlighted that a quarter of staff have either been working exclusively or at least in part from their homes:



Mileage by patients and visitors has reduced in line with lower patient numbers and restrictions on visitors however again, the tool used for this does not take a pandemic scenario into consideration.

Travel undertaken

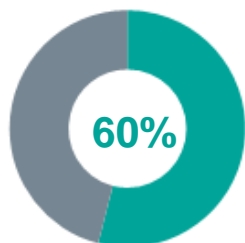
All travel is shown in miles.

	2017-2018	2018-2019	2019-2020	2020-2021	Trend	
Patient and visitor travel	22,570,481	38,615,782	34,562,091	21,035,918	-13,526,173	↓
Business travel and fleet	542,441	1,202,702	1,375,945	985,469	- 390,476	↓
Staff commute	7,557,304	30,054,300	29,267,018	30,724,320	1,457,302	↑
Total mileage	30,670,226	69,872,784	65,205,054	52,745,707	-12,459,347	↓

Figure 14: The mileage of patient, visitor, staff, business and fleet travel

7.5.6. Paper Consumption

Following the further roll-out of digital solutions by our Information Management and Technology Division, the Trust's spend on paper reduced by £2.2k in 2020-21.

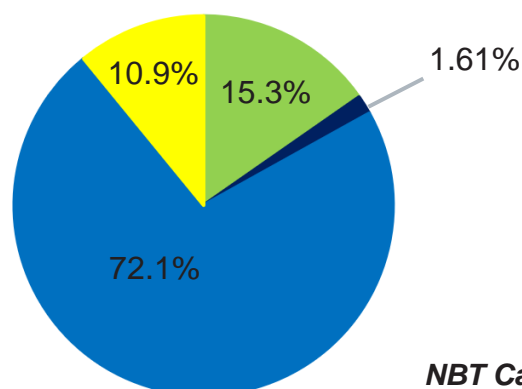


7.6 Carbon and Greenhouse Gases

The Trust is committed to reducing our carbon emissions. The work we have commissioned to develop a Carbon Route Map to set our journey to being carbon net zero by 2030 will consist of several stages:

- A gap analysis
- Future predicted emissions
- A list of assessed opportunities and recommendations for each area of emission across the 2020-2030 period
- A 2030 Carbon Strategy and action plan
- A Sustainable Procurement Strategy

NBT Carbon Footprint 2020-21



NBT Carbon Footprint Breakdown 2020-21

25,236 tonnes CO ₂ e	Core emissions: Scope 1, 2, 3 and emissions from energy, waste, water, business travel and transport and anaesthetic gases
2,658 tonnes CO ₂ e	Commissioning: Scope 3 emissions
118,778 tonnes CO ₂ e	Supply chain: All scope 3 emissions (goods, services and buildings procured)
17,958 tonnes CO ₂ e	Community: All emissions (Scope 1, 2, 3 from staff commute, patient and visitor travel).

NOTE: The accuracy of this year's carbon footprint cannot be guaranteed due to a technical issue with the Sustainability Reporting Portal that NHS Trusts use to translate performance data into carbon emissions. Both the Waste and Transport sections of the Portal are not functioning as designed and as such the resulting carbon emissions cannot be confirmed as accurate. Due to the Portal being an external tool, the Trust is not able to interrogate it to determine where the errors are occurring and are reliant on the organisation that runs the site to identify and resolve the problem. Any identified errors will be corrected and highlighted in future reports.

