NHS
St Helens and Knowsley
Teaching Hospitals
NHS Trust

GREEN PLAN
2021-2026

OUR PATH TO SUSTAINABLE HEALTHCARE

Forward

St Helens and Knowsley Teaching Hospitals NHS Trust are delighted to present our Green Plan. Our Trust recognises the challenges we face on issues of climate change, waste and air pollution and the impact these issues have on the health of our planet, our local communities, and our patients.

2020/21 reminded us how closely connected we all are to the natural world and how vulnerable we can be to our environment. Fortunately, the links between human activity, environmental health and public health are becoming more widely acknowledged and understood across the world. Scientific consensus makes it clear that greenhouse gas emissions, deforestation and loss of biodiversity adversely affects all of us with direct and immediate consequences to our health and day to day lives. Without accelerated action against climate change there will be "increases in the intensity of heatwaves, more frequent storms and flooding, and increased spread of infectious diseases" (*Delivering a 'Net Zero' National Health Service*, p7).

This plan has been developed to accelerate the pace of our response to climate change by setting out a clear, ambitious, and achievable strategy in full support of the NHS commitment to reduce emissions to 'net zero'.

Dealing with the pandemic over the last 18 months has shown us how quickly our staff and partner organisations can react and adapt in response to crisis. Adapting to climate crisis will require equal urgency and more enduring change if we are to achieve the targets set out in this document and ultimately the ambitions of the NHS; to be the world's first 'net zero' national health service.

Improving our carbon footprint and reducing our impact on the environment will bring direct improvements to people and communities. However, the level of change required will need everyone within our Trust to play their part. Everyone should speak out when they can see a more sustainable way of doing things; we need to work together, sharing our ideas and innovations. Our managers should lead our teams and departments by example, with sustainability on the agenda of everything we do. Environmental performance and achievements should be regularly communicated and promoted to share good practice and replicate it across the organisation. Working together in this way will fully embrace our responsibility to lead change, promote green growth, protect our environment, and deliver sustainable healthcare.

Contents

Our Green Plan

This Green Plan builds upon the success of the Sustainable Development Management Plan that it replaces. It renews and reinvigorates a framework to encourage a culture across all our sites that supports and inspires innovative policies, decisions and actions that empower individuals, departments, and partner organisations to progress our green agenda; to provide sustainable healthcare, tackle climate change and achieve net zero carbon targets.

Our plan has evolved in line with *Developing a 'Net Zero' National Health Service* launched in October 2020, and *A HealthCare Engineering Roadmap for Delivering Net Zero Carbon* launched in March 2021. St Helens and Knowsley Teaching Hospitals NHS Trust realises the urgency for positive change and accepts the immediate challenge of delivering healthcare in a way that meets current needs without hindering the ability of future generations to meet theirs. Through this plan we strive to 'live within our means' environmentally, financially, and socially, and commit to engage our collective knowledge and skills to help secure the health and wellbeing of future generations.

This plan centres around three core actionable objectives: (1) reduce carbon, waste, and water, (2) improve air quality, and (3) reduce avoidable single use plastics. The document displays our *Journey so Far* and discusses our *Carbon Footprint*, it clarifies *Our Vison and Objectives* for change and demonstrates our *Implementation Structure* before detailing our *Action Plan*. The document presents our intentions for *Tracking Progress and Reporting* and then concludes with a *Summary* that inspires immediate action.

IMPROVE AIR QUALITY

REDUCE CARBON, WASTE AND WATER

REDUCE AVOIDABLE SINGLE USE PLASTICS

PLAN ACT REVIEW
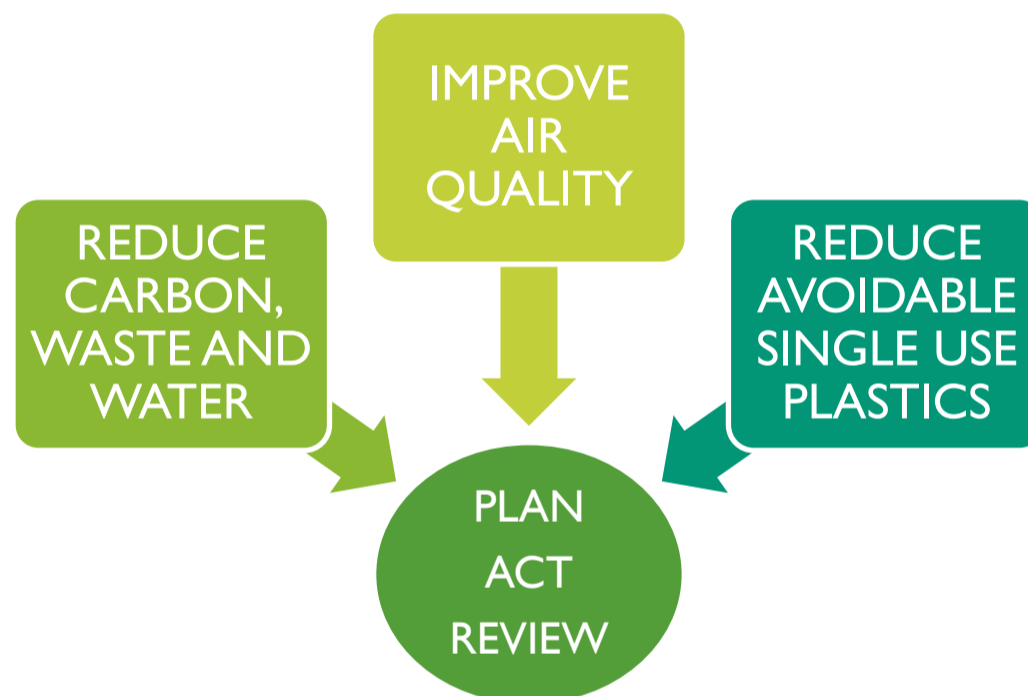
DOCUMENT CHECKLIST

- ✓ Guides reduction in Energy use and careful use of water resources
- ✓ Promotes minimisation of waste and the re-use and recycling of materials
- ✓ Advocates the protection of green space and biodiversity
- ✓ Encourages walking, cycling and public transport
- ✓ Encourages community engagement and working in partnership with others
- ✓ Promotes the link between physical activity, health, and sustainability
- ✓ Focuses procurement on the carbon-footprint and pollutants associated with goods and services
- ✓ Promotes a switch to lower carbon asthma inhalers and anesthetic gases
- ✓ Drives a strategy toward a more green and efficient estate

Our Journey so Far

The Trust has long been actively engaged in a carbon reduction programme to mitigate the impact our services have on the environment. The launch of the *NHS Sustainable Development Strategy 2014-2020* highlighted that while carbon reduction was core to us achieving our goals, to make a valuable difference we had to widen our scope to include other areas of sustainable development, such as reducing waste and pollution, and contributing to the development of healthy and resilient communities to diminish the need for our services in the first place.

In 2014 we launched our Sustainable Development Management Plan. We set out a series of actions focused on progressing our carbon reduction agenda, developing effective partnerships, and engaging the local community.

Timeline
(just some of our achievements)

SHOWING LOCAL SCHOOL CHILDREN THE IMPORTANCE OF PLANTING TREES

PLANTING HERB GARDENS WITH LOCAL SCHOOLS AND TALKING ABOUT SUSTAINABLE FOOD

GREEN APPLE SUSTAINABILITY AWARD WINNERS

GREEN WORLD SUSTAINABILITY AMBASSADORS

NHS SUSTAINABILITY AWARD WINNER FOR BIODIVERSITY

FITTED FLANGE AND VALVE INSULATION TO HEAT EMITTING PLANT ACROSS ALL SITES.

INSTALLATION OF A FLU-ACE HEAT RECOVERY UNIT

NATIONAL PUBLIC SECTOR SUSTAINABILITY AWARDS – RUNNER UP FOR 'MOST SUSTAINABLE PUBLIC SECTOR ORGANISATION IN THE NHS'

INSTALLATION OF A 1.3-MEGAWATT COMBINED HEAT AND POWER UNIT

INSTALLED LED LIGHTING IN WHISTON NORTH SITE CAR PARKS

SPONSOR OF CLEAN DRINKING WATER WELL IN UGANDA THROUGH SALE OF LIFE WATER IN OUR RESTAURANTS

SWITCHED TO REUSABLE SHARPS BINS

INTRODUCED WARPIT; WASTE, REUSE AND RECYCLE PORTAL

SWITCHED TO ENERGY EFFICIENT FILTERS IN OUR AIR HANDLING UNITS

CLOSE MONITORING AND REPORTING ON STAFF USE OF THEATER SET-BACK MODE.

HEALTHY EATING AND EXERCISE CAMPAIGN WITH SMOOTHY-BIKES

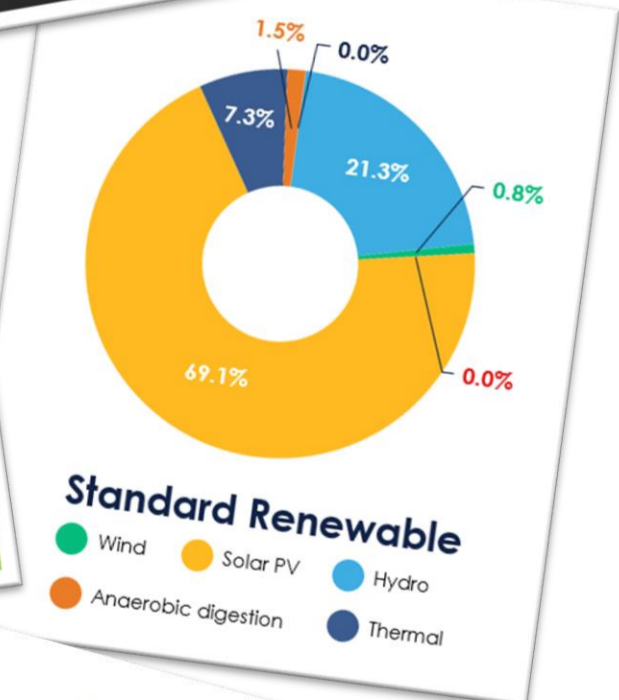SHARING REUSABLE BATTERIES WITH LOCAL SCHOOLS AND HOSPICE

SHORTLISTED FOR SUSTAINABILITY PARTNERSHIPS' NHS SUSTAINABILITY AWARD FOR PUBLIC ENGAGEMENT

ROLLED OUT TELEHEALTH – REDUCING UNNECESSARY PATIENT TRAVEL.

REMOVING SINGLE USE PLASTICS FROM HOSPITAL RESTAURANTS

SHARING SURPLUS FOOD WITH FOOD BANKS TO HELP PEOPLE AND FAMILIES IN NEED

NOW PURCHASING ALL OUR ELECTRICITY FROM RENEWABLES.

ESTATES AND FACILITIES PROJECT PARTNERS COMMIT TO 'NET ZERO' CARBON

INSTALLATION OF 16 ELECTRIC VEHICLE CHARGING POINTS OVER WHISTON AND ST HELENS HOSPITALS

REPLACING SINGLE USE PLASTICS

With the recent focus from the UK government, and documentaries airing on our main terrestrial channels aiming to highlight the threat that single-use plastics pose to the environment, at Compass UK&I, as of 15th July, across our Healthcare business, we are taking the positive step to remove plastic straws, drink stirrers and cotton buds from our business and replace with environmentally friendly paper and wooden alternatives.

As the UK's largest food and support services organisation we are moving ahead of the curve, as UK government have confirmed that these single use plastics will be banned in the UK from April 2020. This is the government's latest attempt to stem the flow of waste and promote the use of recyclable materials.

As a step further, we are also phasing out plastic bags across our business and replacing with paper alternative as part of

From Jan - Sep 2019, Compass Group provided **27.0 tonnes** of surplus products to FareShare

That's enough for an estimated **64,399 meals** for people in need!

Standard Renewable

1.5% 0.0%
7.3%
21.3%
0.8%
69.1%
0.0%

- Wind
- Solar PV
- Hydro
- Anaerobic digestion
- Thermal

Our Carbon Footprint

Despite our progress, there is still a long way to go and a significant challenge ahead. The NHS as whole must reduce its Carbon Footprint by over 30MtCO$_2$e to close the current gap to net zero, this is roughly equivalent to the emissions profile of Croatia.

For our Trust to make a meaningful contribution to this reduction we have to understand the full scope of our emissions so we can identify the most significant areas of opportunity for change. To aid this process the NHS have adopted The Greenhouse Gas Protocol (GHGP), which provides us with a more encompassing model for identifying a wider range of emissions associated with our services. These emissions fall broadly into three scopes:

- **Scope 1:** Direct emissions from owned or directly controlled sources on site.
- **Scope 2:** Indirect emissions from the generation of purchased energy, mostly electricity
- **Scope 3:** All other indirect emissions that occur in producing and transporting goods and services, including the full supply chain.

"The NHS is a huge and powerful buyer of goods and services. As a consumer of energy, a producer of waste, a cause of travel and a commissioner of building works, its potential impact on health, on the environment, and on the social and economic fabric of our lives is without parallel…The NHS has formidable powers at its disposal arising from its size, from the fact that it reaches into almost every corner of the country and touches almost everybody's lives, and from the scale of its resources – not just money, but people, land, facilities, reputation and influence."

