

The background is decorated with various line-art icons in blue and green, each enclosed in a circle. The icons include: a gear with three people, a flowchart, a network diagram with a central person, a hospital building, two speech bubbles, a plate of food with a fork and spoon, a person at a computer, a pill bottle and pills, a globe with a thermometer, a truck, a clipboard with checkmarks, a bus, a forest of trees, a classical building with columns, and a circular flow diagram with three people.

The NHS Greater Manchester Green Plan 2022- 2025

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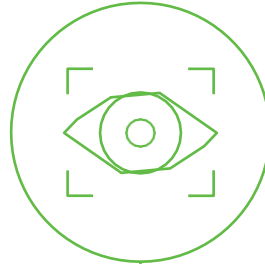
Overview



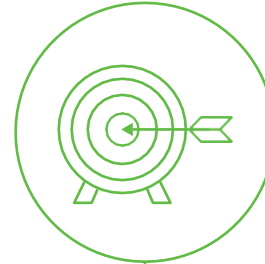
The NHS GM Green Plan 2022-2025



Why do we need a Green Plan?



Our vision



Our impact: baseline



Our journey to date



What do we want to achieve?



The NHS GM Green Plan at a glance



The NHS GM Green Plan 2022-2025

About us

NHS Greater Manchester (NHS GM) is the Integrated Care Board for Greater Manchester, and is responsible for making decisions about health services across Greater Manchester and in the ten boroughs and cities.

The creation of NHS Greater Manchester, and our new statutory Greater Manchester Integrated Care Partnership, on 1st July 2022 gives health and care partners the opportunity to accelerate the journey to improve our population's health and wellbeing we have been on for the last five years, and so play our part in delivering our city region's vision.

The Green Plan 2022–2025 is overseen by NHS Greater Manchester.

The first version of the Green Plan 2022-2025 was published before the new statutory bodies were in place, and as such we are taking the opportunity to refresh the content in version 1.2 to ensure details and actions are up to date, realistic and well placed to achieve our net zero ambitions.

There are over 2.8 million people in Greater Manchester. There are 10 local authorities, 9 NHS Trusts with 19 hospitals, emergency, community and mental health services, 412 GP practices, 351 dental practices, 647 community pharmacies and 259 optometrists.





Why do we need a Green Plan?

The principal aim of healthcare is to improve people’s health. But paradoxically, the carbon emissions and pollution generated by healthcare delivery negatively impact health.

Over a million GM residents live in some of the most deprived areas in the country. These people can expect to live nearly a decade less than those living in the most affluent areas. Contributory factors include: the living environment (e.g., access to green spaces and air quality), income and the ability to withstand climate-related events such as flooding and heatwaves. The impacts of climate change disproportionately affect our most vulnerable communities.

To achieve net zero for the whole of the NHS, each NHS Trust and Integrated Care System were tasked with publishing a Green Plan. Ours reflects collaborative priorities from Trust Plans, encompasses priorities for the rest of the healthcare system and sets out a three-year approach to meet both national NHS targets and those set out by the GMCA in the 5-Year Environment Plan.

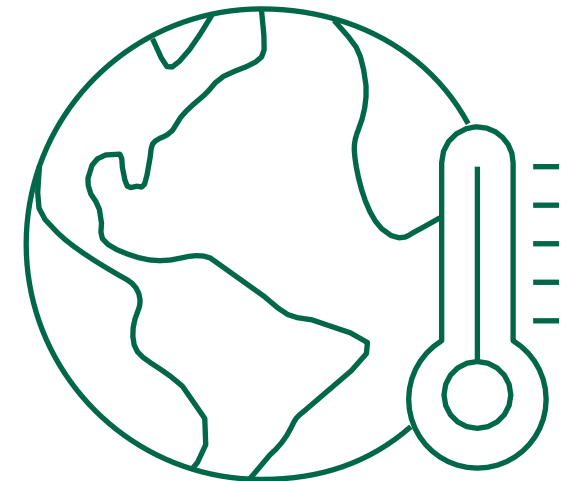
A wide list of legislative & policy drivers can be found in Appendix C.