OBJECTIVE 6

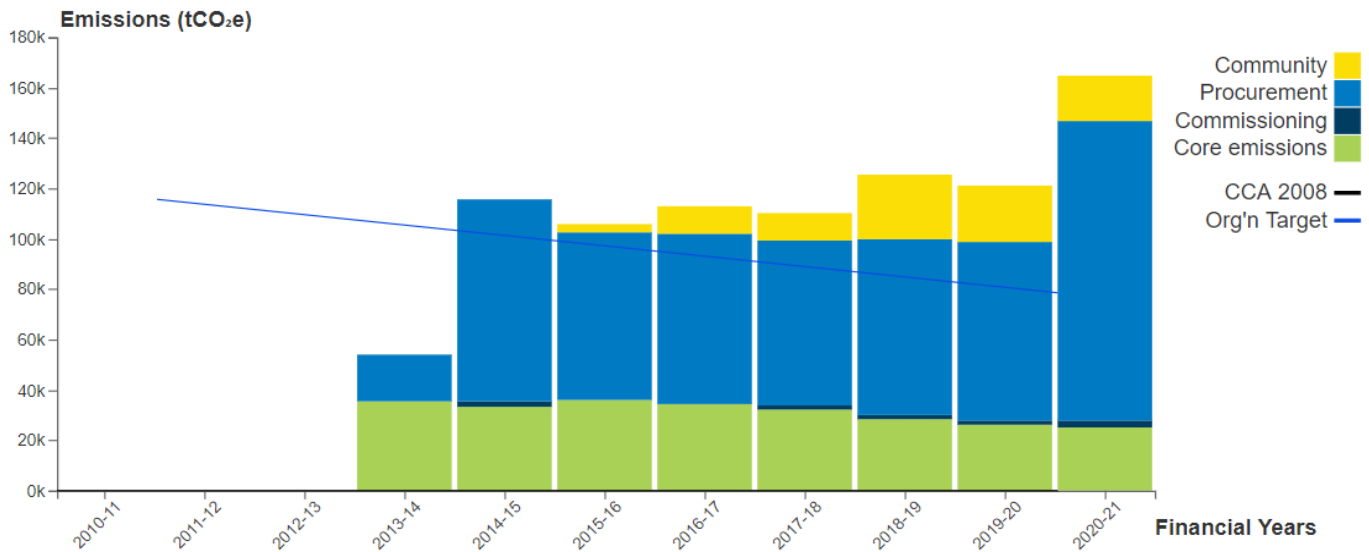
We will manage our carbon emissions in line with the NHS Long Term Plan

We have

- Commissioned the production of a plan to identify the route we need to take to reach our 2030 goal
- Appointed an Energy and Carbon manager to address emissions from this significant area.

We will

- Upgrade the Elgar House Building Management System (BMS)
- Optimise the Learning and Research Centre, Pathology 1 and Pathology 2 BMS
- Apply for central funding to implement a wide range of energy efficiency and renewable initiatives



Our Scope 1 emissions have only reduced in the past year because a reduction in our anaesthetic gas use (374 tonnes of CO₂e) helped to compensate for an increase of 360 tonnes of CO₂e from gas and oil. To achieve carbon net zero we will need to see ongoing reductions across all areas of Scope 1 emissions.

Our Scope 2 emissions have also reduced, due to reduced electricity consumption and the decarbonisation of the grid which means that each unit of electricity we consume has less inherent carbon associated with it (through increased efficiencies and generation via renewable sources).

The Trust's Scope 3 emissions have increased significantly over the past year as a direct result of the Covid-19 pandemic. Increased waste generation and a considerable increase in spend on manufactured goods have outweighed any decreases we have seen due to reduced travel.

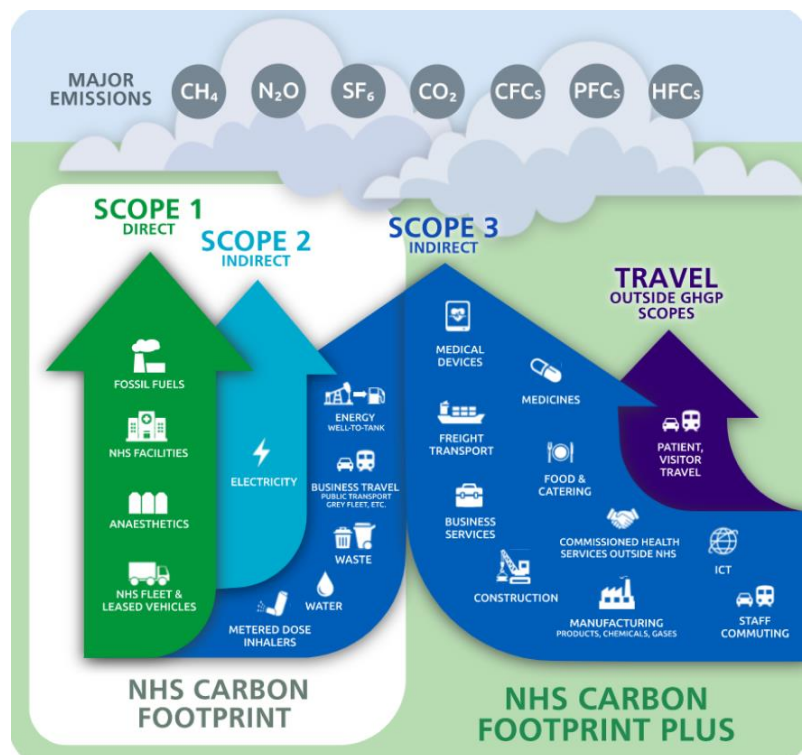
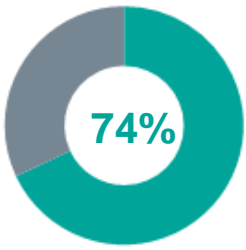