Anna Coote, Commissioner for Health at the Sustainable Development Commission

Figure 1 shows that some emissions associated with our services fall outside the scopes of the 'NHS Carbon Footprint' but are accounted for within 'NHS Carbon Footprint Plus'.   In line with the NHS commitments, our Trust will also work towards net zero in both categories.
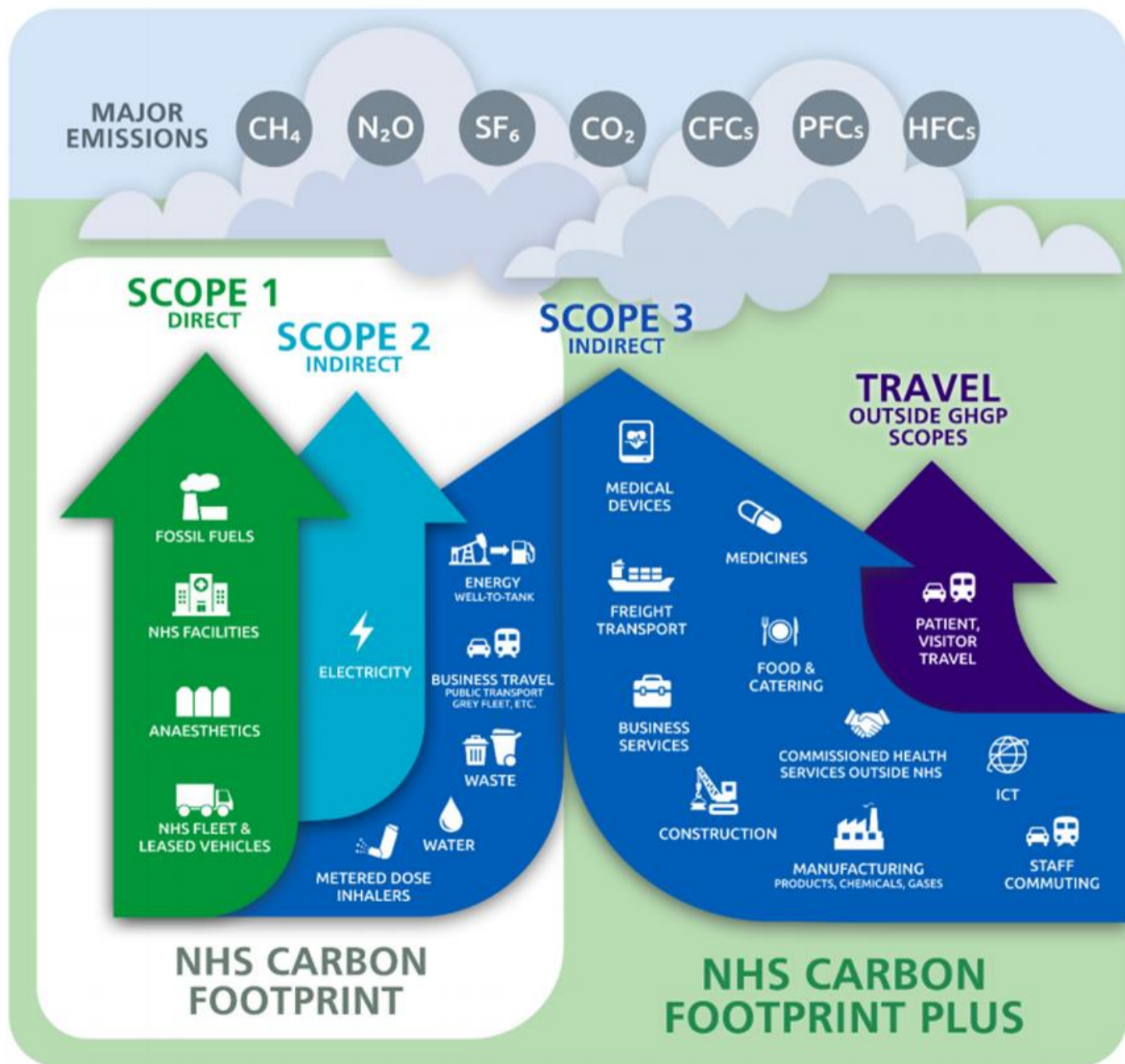

Figure 1: GHGP NHS Emission Scopes - from 'Developing an 'Net-Zero' National Health Service'
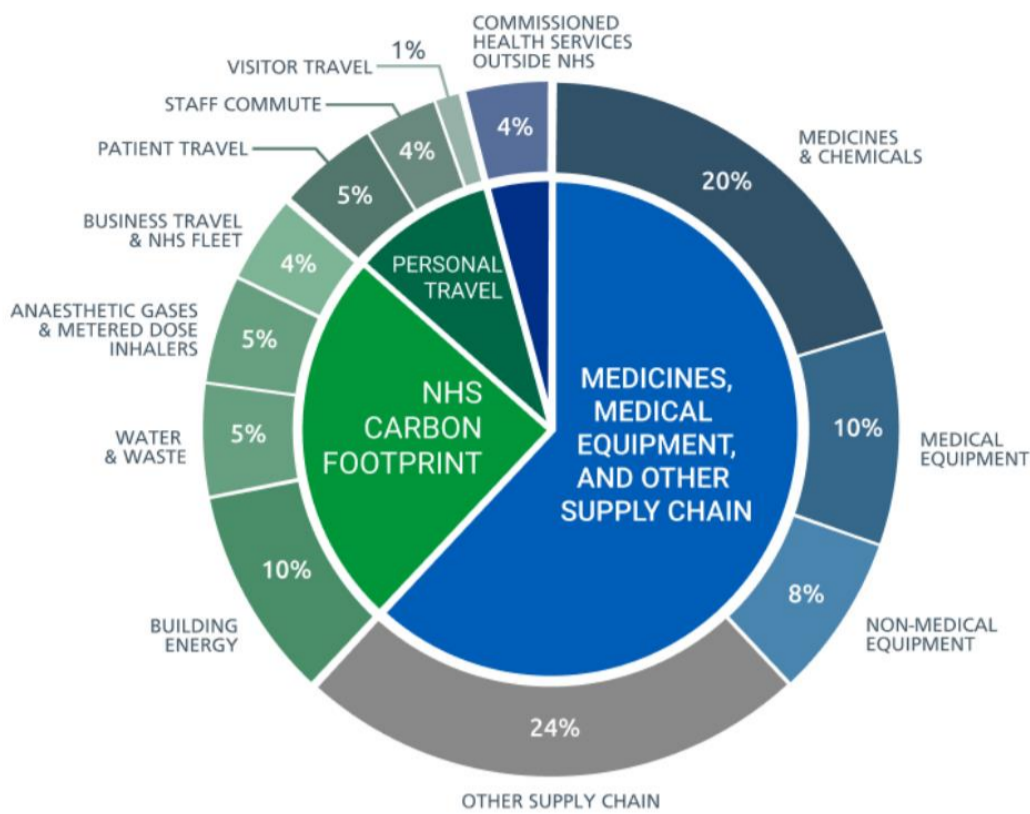
NHS Carbon Footprint Plus

Figure 2: NHS carbon emissions by % of Carbon Footprint Plus - from 'Developing an 'Net Zero' National Health Service'

Carbon associated with the Trust's consumption of gas, oil and electricity make up 25% of our Carbon Footprint Plus and 83% of our Carbon Footprint. This emphasises an essential requirement for investment into decarbonising our heating network, increasing onsite generation, switching out inefficient electrical equipment and devices for low energy alternatives, and minimising energy waste.

Anaesthetic Gases make up 3% to our Carbon Footprint Plus, while metered dose inhalers, business travel, waste, water and fleet and leased Vehicle all contribute 1% or less. These figures all look low in the context of the carbon footprint plus, however when we look at their contribution to the Trust's direct emissions, over which we have most control, we can see their significance and the necessity for urgent focus on these hotspots.

Anaesthetic gasses make up 10% of our Carbon Footprint. We use around 1,800 bottles of Desflurane in surgeries each year; this a particularly potent greenhouse gas, just one 240ml bottle is equivalent to burning 440kg of coal. Switching to Sevoflurane (a less potent gas) where appropriate may allow us to reduce the emissions from these gases by up to 95%. Using gas capture devises on medical equipment during surgery can also allow us to save the remaining emissions.

Metered dose inhalers that use Hydrofluorocarbons (HFCs) as a propellant make up 1.4% of our entire Carbon Footprint. They have a very high Global Warming potential (GWP), each 100-dose inhaler has roughly the same impact as a 180mile drive. We purchase around 9,000 MDIs per year. Simply switching to Dry Powder Inhalers where possible will allow us to reduce this impact dramatically.
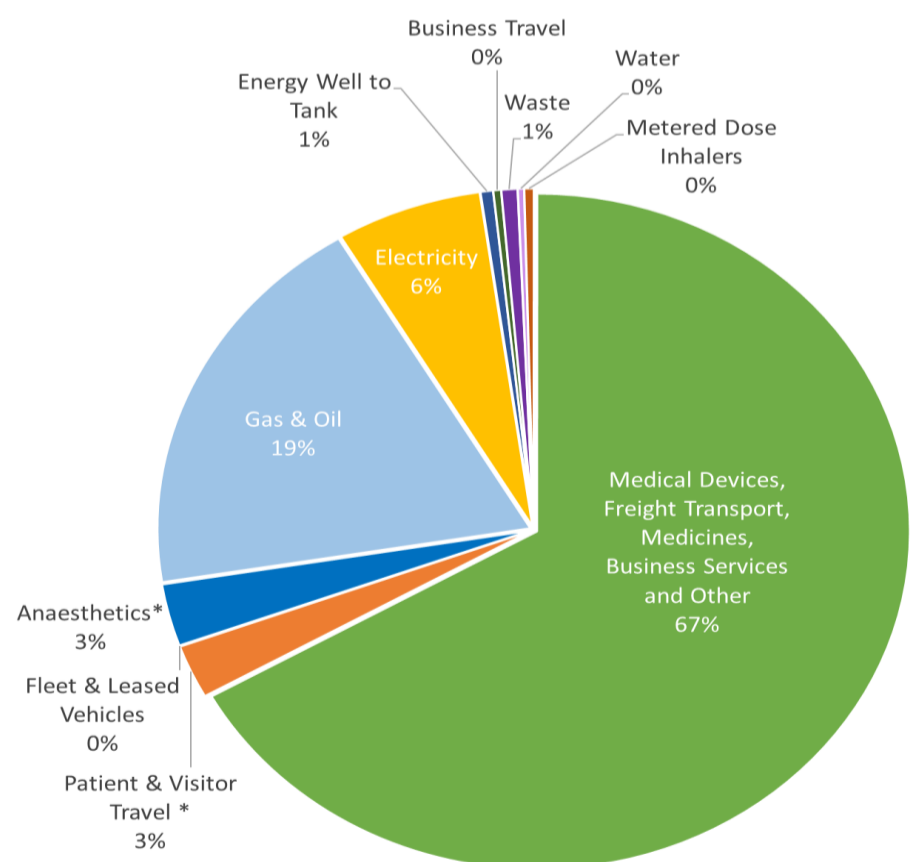
Figure 2 shows NHS emission sources by the proportion they contribute to the overall NHS Carbon Footprint Plus. This helps our Trust identify the greatest areas of opportunity to reduce NHS emissions. The chart suggests that Procurement, Medical Devices (EBME), Estates and Facilities, Pharmacy, and Travel and Transport have the most significant impact across the NHS.

Our Trust operates over numerous facilities; we provide acute and community healthcare services from Whiston and St Helens hospitals, community intermediate care from Newton Community Hospital, and urgent care from the Urgent Treatment Centre in Millennium House. Work is ongoing to include the emissions from all our estate in our Carbon Footprint and Carbon Footprint Plus. The data presented in Table 1 and Figure 3 below focuses on the emissions from our biggest sites, Whiston and St Helens Hospitals.

Table 1 shows the baseline year of 2008 and the most recent reporting year of 2020/21. 2008 has been used as the baseline year due to the greater quality in comparative carbon data following the Climate Change Act (2008).

The data shows a 16% decrease in Carbon Footprint emissions. However, when interpreting this reduction one must consider that the Trust has changed significantly since 2008, with increases in patient activity, staff, and services offered. This fall in emissions is despite our continuous growth but has to an extent been aided by measures brought in to maximise social distancing and minimise pressures caused by Covid-19.

The Trust's Carbon Footprint accounts for 31% of the total Trust Carbon Footprint Plus. Corresponding with the NHS Footprint, Scope 3 emissions contribute to a significant portion of the Trust's Carbon Footprint Plus.