Introduction

In 2009, the Lancet Commission on Climate Change stated that “climate change is the biggest global health threat of the 21st century.” Climate is impacted by anthropogenic or human-induced activities, with current predictions of global warming of up to 2.4°C. Effects are far-reaching: more frequent intense weather events, impacts on air quality, spread of infectious disease, food scarcity, population migration and disrupted supply chains. However, there are many co-benefits from climate action such as advocating healthier dietary choices, encouraging active travel and improving access to high quality green spaces.

The NHS is responsible for 4% of national carbon emissions and 40% of emissions from the public sector. In October 2020, the NHS published ‘Delivering a Net Zero National Health Service’, outlining interventions needed to reach net zero.

As an Integrated Care System, there is a huge opportunity to collaborate at scale to tackle system-level priorities, whilst building on existing place-based arrangements and approaches. The Integrated Care System has a role as a leader and enabler, raising awareness, building capacity, facilitating innovation, sharing good practice, and encouraging organisations who are already delivering to go further and faster so that we can deliver transformative change across the whole system. Without this, we will not be able to deliver the required carbon reductions at the pace needed.





The NHS GM Green Plan 2022-2025

Chairman’s Foreword

The senior leadership, our NHS GM team, and I, are proud to support the Green Plan. We recognise that climate change and health are inextricably linked. Our Green Plan focuses on maximising the benefits of effective partnership working. We are approaching the challenge of delivering net zero carbon across a whole healthcare system as an opportunity to deliver sustainable healthcare that positively influences the wider social determinants of health and reduces inequalities.

Climate change is the single biggest threat to our planet, environment, and the people of Greater Manchester. The experience of the COVID-19 pandemic has demonstrated how vulnerable our communities are to global threats. Providing healthcare for 2.8 million people across our large geographical footprint has significant environmental and health impacts, but also presents considerable opportunities for collaborating and delivering at scale. It is paramount that we deliver healthcare in a more sustainable way and drive down the associated carbon impact. We have developed a bold and ambitious Green Plan to tackle this challenge head-on and deliver net zero healthcare whilst positively influencing the health and wellbeing of the communities we serve.

As the first Integrated Care System to declare a climate emergency, and the first to develop an interim sustainability strategy, we have already signalled our strong ambitions. This Green Plan sets out how we will use the power of the system to deliver far-reaching innovation and change, and outlines priorities and targets for delivering net zero carbon emissions. The challenge set out in this Green Plan will not be easy to deliver, but by working together and building momentum across the system we can deliver change at scale and inspire other systems across the country to do the same.

Sir Richard Leese
Chair of NHS Greater Manchester
Integrated Care Board



Message from the Greater Manchester Combined Authority

Our ambition is for Greater Manchester to become carbon neutral by 2038, 12 years earlier than the national target. Reaching this goal will require action right across our city-region to cut emissions and pioneer more sustainable ways of working. I am delighted that Greater Manchester’s health system partners are now working collaboratively to reduce their carbon footprint.

It is so encouraging to see the strong commitment of our health sector to deliver sustainable healthcare, positively influence public health and wellbeing, and support good lives for all here in Greater Manchester.

Cllr Tom Ross
Leader of Trafford Council and portfolio
lead for the Green-City Region