Figure 15: Carbon emission categories



7.7 Travel and Logistics

The Trust is committed to reducing the impacts of our travel and transport.

Sustainable travel plays a significant part in both reducing traffic on the roads whilst also promoting health and wellbeing through exercise and improving local air quality.

We continue to offer our TravelSmart service providing advice and support for those travelling to our sites; encouraging those who can, to choose a sustainable transport option whenever possible.

Two new working groups have been established to help deliver the recommendations outlined in the Fleet and Business Travel Report and to focus on the future provision of electric vehicle infrastructure at the Trust.

To support our local partners and businesses in the city region, we presented at several external events; showcasing the work NBT has undertaken to reduce single occupancy vehicles and sharing successes and challenges.



OBJECTIVE 7

We will reduce the impacts from our travel and transport services

We have

- Offered 169 staff free bike safety checks
- Loaned 95 bicycles to staff
- Completed a scoping study for fleet and business rationalisation and presented a Fleet and Business Travel Report suggesting actions for consideration and implementation
- Continued to implement our travel plan action plan
- Assessed progress using the national Sustainable Development Unit's HOTT Tool
- Supported the Bouygues/THC lifecycle project
- Signed up to CyclingWorks Bristol, supporting the desire for improved cycle infrastructure in the city.
- Responded to the Bristol City Council Clean Air Zone consultation

We will

- Commit to embedding the Clean Air Hospital Framework to reduce air pollution from our services
- Deliver year 3 of Travel Plan Action Plan including scoping the recruitment of a Fleet/Transport Manager, delivering sustainable travel awareness activities, and increasing electric vehicle charging infrastructure.
- Introduce a staff Vehicle Salary Sacrifice Scheme to encourage and enable uptake of ultra-low emission vehicles
- Develop an EV Strategy

Travel Smart Case Studies

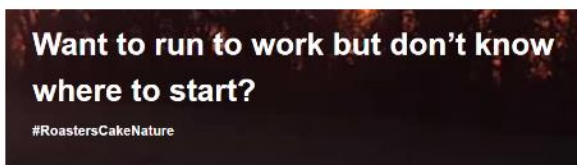
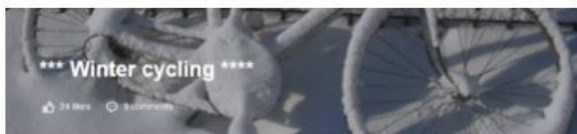
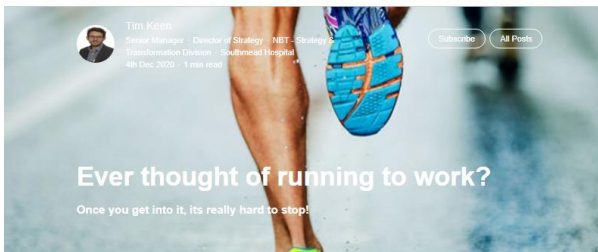


Supporting Cycling Through the Pandemic

Local company BW Cycling donated 50 bicycles, safety and security equipment to support hospital staff who were struggling to get into work during the early stages of the pandemic when public transport was not available.

Many Bristol bicycle shops also offered reduced or free servicing for NHS staff to help keep their bikes fit and healthy and allow them to continue commuting safely. Local partners including Bristol City Council also made reduced price bicycles available for key workers.