Trust Carbon Footprint Plus

Figure 3: STHK Trust carbon emissions by % of Carbon Footprint Plus (Whitson and St Helens Hospital sites)

Trust Carbon Summary

			Category	Carbon Footprint (TCO2e)		% Change to Date	% of Trust Carbon Footprint Plus
				2008 Baseline	2020/2021		
Trust Carbon Footprint	Scope 1 - Direct		Fleet & Leased Vehicles *	6	15	137%	0%
			Anaesthetics*	1,749	1,504	-14%	3%
			Gas & Oil	6,846	9,583	40%	19%
	Scope 2- Indirect		Electricity	8,141	3,199	-61%	6%
	Scope 3 - Indirect		Energy Well to Tank	633	275	-57%	1%
			Business Travel *	103	171	66%	0%
			Waste	582	355	-39%	1%
			Water	170	139	-19%	0%
			Metered Dose Inhalers	245	211	-14%	0%
			Total Trust Carbon Footprint	**18,476**	**15,452**	**-16%**	**30%**
Trust Carbon Footprint Plus	Scope 3 - Indirect		Medical Devices, Freight Transport, Medicines, Business Services, Food & Catering, Construction, Commissioned Health Services, Manufacturing, ICT, Staff Commuting, Other Supply Chain #	40,910	34,215	-16%	67%
	Travel Outside GHGP Scopes		Patient & Visitor Travel *	3,410	1,296	-62%	3%
			Total Trust Carbon Footprint Plus	**62,797**	**50,963**	**-19%**	

* Later baseline extrapolated back to 2008
\# Informed approximation

Table 1: STHK Trust Carbon Footprint & Carbon Footprint Plus
(St Helens and Whiston Hospital Sites)

Vision and Objectives

VISION

On 1st October 2020, the NHS made clear its vision to become the first health system in the world to deliver a net-zero service. This means any emissions that remain following the decarbonisation of NHS services will be offset by schemes such as tree planting or carbon capture.

The NHS have committed to two new targets:

- **Achieve net zero on emissions controlled directly by the NHS** (The NHS Carbon Footprint) **by 2040**, with the ambition to reach an 80% reduction by 2028-32.
- **Achieve net zero on emissions within NHS influence** (The NHS Carbon Footprint Plus) **by 2045**, with the ambition to reach an 80% reduction by 2036-39.

These targets are far more ambitious and appropriate than the previous targets set in line with the Carbon Reduction Act, 2008. The NHS is ideally placed to lead this action on climate change, as the single largest organisation in the UK its services currently contribute 4% to the countries carbon footprint. Also, clear links between emissions and population health and wellbeing makes action fundamental to NHS core principles and the sustainability of services.

Our Trust acknowledges this position and our role as an anchor institution within the communities we serve, and so we adopt these new targets in full support of NHS net-zero commitments. **Our vision is to be a leading and sustainable Trust.** Through implementing this green plan, we aim to embed sustainability into every area of our organisation to help meet these targets and our objectives below.

OBJECTIVES

FOSSIL FUELS
Reduce demand on gas heating by 34%
Target: 2024

PATIENT & VISITOR TRAVEL
Increase green travel and reduce emissions by 33%
Target: 2024

ELECTRICITY
Reduce Electricity demand on grid by 34%
Target: 2024

BUSINESS TRAVEL & FLEET
Cut business mileage and Fleet emissions by 34%
Target: 2024

WATER
Reduce and offset Water associated emissions by 34%
Target: 2024

STAFF COMMUTE
Increase active travel and reduce staff travel associated emissions by 34%
Target: 2024

WASTE
Reduce Waste by 15% and obtain single use plastic pledges from 75% of staff
Target: 2022

ANAESTHETIC GASSES & INHALERS
Reduce Anesthetic Gas and MDI inhaler emissions by 23%
Target: 2022

Reductions on 2008 Baseline

Implementation Structure

Sustainable development and the reduction of greenhouse gases are corporate responsibilities and are an inherent part of the Trust's performance and governance mechanisms. The Director of Corporate Services provides assurance to the Trust Board that the delivery of objectives pertaining to sustainable development is appropriate and oversees the work of a multifunctional Net Zero Action Group (NZAG).

The NZAG draws together representatives from across the Trust and their partner agencies with the aim of driving continuous improvement, highlighting opportunities for development, and supporting the implementation and delivery of initiatives for carbon reduction.

The Net Zero Delivery Manager appointed to chair the NZAG co-ordinates structured meetings focusing on the key areas of sustainability, liaises with the staff representatives relevant to these keys areas and sets up organised events to engage staff, visitors, the local community and key stakeholders. The Ney Zero Delivery Manager will also review and report on progress.

A network of sustainability champions will be appointed and overseen by the representatives attending the NZAG. A special Trust focus will need to ensure that this network has the capabilities to effectively contribute to sustainable development and carbon reduction solutions.

The following figure summarises the sustainable development implementation structure established by the Trust:
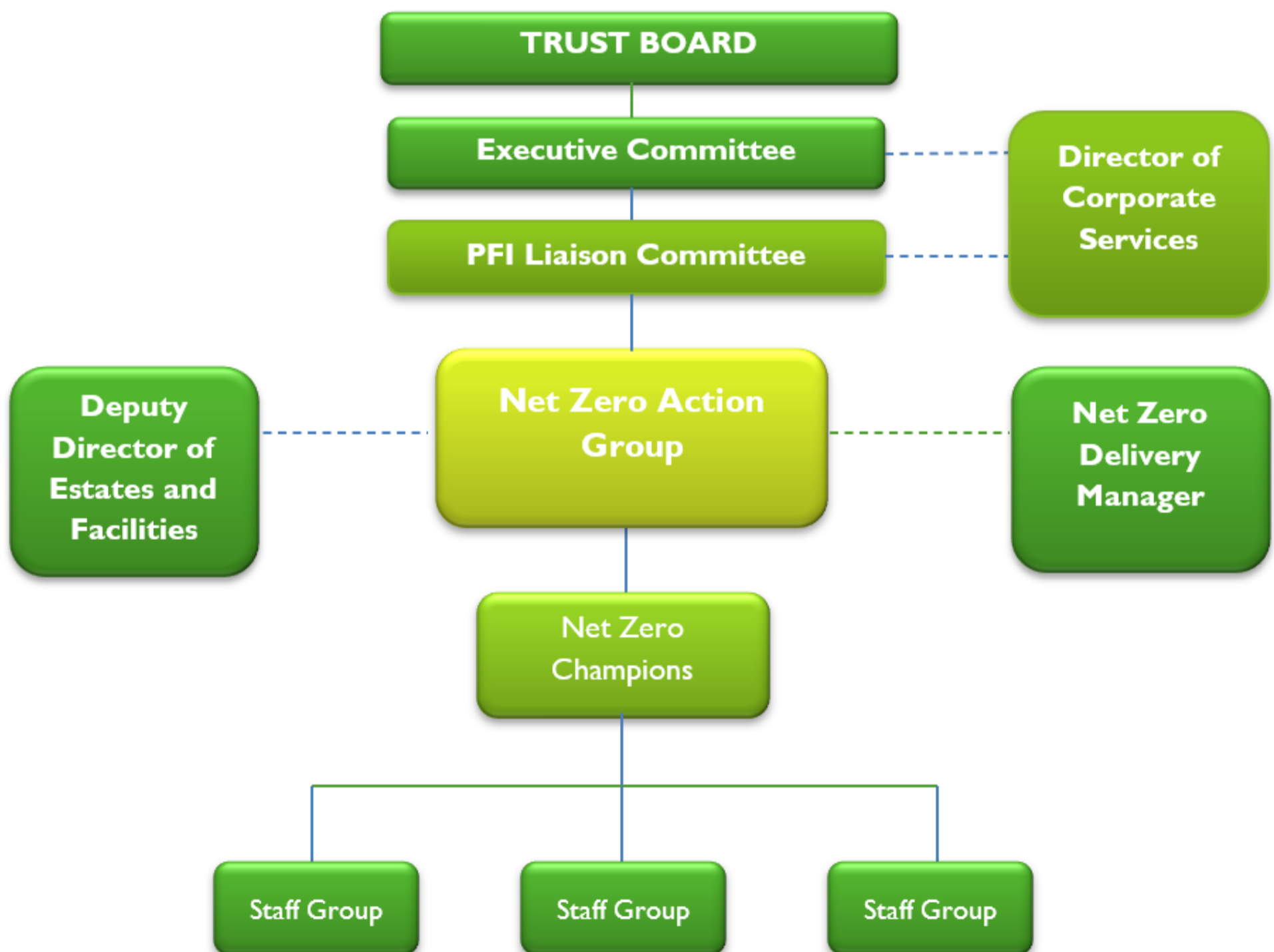
Figure 3: Trust Implementation Structure

Action Plan

PATHWAY TO NET ZERO

The NHS pathway to net zero published in *Developing a 'Net Zero' National Health Service* has been developed from a comprehensive analysis of current and planned activities across all NHS services, drawing on global best practice that can be scaled across all areas. The trajectories to net zero for the NHS Carbon Footprint and NHS Carbon Footprint Plus are displayed below in Figures 4 and 6 respectively.

Figure 4: NHS Pathway to net zero - NHS Carbon Footprint - from Developing a 'Net Zero' National Health Service
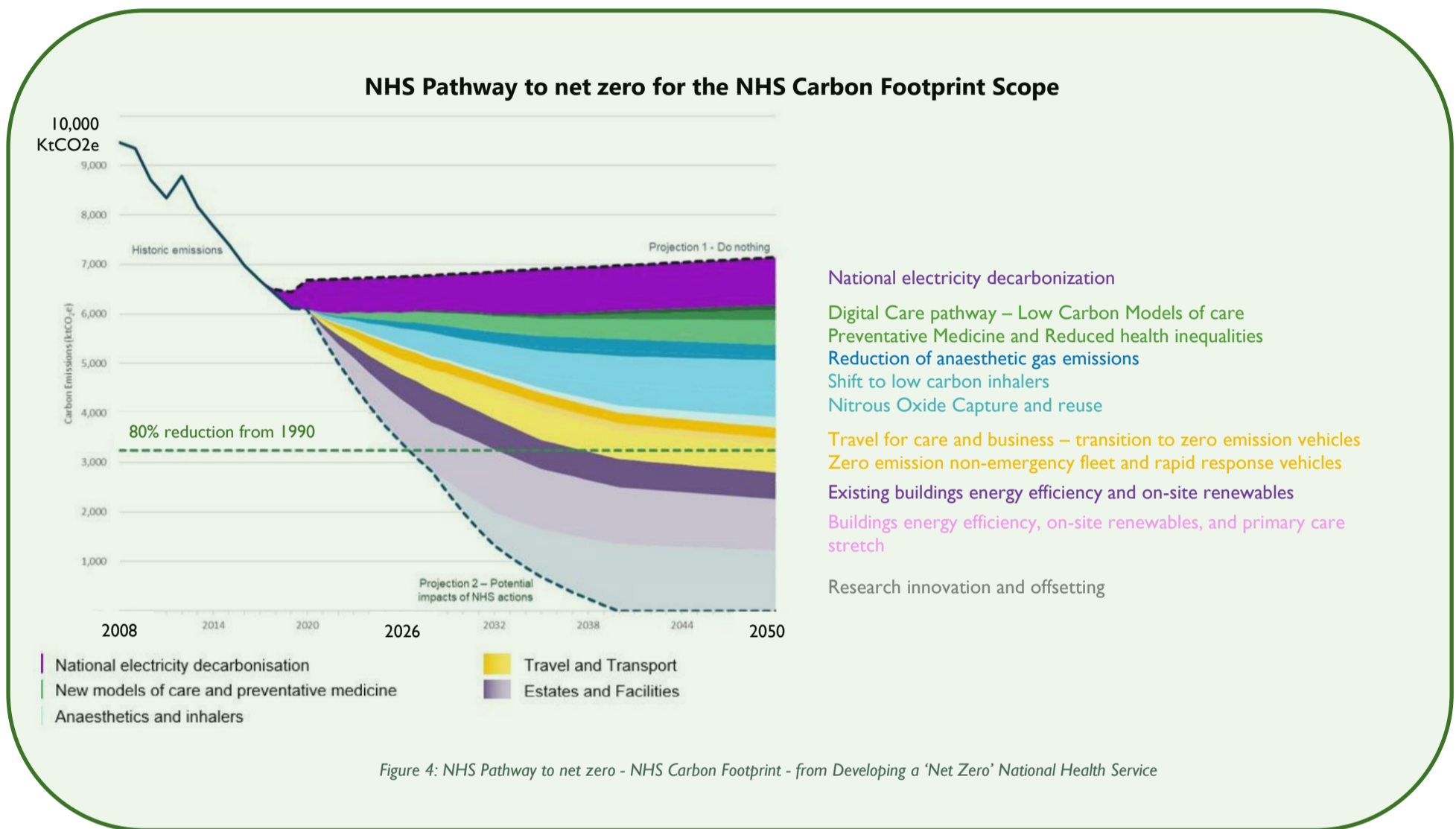
The graphs show that achieving these goals will require collective and collaborative action by all staff across all areas of the NHS and beyond. However, they also show that achieving these goals will rely on the pace at which government and other sectors drive change and make appropriate investments in sustainable development. The rate at which future innovations become available to reduce carbon emissions will also impact the predictive accuracy of these trajectories. The Net Zero report states that these trajectories will be refined every 5 years following an updated analysis.