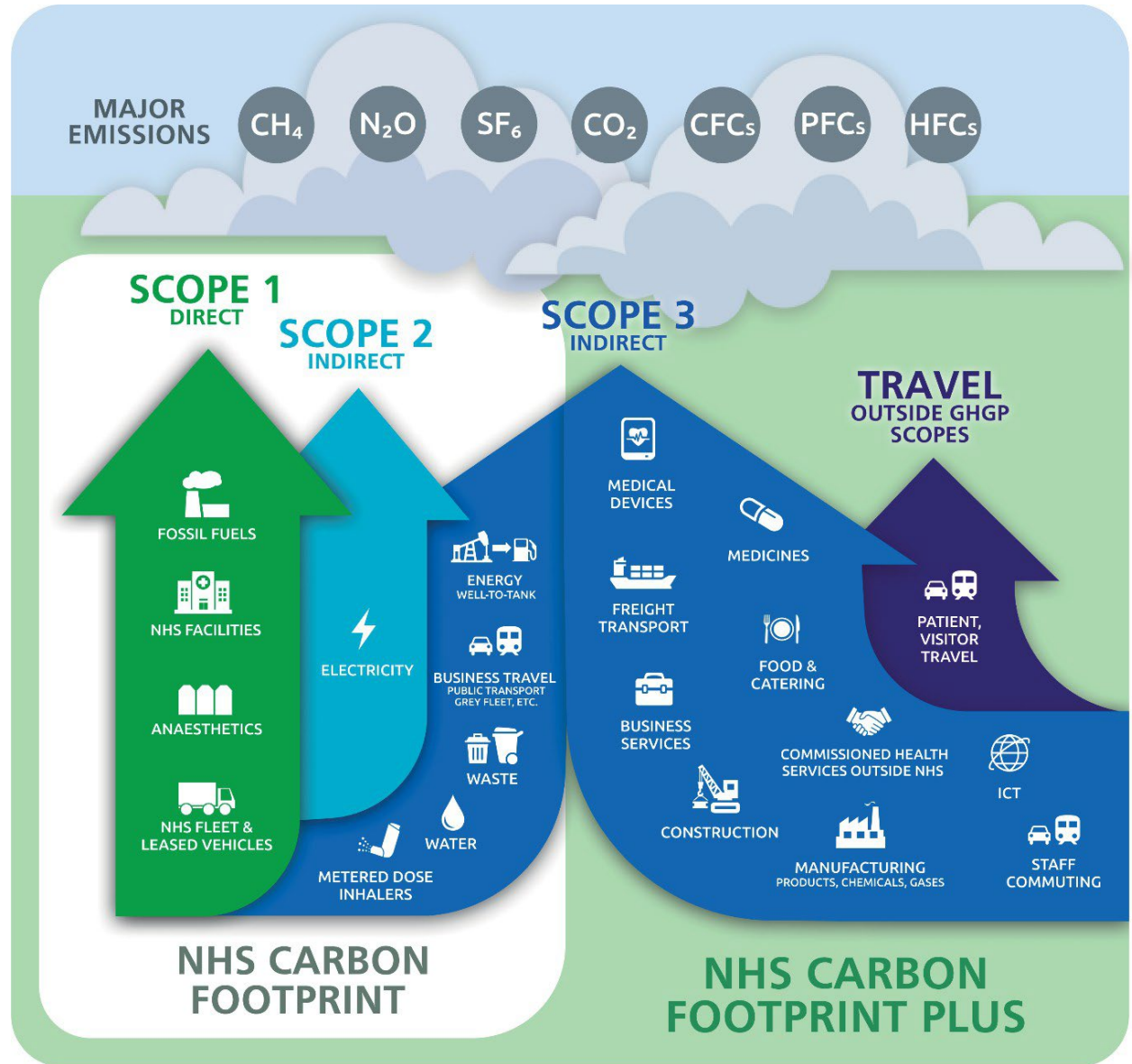
Our vision

Our vision is to improve the health and wellbeing of all residents of Greater Manchester whilst minimising environmental impacts through the delivery of sustainable healthcare and increasing focus on public health. We will build resilience across the system to deal with the impacts of climate change and promote health equity.

To achieve this vision, we have set two overarching goals:

- **To achieve a net zero NHS GM Carbon Footprint by 2038** – this target is the science-based approach outlined in the GMCA 5-Year Environment Plan. We will seek assurance that providers are delivering against their own plans, whilst focusing on priorities that we can deliver most effectively by working together.
- **To achieve a net zero NHS GM Carbon Footprint Plus by 2045** – this is a national NHS target to eliminate the carbon impact of the goods and services we buy. We will work closely with national and regional partners to achieve this.

This Green Plan builds on our interim Sustainable Development Management Plan and outlines the priority themes and actions to 2025. Everything on our planet is interconnected so we will use a suite of metrics and performance indicators to capture and report progress, and not focus only on carbon.