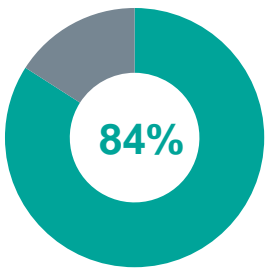
View Blog Post



Well for Winter Campaign

As part of the NBT Wellbeing campaign through winter, staff wrote and published blogs on the LINK intranet page to promote the different benefits of cycling and running to work.

This raised the profile of the links between sustainable and active travel choices and improving health and wellbeing. The blogs were engaged with over 100 times.



7.8 Green Space and Biodiversity

The Trust is committed to protecting and enhancing the natural environment, including the prevention of pollution.

The 2020-21 period has served to demonstrate the importance of access to green space for the benefit of health and wellbeing. Alongside the city's wealth of parks and gardens, the Trust's outside spaces have been essential for providing areas to rest, recuperate, take breaks and meet with colleagues at a distance.

We recognised the importance of our grounds for local community benefit through the re-designation of Lime Tree Neighbourhood Park.



We continue to provide information in our key areas to raise awareness and encourage participation from colleagues and the public.



OBJECTIVE 8

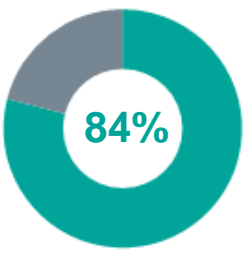
We will protect and enhance the environment and prevent pollution

We have

- Implemented actions in our Biodiversity Management Action Plan
- Undertaken an ecological survey across the whole Southmead Site
- Planted drought tolerant plants with an additional interpretation panel to educate the public on the impacts of a warmer climate.
- Created HALOs (Herons And Loved Ones) – spring bulb circles and an interpretation panel in the newly designated Lime Tree Neighbourhood Park

We will

- Review and revise Biodiversity Management Plan action plan
- Host a Nature Recovery Ranger for 12 months (with the possibility of 2 x internships)
- Develop the allotment and promote it within and beyond NBT
- Develop guidance for green infrastructure to support the BNSSG CCAP risk assessment
- Run a wildlife photography competition with the Trust Fresh Arts team
- Undertake pollinator and butterfly surveys of the attenuation ponds.
- Extend our wildflower meadows and undertake No Mow May with PlantLife.
- Engage staff in outdoor activities such as, butterfly walks, wildflower identification, bird watching and foraging.



7.9 Capital Projects

The Trust is committed to reducing the environmental impacts from our buildings, critical infrastructure and equipment essential for the smooth running of the hospital.

The Trust's Capital Programme ensures the delivery of services and enables resources to be managed more effectively through critical infrastructure and material improvement works across our Estates.

The programme ranges from major demolition and construction works through to refurbishment projects as well as energy efficiency projects and the purchase of critical medical equipment.

Gynecological Operating Theatres case study

In 2021 two new Gynecological operating theatres were installed by the Trust. These theatres will obtain heating and hot water from the existing adjacent gas boiler plantroom. However, they have been designed such that when this plantroom is decommissioned, the theatres will be suitable for switching to low-carbon heat sources such as electric heat pumps with no expensive retrofit to heating terminal units required. This means that the theatres are net-zero carbon ready.

OBJECTIVE 9

We will embed sustainable design and construction within our capital projects

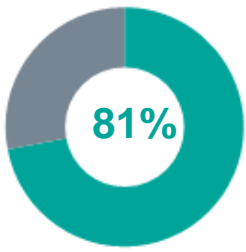
We have

- Published our Estate Strategy
- Continued to require that the sustainability impacts of our capital projects are assessed and mitigated

We will

- Update and launch Sustainable Design Guide
- Ensure all future capital projects are designed to be compatible with a future zero carbon strategy
- Replace the NICU, Gynae and Elgar AHUs with a high efficiency alternatives
- Upgrade the A-Block gas boiler
- Upgrade the Brunel stair cores, Brunel MSCP and Beaufort MSCP to LED lighting
- Install cavity wall insulation into the Christopher Hancock Building
- Top-up loft insulation in Christopher Hancock Building and Elgar House





7.10 Asset Management and Utilities

The Trust is committed to reducing the sustainability impacts from our operational assets and buildings.