Figures 5 and 7 below show the Trust's trajectory to net zero for our Carbon Footprint and Carbon Footprint Plus.

Figure 6: NHS Pathway to net zero - NHS Carbon Footprint Plus - from Developing a 'Net Zero' National Health Service
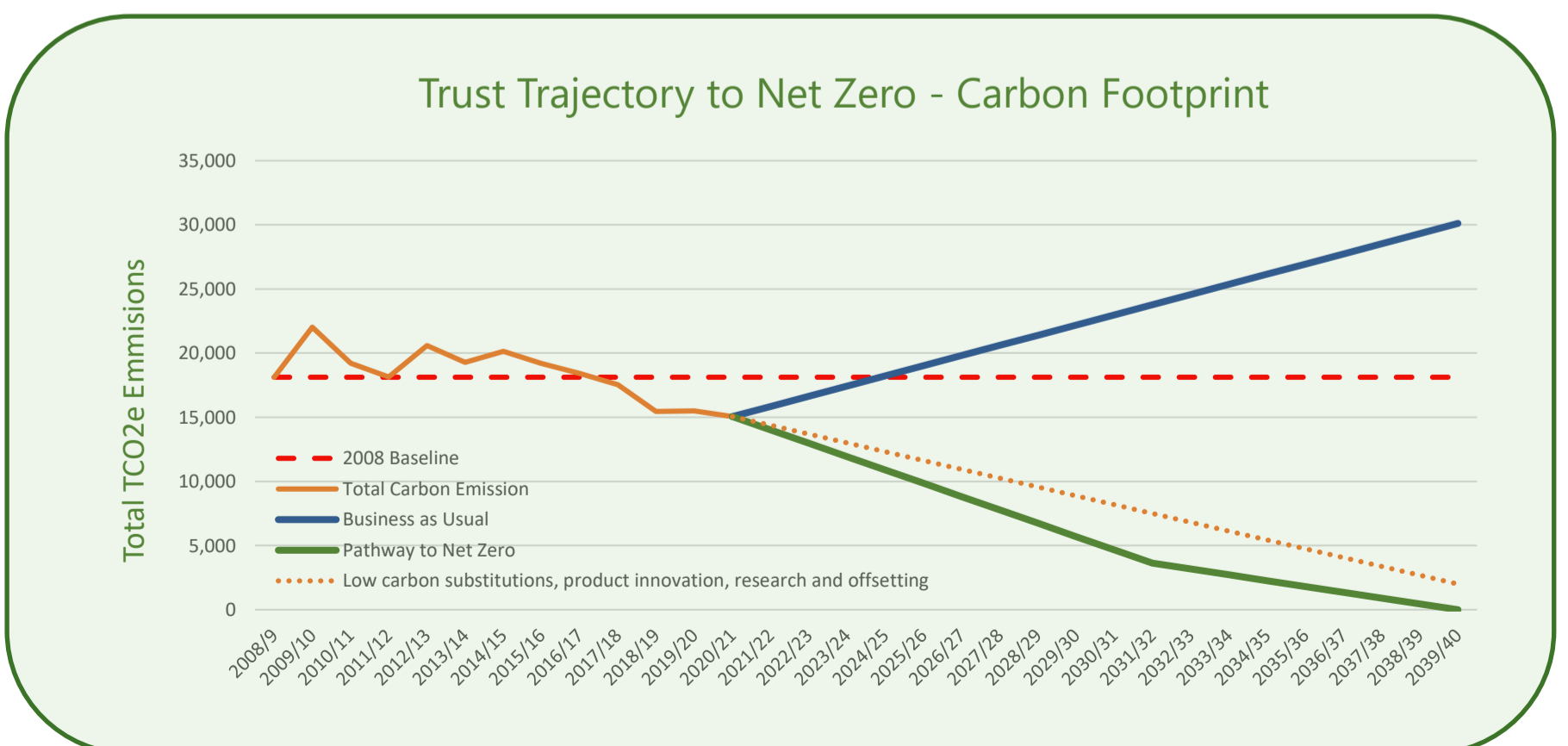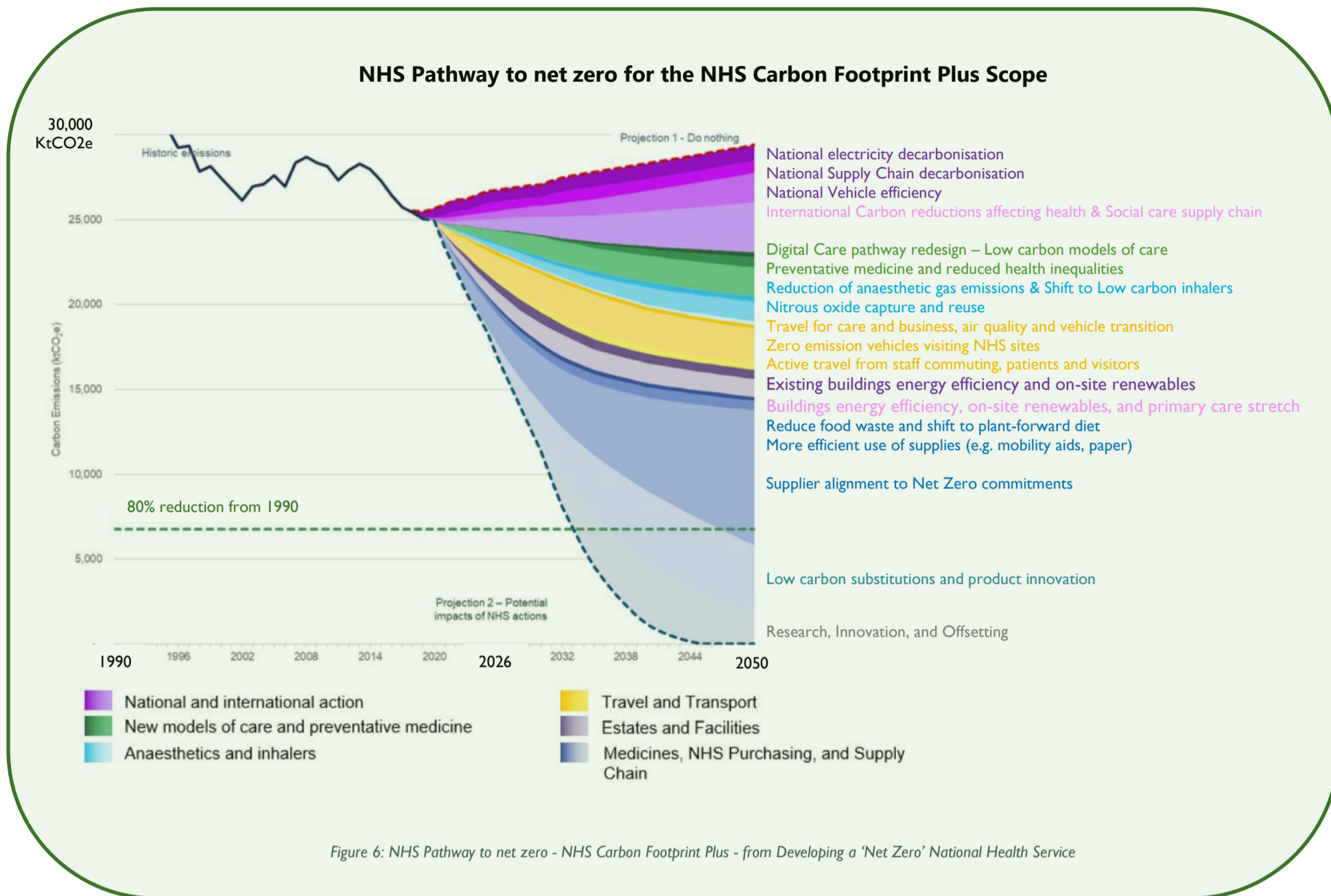
Our Trust's trajectories to net zero will equally rely to a certain extent on global action and innovation to decarbonise energy networks, transport and supply chains; however, collective action from all our staff and their collaboration with external partners and stakeholders will be the primary driving force to reduce a signification proportion of carbon emissions within our control and influence.
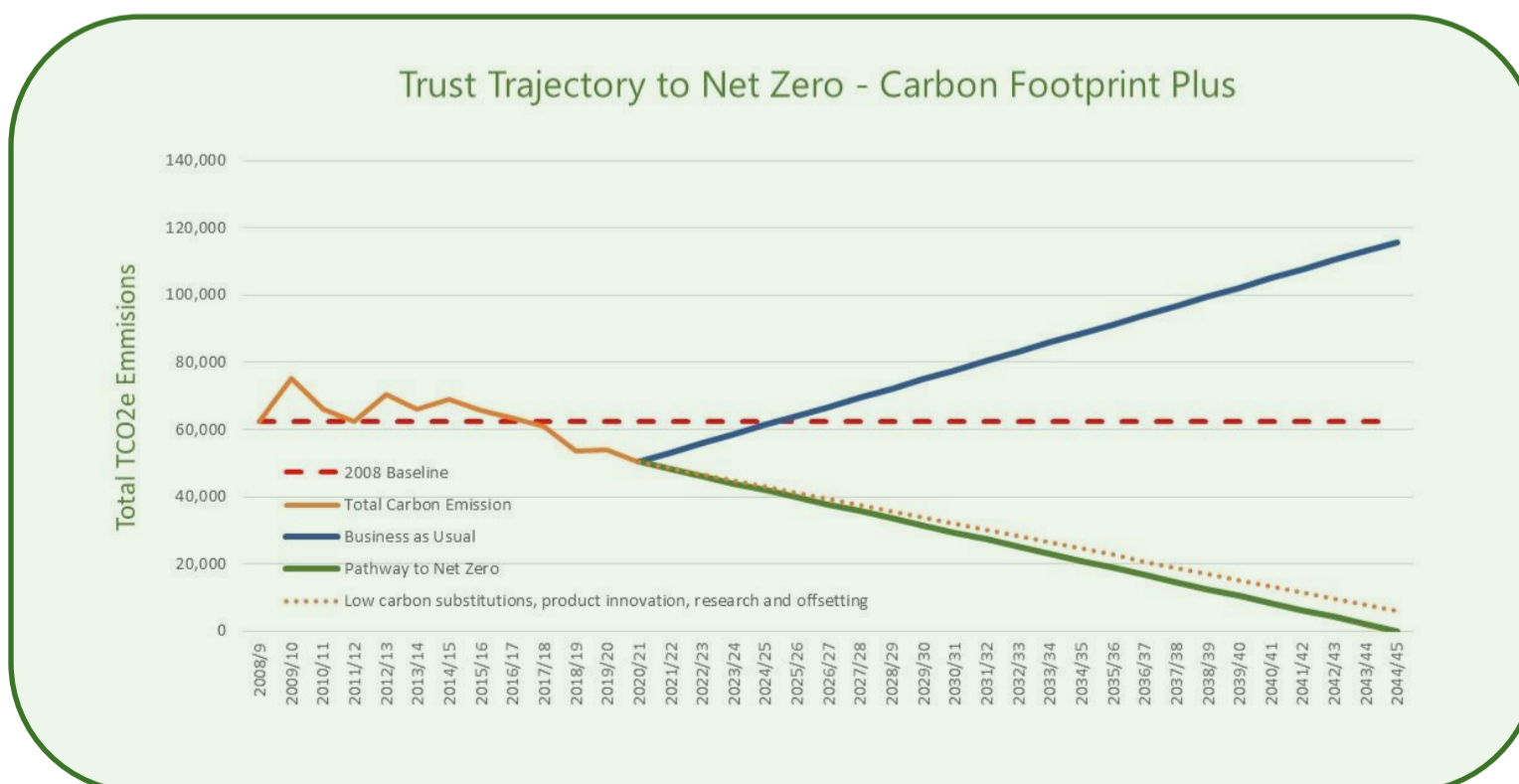
To achieve these trajectories this plan sets out actions for the main areas detailed in the NHS net zero report:

- direct interventions with estates and facilities, travel and transport, supply chain and medicines
- enabling actions, including sustainable models of care, workforce, networks and leadership, and funding and finance.

These areas are addressed in the categories that follow: Carbon Hotspots; Leadership, Engagement and Development; Commissioning and Procurement; Healthy and Resilient Communities; Sustainable Clinical and Care Models.

CARBON HOTSPOTS

The financial and environmental benefits the Trust can realise by cutting carbon emissions have never been more evident. The costs of energy and resources are rising rapidly and evidence suggesting the negative implications of climate change on the health and wellbeing of future generations is mounting. This provides a strong motive to act.

Identifying and conveying the carbon hotspots within the Trust creates a significant opportunity for individuals and departments to understand the Co2e emissions within their remit and allows them to focus reduction initiatives on the areas with the highest footprint. If every person and department get involved there becomes a real potential to maximise the result of combined efforts to reduce the Trust's impact on the environment.

The NHS's carbon hotspots include pharmaceuticals, medical devices and gasses; energy; travel and transport; and Waste and Water. The following insights and actions will assist and encourage Trust departments to reduce carbon in these areas.