Our impact: baseline

To achieve ambitious carbon reductions across NHS GM, it is crucial to understand the configuration and scale of our current carbon impact and establish a methodology for measuring this on a go-forward basis. Calculating an accurate carbon baseline for a healthcare system is challenging, and we need to consider all parts of the healthcare system that fall within the breadth of this Green Plan. To improve the accuracy and understanding of our current impact, we worked with the Tyndall Centre for Climate Change Research and with the Anthesis Group to enhance existing data and inform this analysis. This will be an iterative process and it will be a priority to improve both data quality and coverage over the lifetime of this plan.

The carbon impact of NHS GM can be separated into emissions which the constituent ICP organisations can control (NHS GM Carbon Footprint) and emissions which NHS GM can influence (NHS GM Carbon Footprint Plus)

We were provided with a carbon footprint from the Greener NHS Team which was calculated using a combination of disaggregated national data and actual data. This is the carbon footprint that will be used to measure progress nationally.

We have expanded upon this through the introduction of organisational proxy data where data is not currently available, giving a higher level of confidence for core footprint data, and allowing improved focus on the most material contributions from different organisations. Using this proxy data

gives a Carbon Footprint around 35% lower than the national dataset, and a Carbon Footprint Plus around 18% lower, but is more closely aligned with GM and organisational boundaries due to differences in assumptions of geographic boundary (GM vs NW), and the range of organisations considered.

Figure 1a: NHS GM Carbon Footprint 2019/20

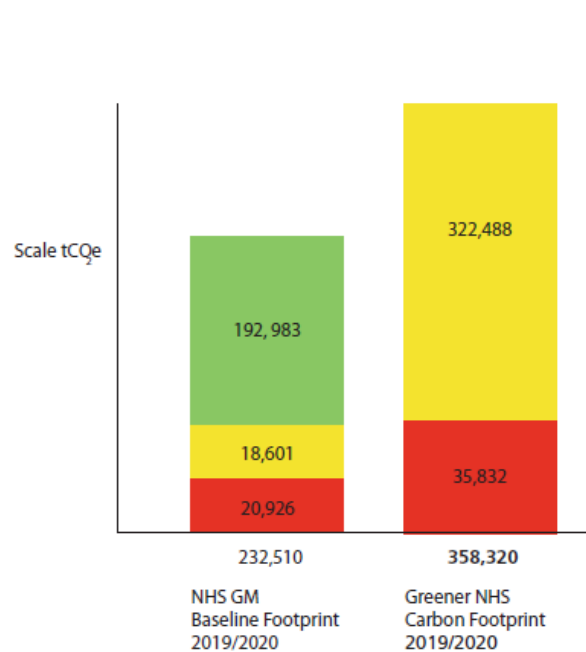
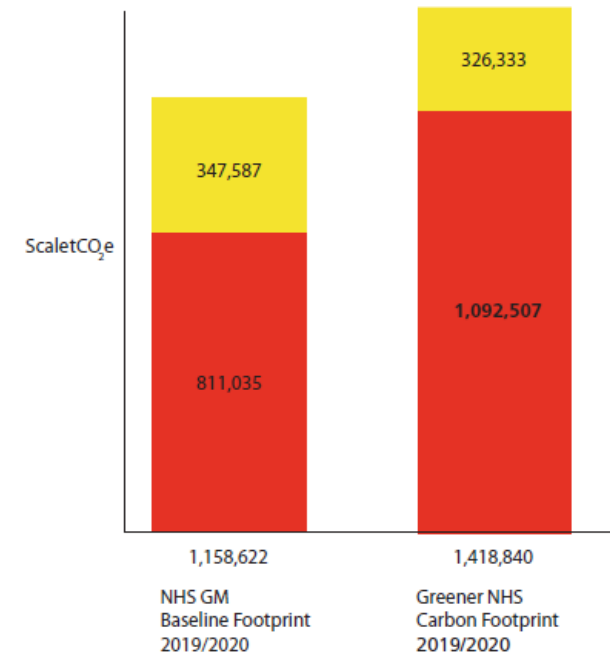