The Trust's Critical Retained Infrastructure Scheme Programme (CRISP) oversees the replacement of these assets and equipment. Once installed, these assets are maintained through the Planned Preventive Maintenance schedule (PPM). This is a cyclic schedule used to manage maintenance activity with the objective of maintaining safety, efficiency and keeping loss of service through break-downs or emergency maintenance activity to a minimum.

The Planned Preventive Maintenance schedule should be able to focus on maintaining new energy efficient equipment, rather than trying to maintain ageing assets which are no longer sustainable to run and at higher risk of failure.

Learning Research Building Case Study

Following analysis of the performance of the 900kW Learning and Research chiller it was demonstrated that significant energy savings could be achieved by improving how the chiller and associated pumps were controlled.

Funding was allocated and a Building Management System (BMS) contractor appointed to make corrections and improvements to the controls coding.

This resulted in over £15,000 of electricity and 20 tonnes of CO₂ savings in the first six months and significant improvement to the expected life of the equipment.

We hope to make similar changes to other chillers on our site.

OBJECTIVE 10

We will manage our operational assets and critical infrastructure to promote longevity and efficiency of use

We have

- Delivered 94% of the Planned Preventive Maintenance (PPM) works within the Retained Estate and PFI
- Ensured the PFI Building is maintained to the NHS Estates Code B Condition
- Ensured the replacement of equipment in the PFI considers whole lifecycle costs
- Appointed an Energy and Carbon manager to address emissions from energy use and buildings.

We will

- Develop a clear policy and process for our Estates Strategy that demonstrates our commitment to sustainability.
- Undertake a contractor compliance review, ensuring all our contractors are vetted against environmental compliance as part of the tender process.
- Investigate the BMS and determine opportunities for savings through improved control.
- Produce a zero-carbon plan for each building
- Run pilot projects upgrading gas boilers to electric heat pumps
- Continue the roll out of LED lighting

8. Finance

The table below highlights some of the costs relating to key areas of resource use during 2020-21 and the trend over recent years. We have seen a decrease in energy, water, sewage and business mileage costs but an increase in waste cost.

Financial Data (Spend)	2017-2018	2018-2019	2019-2020	2020-2021
Total Energy Cost	£6,192,969	£7,201,048	£7,839,267	£7,100,516
Water & Sewage Cost	£665,091	£751,408	£681,179	£672,828
Waste Cost	£735,185	£758,181	£808,343	£967,523
Business Mileage - Grey Fleet	£239,417	£242,576	£188,764	£148,501
Internal reuse of equipment	£43,539	£43,000	£57,831	£22,849

8.1 Charitable Funds

To further support innovative sustainable healthcare projects, Southmead Hospital Charity's Sustainable Healthcare fund delivers a range of sustainability and health and wellbeing projects for the benefit of patients, visitors and staff.

The fund aims to promote social cohesion and personal resilience through the prevention of avoidable illness through access to green space. Previous areas of spend from our Sustainable Healthcare fund include:

- NBT Staff and Patient Allotment
- Plants (Southmead lavender beds and Vu Herb Garden)
- Picnic benches

This past year we have limited opportunities to fund-raise due to Sustainable Development Unit capacity and Covid-19 restrictions. We will develop a new fund-raising plan in 2020-21 and have already launched a wildlife photography competition with the intention of using the winning entries to create greeting cards to sell.



9. Reporting

North Bristol NHS Trust has an obligation to report progress on sustainable development in line with national reporting requirements.

The NHS Standard Contract requires the Trust to take all reasonable steps to minimise adverse impacts on the environment. The contract specifies that North Bristol NHS Trust must demonstrate progress on climate change adaptation, mitigation and sustainable development and must provide a summary of that progress in the annual report and produce a Green Plan.

The Department of Health requires Trusts to report ERIC (Estates Return Information Collection) data. ERIC data comprises essential statistics on waste, energy and water from Estates and Facilities. The Trust must also submit a large quantity of data annually via the national Sustainability Reporting Portal. This tool is designed to translate our performance data into carbon emissions however it has proved unreliable since it was first introduced and has been responsible for incorrect reporting in past years due to technical issues with the website and the way it transforms various types of data into tonnes of carbon. This year is no exception with key concerns being the accuracy of the calculation of the waste and transport-related carbon emissions.