Pharmaceuticals, medical devices, and gases

The manufacture, packaging, distribution, use and disposal of pharmaceuticals represent 35% of the entire public health and social care system's carbon footprint. 10% of this relates to medical devices and equipment. Most significantly, however, Metered Dose Inhalers and anaesthetic gases account for 5% of the entire CO2e footprint.

73 million inhalers are used in the UK every day, many of which use Hydrofluorocarbon gases as an aerosol propellant; 1 tonne of Hydrofluorocarbon gasses can be equivalent to 1000 tonnes of carbon dioxide in terms of their impact on the environment, thus contributing greatly to overall CO2e emissions.

Anaesthetic gases (Nitrous Oxide, Desflurane, Isoflurane and Sevoflurane) are potent gases that account for a large portion of the carbon footprint for the entire public health and social care system.

Our Trust's figures suggest that pharmaceuticals, medical devices and anaesthetic gases represent a significant portion of our carbon emissions, so there is no doubt that bold commitments are required to take action to significantly reduce emissions in this area.

Actions for Pharmaceuticals, Medical Devices and Gases

➢ Reduce the proportion of desflurane used in surgery to less than 10% of overall volatile anaesthetic gases volume in line with the proposed 2021/22 NHS Standard Contract

➢ Implement approaches to optimise use of medical gases, including reducing nitrous oxide waste and preventing the atmospheric release of medical gases

➢ Reducing the carbon impact of inhalers, in line with the commitment of a 50% reduction by 2028 and a 6% reduction in 2021/22 on a 2019/20 baseline, by:
- Supporting patient choice of less carbon intensive inhalers, for example dry powder inhalers, where clinically appropriate, resulting in a 2% reduction of emissions by March 2022
- Working with the national team to ensure schemes for green disposal of inhalers are rolled out across the region; and

➢ Create a steering group to drive sustainable development forward in this area.

➢ Rather than throwing inhalers away they can be returned to pharmacists and then back to manufacturer GlaxoSmithKline through the 'Complete the Cycle Scheme'.

➢ Use the Green Bag Scheme – Patients to be issued with a reusable green bag to safely manage the transport of their prescription drugs when coming into our hospitals and health centres.

➢ Educate patients about how and when to take their medicines to improve effectiveness and prevent discarded medicines polluting the environment and being used inappropriately by others.

➢ Review prescribing guidelines and benchmark prescribing practices to reduce inappropriate prescribing of medications.

➢ Where clinically appropriate, prioritise evidence-based therapies over pharmaceutical interventions as the first stage of management. For example:
- therapies such as cognitive behavioural therapy prior to prescribing anti-depressants
- diet and exercise in the management of hypertension

➢ Investigate manufacture, disposal and re-use or recycling of medical instruments and current single use items.

➢ Consider more innovative products that will minimise waste, meet infection control requirements and are re-usable or re-processable.

➢ Use the Procurement for carbon reduction (P4CR) guidance which includes the energy efficiency of medical devices supporting low carbon investment decisions for electrical and electronic equipment.

Measuring, Monitoring and Evaluating Pharmaceuticals, Medical Devices and Gases

- Reduce carbon emissions in areas of their operations with the highest carbon footprint
- Explore opportunities for cross agency and sector action to reduce carbon emissions
- Monitor and publicly report carbon emissions
- Share and adopt existing good practice on delivering ambitious carbon reduction across the system.

Actions for Energy

Reduce Energy Usage

➢ Develop energy awareness campaigns that target areas of energy wastage for example by encouraging people to switch off lighting and providing guidance on clinical equipment that can be safely turned off (and which can't) when not in use.

➢ Review heating timing and zoning controls, and thermostat temperature set points to identify whether there is potential to reduce heating/cooling whilst ensuring adequate temperatures for the comfort of service users and staff as well as for building maintenance.

➢ Always use lighting controls to reduce lighting in areas that do not need to be fully lit. For instance, passive infrared sensors, photoelectric/ dimming controls and zonal switching.

Increase Energy Efficiency

➢ Installation/upgrading of insulation for instance walls, roofs, pipework, window glazing, draught proofing.

➢ Use of energy saving lighting technology for example high frequency lighting, LED lighting.

➢ The efficient provision of heat, for example using high efficiency boilers or district heat networks.

➢ Building Management System optimization - Installation of a computer-based control system that allows energy-using services to be centrally managed: notably heating, ventilation and air conditioning (HVAC) and sometimes lighting.

➢ Measures to reduce the impact of electronic equipment and IT for instance by enabling energy saving features and purchasing equipment with the Energy Star logo.

➢ Installation of Variable Speed Drives (VSD) to fan and pump motors.

➢ Replacement of electric motors with higher efficiency motors where applicable.

➢ Use of tri-generation systems that can provide cooling as well as electricity generation and heating as per standard Combined Heat and Power plants.

Increase amount of Low Carbon Energy

➢ Analyse the potential for increasing lower/zero carbon forms of energy supply through renewables. For example, wind turbines, photo-voltaic, geothermal, the potential for combined heat and power plants.

➢ Indicate to energy suppliers the expectation that they increase the proportion of renewable energy they provide.

Measuring, Monitoring and Evaluating Energy

- Aim to conform to accepted national standards and requirements of ISO 14001 environmental management system.
- Take regular and Meter readings
- Use Stark logging and monitoring service
- Regular review of energy bills
- Issue monthly reports detailing energy consumptions
- Use of building analytics to monitor the energy performance of building equipment
- Distribute, collect and review departmental sustainability audits
- Take regular temperature readings across the estate
- Reduce carbon emissions in areas of their operations with the highest carbon footprint
- Explore opportunities for cross agency and sector action to reduce carbon emissions
- Monitor and publicly report carbon emissions
- Share and adopt existing good practice on delivering ambitious carbon reduction across the system.

Energy

Building energy use accounts for 10% of C02e emitted from the entire public health and social care system, 75% of this is from acute Trusts. Action in this area can reduce emissions, energy bills and energy demand. The following three principles help guide efforts to realise these multiple benefits:

i. Reduce unnecessary usage. Reducing the unnecessary use of energy is usually the most cost-effective approach. It can be achieved through training and educating staff, service users and the public on the variety of ways energy can be reduced through changes in their day to day 'energy behaviour'. There is also a wide variety of technological initiatives that can minimise wasted energy.

ii. Increase energy efficiency. Rising energy costs are increasing the feasibility of many initiatives that improve the efficiency of building systems. At the same time energy efficient technologies are advancing and in many cases are able to generate significant financial savings. What is more, there are several private organisations that will fund various energy saving projects and recoup their investment through guaranteed financial savings.

iii. Increase amount of low carbon energy. Combined Heat and Power (CHP) is one initiative where switching from a higher carbon energy source to a lower carbon energy source can generate significant financial savings. Exploring alternate energy sources and developing an understanding of where changes and initiatives can be implemented appropriately is key to the effective reduction of carbon emissions.

"ADULTS KEEP SAYING WE OWE IT TO THE YOUNG PEOPLE, TO GIVE THEM HOPE, BUT I DON'T WANT YOUR HOPE. I DON'T WANT YOU TO BE HOPEFUL. I WANT YOU TO PANIC. I WANT YOU TO FEEL THE FEAR I FEEL EVERY DAY. I WANT YOU TO ACT. I WANT YOU TO ACT AS YOU WOULD IN A CRISIS. I WANT YOU TO ACT AS IF THE HOUSE IS ON FIRE, BECAUSE IT IS."

Greta Thunberg, 17-year-old Swedish Activist

Travel and Transport

14% of the CO2e emissions from the public health and social care system are accounted for by Travel and Transport. These emissions are made up from staff travelling to work, staff travelling to see service users, goods being transported to and between sites and service users travelling to care sites.

It is generally recognised that the approach to reducing carbon in this area has to be tailored to the models of care used and the type of care setting. However, multiple benefits can typically be achieved through a variety of ways that improve access to healthcare sites. The following three examples have been provided to guide and encourage lower carbon travel and transport:

i. **Increasing active travel** (e.g. cycling and walking) and the use of public transport by staff, service users and the public: Active travel not only reduces carbon emissions, it cuts air and noise pollution and is believed to be an effective treatment that protects against heart disease, strokes, type-2 diabetes, certain forms of cancer and mental ill-health. Actions that promote and encourage active travel can help staff, visitors and many patients reap these benefits.

ii. **Reduce unnecessary travel**: Understanding the available paths of communication and exploring the different avenues through which care can be delivered allows for a more resilient system of care that minimises travel. For instance, particular focus on how constantly developing technology changes the way people choose to interact can generate initiatives that have the power to transform the care experience and reduce how much travel is required to deliver services.

iii. **Minimise pollution from necessary travel**: Where travel is necessary for the delivery of services, choosing low carbon alternatives can reduce the negative impact on the environment and minimise any harm to the health of people in the local community.

Actions for Travel and Transport

Increase active Travel

➢ Identifying a cycle-to-work lead in every trust, as outlined in the People Plan

➢ continue salary sacrifice cycle-to-work scheme in place for staff

➢ ensure all sites have shower and secure storage facilities available and encourage staff and visitors to cycle-to-work

➢ Improve public transport access to healthcare sites and continue shuttle buses linking care sites, sometimes also servicing other local destinations.

➢ Work in partnership with local authority to improve local walking and cycling access.

➢ Support healthcare professionals to prescribe increased levels of physical activity such as walking and cycling to service users.

➢ Senior staff demonstrate leadership by themselves travelling actively, and by declining incentives to drive (pride-of-place parking, for example).

➢ Develop incentives for active travel such as removal of car parking subsidies; flat mileage rate expenses regardless of engine size and mode of transport; subsidized bus passes; interest-free loans for cycles, equipment, and season ticket purchases.

Reduce Unnecessary Travel

➢ Assess environmental impacts in business cases for proposed new models of care.

➢ Utilise e-health solutions where this can contribute to improved experience and less travel for patients.

➢ Review recurring business mileage expenditure to identify meetings that could be conducted by teleconference.

➢ Train staff on how to use video and teleconferencing technology and agree to conduct more meetings by teleconference.

Minimise Pollution from unnecessary travel

➢ Ensure that systems solely purchase and lease cars that are ultra-low emissions vehicles (ULEVs) or zero emission vehicles (ZEVs), and work towards purchasing vans (under 3.5 tonne) that are ULEVs or ZEVs, in line with the LTP and Net Zero Strategy commitments;

➢ Ensure that only ULEVs or ZEVs are available to staff through car salary sacrifice schemes

➢ Factor the environmental impact of suppliers' transport into the decision-making process for procuring goods.

➢ Reduce carbon emissions by using electric vehicles for onsite logistics.

➢ Ensuring drivers within the fleet are educated on green driving techniques through a variety of schemes.

Measuring, monitoring, and evaluating Travel and Transport

- Carry out departmental sustainability audits
- Monitor the number of cars in car parks
- Reduce carbon emissions in areas of their operations with the highest carbon footprint
- Explore opportunities for cross agency and sector action to reduce carbon emissions
- Monitor and publicly report carbon emissions
- Share and adopt existing good practice on delivering ambitious carbon reduction across the system.

Actions for Water and Waste

Reduce Water

➢ Look at the potential for ultra-low flow showerheads

➢ Evaluate the impact of reducing the capacity of toilet cisterns

➢ Use lifecycle costing to evaluate capital investments for water conservation. Many conservation retrofits that may seem prohibitively expensive are often very beneficial over the life of the equipment.

➢ Consider sub-metering across all our sites to determine where the water is being used. local conservation initiative can then also be monitored to assess progress.

➢ Assess whether there is a use for grey water

➢ Re-evaluate potential for waterless urinals

➢ Continue to monitor water consumption, using trends to identify and unusual activity.

➢ Benchmark water consumption against other like for like sites via ERIC and take tarp in regional sustainability groups to share best practice.

➢ Conduct site Audits. Capture information on all aspects of water use.

Reduce Waste

➢ Switch from single use to reusables (e.g. cups, plates, water bottles and food packaging).

➢ Analyse all purchasing data to identify top 100 plastic items and apply a waste hierarchy approach to the top 100 list to identify and roll out projects.

➢ Work with NHS Supply Chain to look at alternative products, e.g. reusable tourniquets. Re-evaluate alternative options for many single-use items, disposable or expired equipment and unused pharmaceuticals

➢ Scale up Warpit reuse portal, connect with other Hospitals and Organisations.

➢ Maximise point of disposal segregation of glass, plastic, and card.

➢ New procurement contracts to consider packaging materials

➢ Purchasing Audit to determine where resources can be reduced or safely reused

➢ Promote waste awareness across the organisation through newsletters and sustainable development action days. every member of staff should be encouraged to act on waste reduction

➢ Develop and promote facilities that allow the public to return medical equipment no longer needed.

➢ Staff, patients, and visitors to sign a pledge to reduce single use plastics

Measuring, Monitoring and Evaluating Waste and Water

- Use United Utilities Half Hourly data logging and monitoring water service
- Obtain tonnage data from Waste Service Providers
- Regular review of water bills
- Issue monthly reports detailing Water usage and Waste tonnages
- Distribute, collect, and review departmental sustainability audits
- Monitor and publicly report carbon emissions
- Share and adopt existing good practice on delivering ambitious carbon reduction across the system.

Water and Waste

Water and Waste account for 5% of emissions from the NHS Carbon Footprint Plus, most of this is from acute Trusts.

Water - studies show that the largest proportion of water used in hospitals is for domestic uses, such as sinks, toilets and showers. Therefore, water saving initiatives targeting these areas can have a significant impact on our overall consumption. Sterilisation, landscaping, kitchen use and heating systems also provide significant opportunity for conserving water.

It is useful to look at water conservation in terms of two distinct categories, the technical part, and the human part. The technical part includes collecting data, understanding how and where water is used and installing water efficient measures and procedures. The human part looks at changing people's behaviours around water usage. Both parts needs to addressed to reach our conservation goals.

Waste - The NHS spends over 4.6billion per year one medical supplies and consumables, they are one of the largest employers with over 1 million patient contacts every 36 hours. With this buying power and level of human engagement we can influence supply chains and societal attitudes towards resources and waste. In 2018 the NHS bought 163 million plastic cups, 15 million plastic straws,16 million pieces of plastic cutlery, and 2 million plastic stirrers. If the NHS cuts catering plastics in half, we could stop 100 million items ending up in land fill or polluting oceans.

Most Preferable
AVOID
REDUCE
REUSE
RECYCLE
RECOVER
TREAT
DISPOSE
Least Preferable

LEADERSHIP, ENGAGEMENT AND DEVELOPMENT

At the heart of every Trust's culture is the knowledge, beliefs and values of staff, service users and the public. So, embedding sustainability into the organisations every-day practices requires a long-term culture change driven through effective leadership, engagement, and development. In turn the Trust aims to develop a culture that supports people's understanding of sustainability and the reasons why taking action is so important for ensuring our services are fit for the future. In line with the Greener NHS's guidance the Trust sets out to ensure:

- Communities and staff are enthusiastic and committed because leaders at all levels have engaged widely and developed a narrative for sustainable development that aligns visions, priorities, and delivery.
- Education, training and development equip leaders and the workforce with the necessary knowledge and skills to function in changing times and climates.
- Exemplary employment practices enhance the health and wellbeing of the workforce

Leadership for sustainable healthcare

Strong, visible leadership at every level is needed to fuel the transition to a more socially, financially, and environmentally sustainable Trust. Effective leadership is already happening at all levels right across the organisation; incorporating the knowledge of sustainability, developing skills and increasing engagement beyond the confines of the Trust and into the local community are the areas on which it is necessary to focus. Jan Sobieraj, the Managing Director of the NHS Leadership academy suggests, safe and sustainable services that seamlessly integrate across organisations can be achieved by strong, compassionate leaders who create environments where their teams feel free to innovate. She explains how it is environments like these where ideas flourish, problems are solved and sustainability is realised through innovation and diversity.

Engagement

A sustainable Trust requires sustainability in the health and wellbeing of the community. For this reason, collaboration is key to the success of this management plan. In order to develop effective cooperation between service users, staff, trade unions and the public, engagement needs to take place concerning: (1) the importance of sustainable and healthy lifestyles, (2) the importance of the social, financial and environmental sustainability in the healthcare system, (3) the new ways of working that have been conveyed throughout this plan, and (4) the necessary changes to the delivery of healthcare services locally.

Actions for Leadership

- Chief Executives, in discussion with their directors, could outline their stance on sustainability.
- Report progress on sustainability in the organisation's annual report.
- Share success stories and develop a clear organisational vision statement for sustainability with staff.
- Nominate a board level executive and/or non-executive lead for sustainability
- Run sustainable Board leadership programmes to promote leadership competencies which encourage consideration of environmental and social impacts and projections alongside financial and health outcomes.
- Develop a communications strategy and plan to help to raise awareness about sustainability at every level of the organisation.
- Demonstrate a commitment to sustainability nationally by participating in national sustainability campaigns and encourages staff to be involved.
- Make sustainable healthcare a part of the core vision and values of the organisation and reflected in its own brand identity.
- Encourage staff to be part of the organisations sustainability journey by developing initiatives such as office efficiency, healthy wards, green theatres and natural spaces to which all can contribute.
- Form a task force consisting of representatives and champions of various departments and professions within the organization to help guide and implement efforts.
- Hold annual sustainability awards to recognize the most environmentally and socially sustainable team/department.
- Apply for national sustainability awards.
- Bodies responsible for setting standards in training and practice (e.g. HEE, CIEH, GNC, RCN, GMC and other professional standards authorities) ensure sustainability is appropriately addressed in standards.
- Royal Colleges and Trade Unions continue to lead the development of training resources and assessment tools.
- Leadership development programmes incorporate a sustainability component both nationally and sub-nationally.
- Include sustainable healthcare as part of mandatory staff training.
- Ensure sustainability is part of staff annual appraisals and sustainability objectives link into organisational policy.
- Ensure the actual delivery of training is more environmentally and socially friendly. For example, by using training approaches that minimise travel such as e-learning or live streaming of conferences or learning events.
- Train staff to interact with service users and colleagues using multiple methods and technologies. In particular how to use the equipment and the style of communication required for each technology.
- Work with Higher Education Institutions to ensure sustainable development (including carbon reduction) is part of all continuous professional development, undergraduate and postgraduate curricula for practitioners and clinicians.
- Consider the use of technology to reduce staff travel for processes such as recruitment, training, and appraisal.

Measuring, Monitoring and Evaluating Leadership

- Keep a training register that shows the number of people that have been trained.
- Regularly review the actions raised and completed.
- Equip leaders and the workforce with the necessary knowledge and skills to function in changing times and climates through education, training and development.

Engaging communities and service users requires an ongoing, open and honest dialogue in which people are asked how they want to manage their own health and wellbeing m. Questions should also be asked about their community resources; where they are strong and where they can be sustainably improved to provide them with the support they want and expect. Understanding public attitudes and expectations around sustainability is necessary to guide and deliver tailored approaches and initiatives that encourage their active engagement.

Engaging Staff through various innovative and imaginative avenues can support a cultural and behavioural shift in which staff keep sustainability in mind when making day to day decisions. This can have a significant impact on sustainable development, for instance, clinicians and practitioners influence decisions that are made throughout the system ranging from setting population health policy, what advice to give, prescriptions to write, the best models of care, or deciding when it is preferable not to intervene pharmacologically or otherwise. At the same time, front line staffs have highly visible and trusted roles giving them the power to advocate sustainability through the regular contact they have with service users.

Actions for Engagement

Community and Service User Engagement

- Distribute a periodic sustainability newsletter to update staff on the current issues

- Assess the benefits of implementing information screens that display data that can encourage sustainable behaviour and healthy lifestyles.

- Sustainability Days

- Volunteer engagement

- Include sustainability questions in engagement processes regarding the redesign of local care services.

- Understand and harness the assets that exist in local communities to enable a more sustainable delivery of healthcare in the future

- Share good news stories about action on sustainability the local healthcare system is taking through local media.

- When designing user and community surveys, include questions on reducing environmental impact, improving social value and reducing inequalities.

- Organisations and communities can make good use of open days and national days to highlight, advocate and raise awareness about these issues and engage their users and communities to help find solutions that can help enhance the environment and health

- Include sustainability in all types of engagement; information provision and exchange; consultations about service provision; partnership working with communities to improve health and wellbeing; community ownership of services; monitoring of service user experiences.

- Seek opportunities to bring health / sustainability community led projects into health & social care settings.

- Clinicians and practitioners can interact with patients, users and the public about what this means for them and how everyone can play their part through healthier lifestyles, reducing waste and taking care of services too.

- Clinicians and practitioners can collaborate within their areas of work to identify practical low carbon policies that: improve outcomes, address inequalities and reduce environmental impacts at a patient/client level and initiate, encourage and lead projects at an organisational or system level.

- Royal Colleges and Professional groups can develop awareness, provide evidence and innovative ways of seeking solutions to improved care for the future and how to support their members to do so.

Staff Engagement

- Develop a communications strategy and plan to help to raise awareness about sustainability at every level of the organisation.

- Demonstrate a commitment to sustainability nationally by participating in national sustainability campaigns and encouraging staff to be involved.

- Make sustainable healthcare a part of the core vision and values of the organisation and reflected in its own brand identity.

- Encourage staff to be part of the organisations sustainability journey by developing initiatives such as office efficiency, healthy wards, green theatres and natural spaces to which all can contribute.

- Form a task force consisting of representatives and champions of various departments and professions within the organization to help guide and implement efforts.

- Hold annual sustainability awards to recognize the most environmentally and socially sustainable team/department.

- Apply for national sustainability awards.

- Clinicians and practitioners can seek their board's views on how best to minimise waste, procure more sustainably and develop pathways of care that will encourage a more sustainable system.

Measuring, Monitoring and Evaluating Engagement

- Monitor, record and review the number of hits on the online newsletter
- Ensure communities and staff are enthusiastic and committed because leaders at all levels have engaged widely and developed a narrative for sustainable development that aligns visions, priorities, and delivery

Developing a workforce fit for the future

Integrating the principles of sustainable development into workforce planning, recruitment and the commissioning of training and education is a necessary step to ensure today's staff and the next generation of healthcare professionals have the knowledge, skills and resources to deliver effective, environmental and economic services.

In 20 years, the healthcare system may require a very different set of skills, however long-term workforce planners should model future requirements with an understanding and consideration of the risks posed by climate change, potential resource constraints and other environmental factors.

'Best employment practices' such as apprenticeships and volunteer schemes can also be utilised to bring benefits to people, families and local organisations in the community. Developing and implementing all of these measures now will help create a shift to a more sustainable system.

COMMISSIONING & PROCUREMENT

Over £88 billion of public money is spent on commissioning healthcare services in England. In turn, delivering these services requires the procurement of goods, services and infrastructure costing a further £40 billion each year. The NHS advocates the need to take the opportunity this presents to influence the suppliers of goods and services to implement more environmentally, socially and financially responsible practices.

The Trust aims to ensure that a responsible, whole lifecycle approach is taken to procuring products; that commissioning organisations are key partners in enhancing the environmental, social and economic wellbeing of local areas; that commissioning of programmes and services realise wider environmental and social benefits; and that the assessment of business cases, option appraisals and models of care redesign include social and environmental impacts alongside financial impacts.

Commissioning of services

Sustainable commissioning that utilises local assets, improves the local environment and empowers local people and communities can be realised by embedding the principles of sustainability into each stage of the commissioning process. The various ways the Trust plans to achieve are set out adjacently:

Actions for the Development of the Workforce

- Implement sustainability into HR campaigns and initiatives
- Introduce sustainability questions on job application forms
- Implement best employment practices that benefit families and partner organisations locally.
- Introduce or expand on Apprentice/volunteer schemes
- Integrate the principles of sustainable development into recruitment, induction, staff training, appraisals, and reward schemes
- Workforce planners to account for the risks posed by changing climates, resource constraints and other environmental factors
- Prepare healthcare staff to deal with climate change and the potential impacts on service delivery. It is important to inform, train and build capacity in these areas. Examples of action could include providing information about:
  - Anticipated changes to the climate in the local area and expected increases in burden on the local healthcare system.
  - New and emerging patterns of infectious diseases.
  - Staff training in identifying heat-related health problems and appropriate treatment and cooling techniques.
  - Early-warning mechanisms, sources and responses, and how healthcare workers can contribute.
  - Fluid intake, adequate nutrition, and proper application of personal protective equipment for healthcare workers.

Measuring, Monitoring and Evaluating Development

- Monitor changes to workforce development initiatives and capture the results

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Actions for Commissioning of Services

- Recognition and adherence to current policy; For instance, within the NHS Standard Contract SC15 requires all providers to, 'take all reasonable steps to minimise their adverse impact on the environment' and to, 'demonstrate their progress on climate change adaption, mitigation and sustainable development…'
- Creation of service specifications and invitation to tender documents that include various criteria to establish and assess; the providers' impact on carbon emissions and air quality, their use of resources and volumes of waste, their positive impacts through the supply chain, their adaption and resilience to environmental change, and their ability to harness pro-environmental and social behaviour to benefit health.
- The Incorporation of community assets, voluntary agencies or third sector providers into the existing commissioning and delivery of healthcare services, in line with the Turning Point Connected Care Model.
- Use of NHS buying Power through consortiums (SBS, Health trust Europe). The Public Services (Social Value) Act 2012 requires public authorities to consider economic, social and environmental wellbeing when negotiating public service contracts.
- Commission more services from local suppliers
- Commissioners of health and social care services work in partnership with other parts of local authorities, health and wellbeing boards and care providers to explore opportunities for aligned action to improve sustainability
- Encourage approaches to care delivery that considers not only the needs of local people and communities but also their asset – an asset-based approach.
- Consider the social and environmental elements of the local health and wellbeing strategy prior to making commissioning decisions.
- Engage with local communities up front in order to determine commissioning priorities and ensure the procurement options are the right ones.