March 2021 saw the introduction of a new quarterly reporting requirement to NHS Improvement and NHS England. There are 20 elements ranging from our response to overheating incidents through to how we deal with food waste. Progress against these new requirements will be monitored throughout the year and summarised in future reports.

Progress against the Green Plan is reported to the Steering Group quarterly and Trust Board 6 monthly, before final approval and publication in September each year. This approach will be modified when we move to the new Green Plan format in 2021-22. North Bristol NHS Trust's Green Plan is available on the Trust website:

www.nbt.nhs.uk/sustainablehealthcare

10. Risks and Opportunities

Risks and opportunities related to sustainable development are managed by the Strategic Estate Development and Sustainable Health service through the Environmental Management System within the Directorate of Estates, Facilities and Capital Planning.

Significant risks and opportunities associated with compliance obligations, objectives, targets and project delivery are reported directly to the Director of Estates Facilities and Capital Planning and FM Board through the management review process.

These risks and opportunities are also communicated to the Sustainable Development Steering Group and to Trust Board twice a year. Significant sustainability risks are recorded on the Trust's risk register and managed accordingly.

We have created a Business Assurance Framework entry for our carbon 2030 goal to help us identify risks that may prevent us from reaching it and are in the process of creating one for our preparedness for adapting to climate change.

11. Sustainable Development Indicators

Theme	Indicator	Metric	2016/17	2017/18	2018/19	2019/20	2020/21	Trend
Carbon Emissions	Scope 1 (gas, oil, fleet, anaesthetic gases)	(tCO2e)	13,132	13,907	13,724	12,844	12,739	Green
	Scope 2 (electricity)	(tCO2e)	20,067	17,515	14,162	12,911	11,480	Green
	Scope 3 (procurement, waste, staff/public travel etc.)	(tCO2e)	79,694	81,207	100,277	92,187	140,412	Red
	Total Carbon Emissions	(tCO2e)	112,893	112,628	128,163	117,942	164,630	Red
Energy	Electricity Consumed - Utility	kWh	38,828,428	39,295,816	40,147,116	40,860,494	39,843,369	Green
	Gas Consumed - Utility	kWh	42,115,642	46,759,825	45,390,730	45,472,381	45,775,435	Red
	Oil Consumed - Utility	kWh	543,381	892,324	765,375	583,708	1,048,078	Red
Onsite Renewable Energy Generation	Solar	kWh	39,717	36,057	44,396	33,133	26,110	Red
Water	Water Volume	m ³	241,944	351,561	389,225	316,732	326,665	Red
Waste	Internal re-use of equipment	£	39,892	43,539	43,000	57,831	-	White
	Other Recovery	tonnes	227	1,972	1,779	1,585	981	Green
	Autoclave	tonnes	725	700	662	586	1185	Red
	Landfill (Offensive waste)	tonnes	1,487	191	204	0	0	Green
	Total Recycling	tonnes	1,266	518	386	883	676	Red
Travel	Business Mileage - Grey Fleet	miles	532,744	409,137	461,973	348,182	279,570	Green
	NBT Fleet	miles			540,792	508,437	431,903	Green
	NBT electric/hybrid vehicles	miles	14,473	18,094	16,163	22,545	1,555	Red
	Staff choosing sustainable travel modes	%	56	63	57	60	53	Red
Anaesthetic Gas	Desflurane - anaesthetic liquid	litres	216	159	131	21	15	Green
	Isoflurane - anaesthetic liquid	litres	12	11	8	2	5.5	Red
	Sevoflurane - anaesthetic liquid	litres	273	294	279	259	187	Green
	Nitrous oxide - anaesthetic gas	litres	477,900	432,000	442,800	540,000	495,000	Green
	Nitrous oxide with oxygen 50/50 split	litres	10,877,700	10,078,200	10,588,800	9,777,300	8,642,600	Green

Contact Us

We welcome your views....

We are continually striving to improve sustainable development here at North Bristol NHS Trust and would welcome your views on how we can do this.

Please send any comments, ideas, suggestions or feedback you may have to:

Sustainable Development Unit
Strategic Estate Development & Sustainable Health
Princess Campbell Office
North Bristol NHS Trust
Southmead Hospital
Bristol, BS10 5NB



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Find out more...

Visit our website below or Intranet page to find out more.



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