Measuring, Monitoring and Evaluating Commissioning of Services

- Assess the environmental indicators at the monitoring and evaluating stage to ensure the Provider's service aligns with expectations.
- Recognise that the commissioner's high expectations of sustainability performance can be a principle driver for improvement.

Actions for Procurement of Goods

Specific Actions

➢ Development of a surplus equipment list for the reuse of any assets.

➢ To set out their own sustainability principles and objectives to help inform a) their own corporate responsibilities for sustainable development and b) the development of the sustainable development approach within their sourcing policy.

➢ To clearly identify how and at which stages their sustainability priorities and objectives feature in the sourcing process.

➢ To specify a Departmental lead for sustainability.

Reduce Demand

➢ Revisit the use of a process methodology (for example Lean systems, Six Sigma, Total Quality Management) to identify and eliminate unnecessary use of resources

➢ Ensuring effective stock rotation and ordering processes in place to prevent wastage .

➢ Ensuring perishable goods are stored correctly to avoid throwing out.

➢ Improving office use of resources through setting printers to automatically print double sided and black and white, and using electronic forms rather than paper alternatives where possible.

➢ Develop closer relationships with suppliers and the supply chain

Increase Efficiency

➢ Applying a weighting or scoring methodology for evaluating bids, considering their environmental impact.

➢ Consider the energy usage of product when purchasing e.g. medical devices.

➢ Include energy efficiency and recyclability as part of the award criteria.

➢ Encouraging recycling through clearly marked recycling bins, ensuring recycle bins are easily accessible and with clear advice on what can be placed in them.

Substitute and Innovate

➢ Working with local farmers, community-based organisations and food suppliers to increase the availability of locally sourced, sustainably grown food.

➢ Rethinking the need and asking for more sustainable and innovative solutions.

➢ Identifying products critical to delivery of care, model the risk of future shortages and investigate more resilient alternatives.

Supply Chain management

➢ Outlining the approach to sustainable development in the organisation's procurement policy.

➢ Utilising 'SID4Gov' to capture information on key aspects of carbon and resource management from suppliers.

➢ Encouraging suppliers of pharmaceuticals and medical devices to use 'GHG Protocol Product Life Cycle Accounting and Reporting Standard' methodology (6) developed with the pharmaceutical sector to provide information on the carbon footprints of products.

Measuring, Monitoring and Evaluating Procurement of Goods

• Record and review cost savings
• Record and review the amount travel has been reduced as a result of switching to local suppliers

Procurement of goods

Goods, services and materials used to deliver healthcare in the UK are procured from all over the world and account for 66% of the NHS, public health and social care system's carbon footprint; this suggests that reducing and measuring the carbon footprint of procured goods would demonstrate a more sustainable process with a widespread impact.

To make significant progress the Trust must work closely with the Cheshire and Mersey procurement network and the supply chain. This will help develop partnerships that have the power to reduce the impact of procured goods on society, the environment and the economy at each stage of the products life (i.e. extraction, processing, manufacture, distribution, use and disposal or recovery). It is essential that procurement professionals are able to identify the products that have the most severe impact and the stages at which efforts can be utilised most effectively. A carbon footprint analysis tool can aid this prioritisation process. However, This four-step framework is to guide effective action:

I.   Reduce Demand – Looking at whether goods and products are necessary before they are procured is a powerful step which could lead to a reduction in the demand for products as well as the more efficient use of existing products.

II. Increase efficiency – buying products, equipment and services that consume less and have a lower environmental impact throughout its lifecycle.

III. Substitute and innovate – Looking at whether alternative products, materials or approaches can be used that have less impact on the environment.

IV. Supply Chain management – influencing suppliers and the supply chain to improve their sustainability performance by setting clear expectations through procurement processes and working with them closely to develop innovative solutions that deliver sustainable benefits to all parties.

To operate in a socially responsible way, deliver savings and improve health and wellbeing the Trust plans to develop procurement processes through the adjacent social, environmental, and economic considerations.

HEALTHY & RESILIENT COMMUNITIES

Healthy, and resilient communities are necessary for an effective and sustainable healthcare system; NHS Trusts can play an important role in their local communities as employers as well as core public service providers. They can support local people, agencies and groups to build a sense of

community identity which, in turn, helps develop places where people want to live, work, and invest. It is these factors that create the types of environment where health and wellbeing is prevalent.

However, all areas have different social, economic, and demographic circumstances; so, all Trusts must provide support that is tailored to their local environment. A tailored approach provides an opportunity to work with the local community and generate health, sustainability and resilience in a way that is warmly received. For this reason, the Trust plans to (1) develop local frameworks; and (2) build local resilience to climate change and adverse events.

Developing Local Frameworks

For the Trust to effectively improve the health and wellbeing of local communities it must work together with other local services within a high-level framework. Health and Wellbeing boards are best placed to lead this approach and develop 'a strong and inspiring local vision for sustainability and resilience'.

Joint Strategic Needs Assessments (JSNAs) can also be a powerful component to the local framework, as they reflect the needs and assets of local communities. The JSNA can also be used to gain an understanding of the local risks in relation climate change and the ways organisations can work together to offer suitable and effective support.

Working together and tailoring support is key to this approach. Sustainability managers, public health directors and other leaders should interact with key stakeholders to determine and prioritise local expectations and ensure support is targeted towards what people want to make the community a better place to work, live and invest.

Actions for Developing Local Frameworks

➢ Local authority schemes such as improved insulation in homes can reduce carbon emissions, reduce fuel poverty, and reduce admissions from respiratory conditions.

➢ Public and environmental health programmes around seasonal diets, increasing active travel, or improving air quality can improve health, reduce use of services, and reduce carbon emissions.

➢ Health and Wellbeing Boards ensure that environmental and social Sustainability are a core component of their Health and Wellbeing strategies and publish an annual progress report.

➢ Ensure that local communities are involved in the assessment of need in relation to sustainability and the design of service commissioning and resilience for health and wellbeing (JSNA).

➢ Integrate sustainability into the Joint Strategic Needs Assessment (JSNA).

➢ Evaluate current community assets and strengths to inform plans and support communities to develop a sense of place and identity that helps reinforce health and wellbeing.

➢ Local economic strategies could incorporate social and environmental sustainability.

➢ Health and wellbeing boards consider the needs, risks, strengths, and assets of communities served and ensure that services are tailored to support and manage health and wellbeing, particularly for those that are most in need or most vulnerable.

➢ Develop and intensify cross agency discussions to build a locality level view of the assets, risks, opportunities and needs of communities so these can form part of local needs assessments and health and wellbeing strategies. Act across agencies to tackle the wider determinants of health and wellbeing and reduce inequalities.

➢ Better understand the current and future impacts of adverse weather events and climate change over the years to come to consider the best opportunities to improve readiness, resilience and minimise adverse impacts on people and services. Support the alignment of key elements of partners Adaptation Plans.

➢ Identify opportunities to understand and augment the social value and assets that are already in place. This includes maximising the benefits of a co-ordinated approach to the commissioning of goods and services in line with the requirements of the Public Sector (Social Value) Act 2012

➢ Identify opportunities where collaborative local sustainable development infrastructure projects could deliver multiple benefits for instance in relation to housing, shared infrastructure, district heating schemes or joined up travel and transport plans.

Measuring, Monitoring and Evaluating the Development of Local Frameworks

• Measure, monitor and report carbon emissions across all relevant agencies in the locality.
• Monitor the targets set for reducing emissions and evaluate how joint action plans are going to achieve them.

Building resilience to climate change and adverse events

The changing climate in the UK is creating longer and more frequent heat waves, floods, droughts and cold snaps. These extreme weather events can have many negative implications for the health and wellbeing of the community so the Trust must work to ensure people and services are prepared and resilient to these disruptions.

Extreme weather events can affect system infrastructure (buildings, vehicles, emergency services, and the supply chain for food, fuel and other key products), including domestic dwellings where many health services are delivered. Such events can also rapidly increase the number of service users, in turn putting increased pressure and workload on services at a time when staff shortages are more likely.

In order to mitigate the risks associated with such events the Trust must work as part of the entire healthcare system alongside Health and Wellbeing Boards, the Environmental Agency, Defra, local authorities and many other organisations to ensure people, buildings and services will be resilient and accessible. The best innovations, however, should also encourage carbon reduction and healthy lifestyles to reduce the environmental impact and thus, climate change in the first place.

SUSTAINABLE CLINICAL AND CARE MODELS

Endeavours to deliver a level of quality that cannot be maintained with available resources are destined to be unsuccessful. Delivering the best quality care with the resources that are available is key to a sustainable healthcare system. However, as limited resources diminish, costs escalate and extreme weather events become more frequent the challenges to maintain and improve quality increase.

In the face of these challenges healthcare policies have to align with the principles of sustainability and set out to transform the way care is delivered so that the future of services is sustainable and affordable. Involving patients, staff, organisations and the community in the design of such policies is essential for strategies to effectively; empower patients, integrate connections between service providers, improve the use of information and communication technology, and support self-care and the management of long term conditions; factors that are all considered fundamental to the future of healthcare services.

Actions for Building Resilience to Climate Change and Adverse Events

➢ Understands and minimise current and future risks to health and wellbeing from changing times and climates.

➢ Health and wellbeing is protected and improved by building on social assets, reducing environmental harm and enhancing the natural environment

➢ Building partnerships with local organisations to identify vulnerable people with long-term cold related health conditions living in cold, damp, homes (See, Warm Homes Service, also, the organisation that adapts houses to enable healthy, independent living at home, firms that offer housing assistance.)

➢ Identifying local priorities with the Council, i.e. Are there home at risk from flood. Is there funding for shared community equipment to mitigate the risk?

➢ Use the Climate Change Risk Assessment Reports (CCRA) 2012 to identify the major risks to health and wellbeing.

➢ Local health resilience partnerships (LHRP) and Local resilience fora (LRF) include climate change projections into their risk assessments.

➢ Continue to build the evidence base on current and future climate risks to further identify and improve future resilience and adaptation needs and opportunities.

➢ Use the UKCP09 climate projections or the Climate Ready BACLIAT tool to complement the process of assessing risks and opportunities associated with generic climate patterns.

➢ Use public health/department of health research on health impacts of climate change to shape policy and planning decisions

➢ Assess and strengthen preparedness action for instance by using UKCIP climate projections tool to identify risks and opportunities to health and wellbeing in the local area, assess levels of preparedness and develop plans to improve resilience.

➢ Engage and support communities and third sector partners to develop and enhance a range of skills and tools to help them to help themselves and others.

➢ Equip communities to act as first responders and identify and support vulnerable populations.

➢ Continue health promotion activity such as physical activity and healthy diets. Capitalise on the potential to achieve health co-benefits by implementing policies that reduce carbon dioxide equivalent emissions and improve health e.g. active travel, more efficient vehicles, low carbon, healthy diets etc.

➢ Build on work informed by monitoring and surveillance of environmental factors, for example air quality, housing conditions, biodiversity, and access to green space.

➢ Local Authorities can use local health data to inform housing improvements around decent home standards, registration of private landlords and action to ensure minimum standards of cold weather thermal comfort in private rented properties via the provision of insulation.

➢ Environmental health practitioners can work with Public Health Departments and CCGs to develop action around air pollution and breathing conditions, improving poor housing, increasing biodiversity and green space.

Measuring, Monitoring and Evaluating Building Resilience to Climate Change Events

• Monitor the number of admissions with cold/heat related health conditions.
• Evaluate the extent to which communities, services and infrastructures are prepared and resilient to weather events and other crises.

Sustainability as a factor underpinning high quality care

The Health and Social Care Act (2012) defines high quality care as 'safe and effective with a positive patient experience'. The NHS promotes the importance of fairness, best value, and sustainability for underpinning this definition. All parts of the healthcare system need to consider how these three pillars apply to the planning, delivery, and monitoring of their services to provide high quality care.

Actions for Sustainability as a factor underpinning high quality care

➢ Consider including sustainability principles in all service planning, commissioning, patient safety and quality improvement programmes as a core component underpinning quality care.

➢ Develop a Quality and Outcomes Framework (QOF) incentive payment for improving sustainability performance.

➢ Actively encourage and support outcomes-based commissioning as opposed to activity-based commissioning.

➢ Involve the third sector and communities in supporting and enabling improved health and wellbeing.

➢ Consider how to bring housing, health, and social care closer together for instance through wellbeing centres that include health, social care, welfare advisers and practitioners or Citizen Advice Bureau sessions in primary care locations.

➢ Build on the existing professional support, training and research that is geared to supporting individuals to live well and enable them to live independently thus minimising the need for acute and specialist input.

➢ Improve the use of technology and self-help approaches to enable people to take charge of their own health and life care planning.
➢ Promote remote diagnostics, surveillance, and therapeutic self-monitoring services to encourage more sustainable models of care.

Measuring, Monitoring and Evaluating Sustainability underpinning high quality care

• Detail the progress of sustainable development in a quarterly suitability newsletter and distribute to staff, patients, and the community

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Transforming Care

Before the Greener NHS was founded the SDU provided the below model which highlights the various levels of support that an individual may need throughout their life in a more sustainable system. Willingness to work in different ways, involving patients and a focus on prevention and health improvement is necessary for this system to be achieved.

"Evidence has shown that the need for acute and specialist interventions can be minimised when there is a system wide focus on living well and supporting people to manage their lives in a positive way"
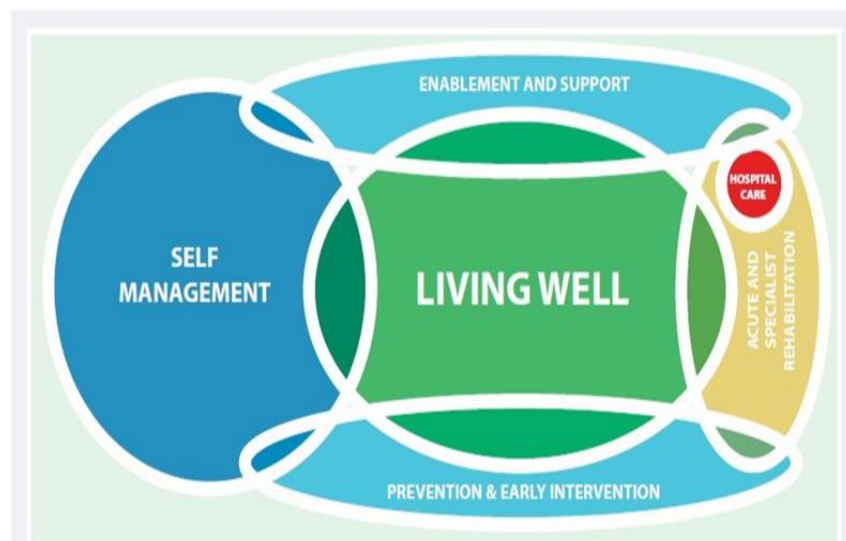
Description of different elements:

Living well – Being healthy throughout our life is an aim for every one of us. At different stages we are likely to come into contact with various forms of health and care support to help us lead a life we can value.

Prevention and early intervention - Throughout our life there are ways in which our health can be enhanced and ill health prevented. For example through vaccination programmes, healthy food, active travel, warm homes or fall prevention programmes. Many of these can improve health and sustainability simultaneously. For instance, addressing the causes of ill health by switching from motorised travel to walking or cycling or by reducing the levels of consumption of animal fats.

Enablement and support - Some periods of ill health will mean that we need support through enablement approaches such as talking therapies, assistive technology or volunteering schemes which ensure that we are supported to be more effective in our daily roles.

Self-management - Many of us will want to learn more about how to manage our own conditions, such as depression, diabetes or vascular disease, by self-monitoring and taking action to support a healthier life. This might include regular and easy access to specialist support.

Acute and specialist rehabilitation - At times we may need acute and specialist help following an emergency or an episode of significant ill health. Secondary and tertiary care will be crucial to assist us through the most acute phases with the emphasis being on early intervention and providing only the right care at the right time in the right place rather than a series of poorly coordinated interventions. Acute and specialist rehabilitation can support this process, minimise any hospital stay and equip us for a world of self-management and living well.

Dying well - Every individual may have a different idea about what would, for them, constitute 'a good death'. Changing attitudes and behaviours in society towards dying, death and bereavement is an important issue and needs to be considered with the dignity of those involved.

Actions for Transforming Care

➢ Encourage evidence-based therapies and lifestyle changes, such as exercise and dietary advice over invasive procedures and pharmaceuticals at the first stage of management. This might include prescribing exercise outdoors.

➢ Avoid prescribing evidently ineffective medicines and treatments.

➢ Consider the environmental impact and toxicity of materials and products used. For example, propellants used in metered dose inhalers for treating respiratory conditions are powerful greenhouse gases. Switching to alternatives such as dry powder inhalers can help reduce harmful greenhouse gas emissions.

➢ Use a process methodology (for example Lean systems, Six Sigma, Total Quality Management) to identify and eliminate waste in pathways of care.

➢ Consider the needs of the individual in the care environment – for example access to green space, sunlight, thermal comfort, privacy and noise reduction by closing doors and switching off lights to aid sleep.

➢ Assess the social and environmental impacts of proposed redesigned services alongside financial impacts and health outcomes. For example, by including environmental and social sustainability assessments on business case templates.

➢ Consider the needs, risks, strengths, and assets of communities served and ensure that services are tailored to support and manage health and wellbeing, particularly for those that are most in need or most vulnerable.

➢ Review models of care and patient pathways in every specialty taking into account the overhead use of resources and carbon footprint, to identify where resources are used and can be reduced.

➢ Consider most appropriate service location to minimise travel and facilitate access, including use of mobile technology or telephone clinics. Enable service users to access services in different ways.

Measuring, Monitoring and Evaluating Transforming Care

• Monitor the amount of resource that are being used and where and evaluate how they can be reduced

Tracking Progress and Reporting

NHS SUSTAINABLE DEVELOPMENT ASSESSMENT TOOL (SDAT)

The Sustainable Development Assessment Tool (SDAT) that was developed for NHS organisations to track their progress against UN Sustainable Development Goals was decommissioned on 28th February 2021. The Greener NHS Team is currently working on a replacement tool, which will align with the priorities set out in *Delivering a Net Zero National Health service* and this Green Plan.

When this new tool is available it will be used to monitor and report our sustainable development and our path towards net zero.
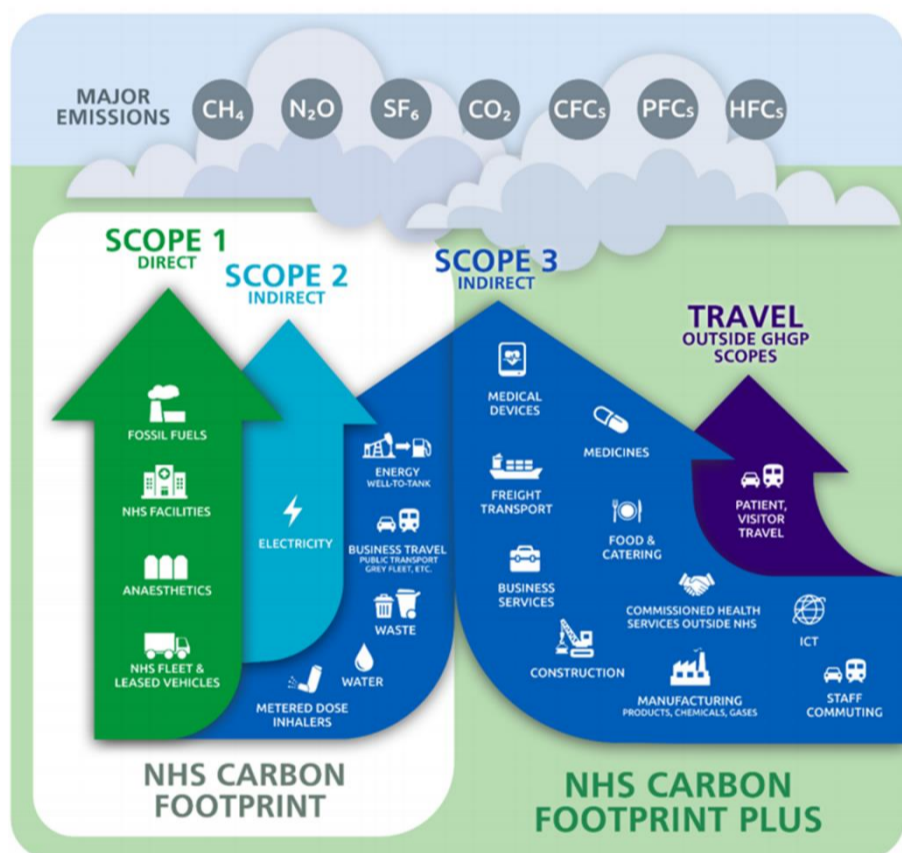
NHS ANNUAL SUSTAINABILITY REPORTING

The Department of Health (DH) requires that the Trust reports on sustainability as part of their annual reporting process. The Carbon Data Collection is an annual reporting framework that has been developed especially for NHS Trusts, Foundation Trusts and CCGs. The framework's goal is to make links between financial and environmental sustainability more transparent. The annual report Provides our carbon footprint broken down into the following categories:

- **Scope 1:** Direct emissions from owned or directly controlled sources on site. This includes Fossil Fuels, Anaesthetic gasses and NHS Fleet vehicles

- **Scope 2:** Indirect emissions from the generation of purchased energy, mostly electricity

- **Scope 3:** All other indirect emissions that occur in producing and transporting goods and services, including the full supply chain.

NHS ESTATES RETURN INFORMATION COLLECTION (ERIC)

ERIC is used by Estates and Facilities to report various data that is also relevant to sustainability, such as: energy consumption, water consumption and waste disposal. The programme automatically calculates the related C02e emissions and can be used to benchmark the Trust's performance against other Trusts.

Summary

Achieving 'Net Zero' whilst preserving the values that underpin a universal health service, free at the point of use, will mean fundamental changes to how we deliver and use healthcare services. This Green Plan outlines ours Trust's commitment to cut emissions and implement sustainability throughout the organisation and local community. Guided by the Greener NHS and associated documents the Trust are working with its departments to tailor actions and monitoring strategies so carbon reduction initiatives can be implemented effectively, economically, and efficiently.

To help limit global warming to well below 2 degrees Celsius and avert a global health crisis, we must maximise the value of our contribution to carbon reduction; we need all our staff, building users, partners and supply chains to act now.

"act as you would in a crisis... act as if the house is on fire, because it is." (Greta Thunberg, World Economic Forum, 2019).

Appendix A: NZAG Terms of Reference

NET ZERO ACTION GROUP – Terms of Reference	
Delegated Authority	The Net Zero Action Group (NZAG) has delegated authority from the Executive Committee to co-ordinate the implementation of Trust's Green Plan. The Group is authorised to obtain independent professional advice if it considers it necessary in accordance with these Terms.
Terms of Reference	The Group will undertake the following duties: i) Shape the Trust's net zero strategy, ii) Oversee the delivery of the Trust's Green Plan (in line with national requirements and frameworks such as *Delivering a 'Net Zero' National Health Service 2020* and the Climate Change Act 2008, iii) Develop practical initiatives and action plans to meet the Green Plan targets, iv) Champion sustainable principles and working practices across the Trust and among external stakeholders, v) Ensure that, as a minimum, the Trust complies with all existing and future NHS strategies on sustainability and carbon reduction, vi) Develop action plans to take forward initiatives with reference to the Greener NHS guidance vii) Liaise with the relevant working groups (i.e. waste group, energy group, travel and transport group etc.) as required to cover specific areas of the Green Plan, viii) Measure progress of Carbon reduction against the Green Plan goals and targets, ix) Encourage positive engagement with staff, patients, visitors and the community on sustainability and sustainable working and living practices, x) Provide assurance to the Executive Committee, through the PFI Liaison Committee that the sustainability agenda is appropriately managed within the Trust, xi) Complete the appropriate return for inclusion within the Trust Annual Report.
Review	In March each year the Group will undertake an annual Meeting Effectiveness Review. Part of this process will include a review of the ToR.
Membership	Net Zero (NZ) Core Members: Senior Vinci FM representative (Chair) – Net Zero (NZ) Delivery & Utilities Lead Senior New Hospitals representative Senior Trust Contract Team representative – NZ Patient and Visitor Travel Lead Senior Medirest representative - NZ Waste Lead Senior Procurement representative – NZ Scope 3 Emissions Lead Senior Pharmacy representative – NZ MDI Reduction Lead Senior Medical Devices representative – NZ Anaesthetic Gas Capture Lead Senior Theatres representative - NZ Anaesthetic Gas Reduction Lead Senior ESR representative – NZ Fleet and Leased Vehicles Lead Senior Payroll representative – NZ Business Travel Lead The attendance of fully briefed deputies, with delegated authority to act on behalf of core members is permitted. In attendance: In addition to formal members, representatives from operational services within the Trust and FM services may be in attendance, and the group shall be able to request the attendance of other members of staff as appropriate. Members are selected for their specific role or because they are representative of a larger group. As a result, members are expected to: i) Ensure that they read papers prior to meetings, ii) Attend as many meetings as possible, iii) Contribute fully to discussion and decision-making, iv) If not in attendance seek a briefing from another member who was present to ensure that they are informed about the meetings progress, v) Represent their group in discussions and decision making, vi) Feedback the content of meetings to colleagues. vii) update group on progress and setbacks for the carbon hotspots they lead
Attendance	Core Members are expected to attend a minimum of 66% of meetings per year.
Quorum	50% of the core membership (or appropriate deputies) must be present.
Accountability & Reporting	The Group reports to the Executive Committee via ad-hoc exception reporting on the chair's meeting log, plus an annual review of performance.
Meeting Frequency	The Group will meet Quarterly.
Agenda Setting and papers	Agenda to be agreed by the Chair. Minute production and distribution is via Vinci FM offices.

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