Figure 1b: NHS GM Carbon Footprint Plus 2019/20





Our impact: baseline

Figure 2a: Greener NHS Carbon Footprint

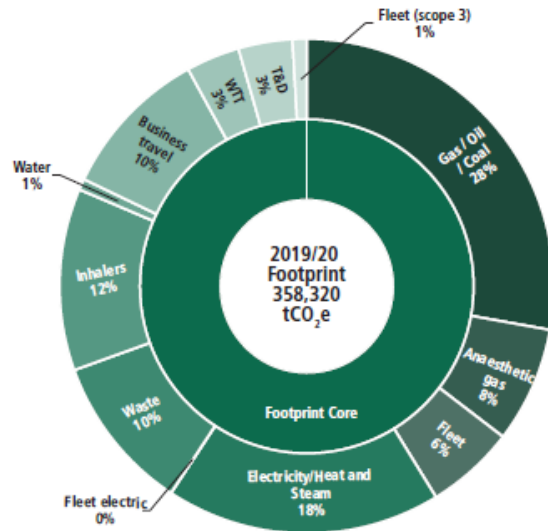


Figure 2b: Confidence

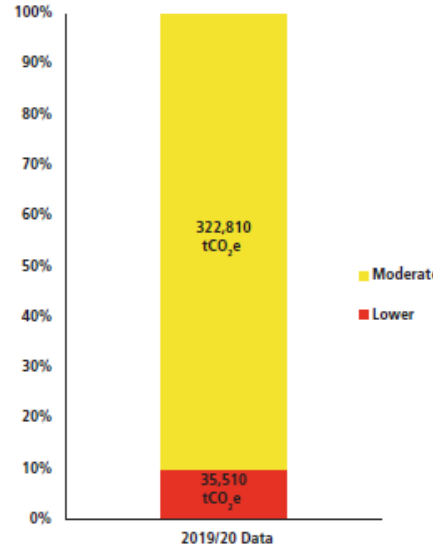


Figure 3a: Greener NHS Carbon Footprint Plus

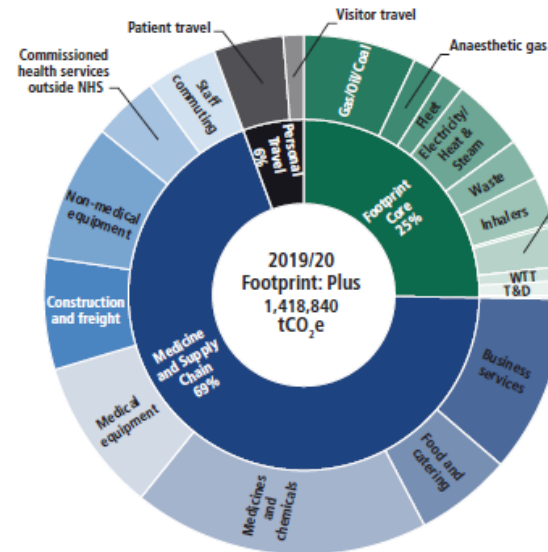
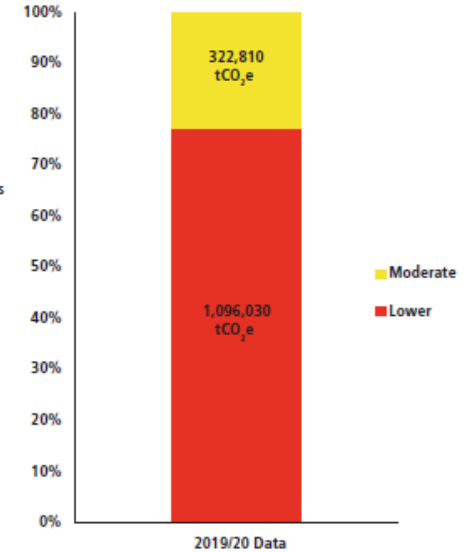


Figure 3b: Confidence



Figures 2a and 3a show the NHS GM Carbon Footprint (358,320 tCO₂e) and Carbon Footprint Plus (1,418,840 tCO₂e) as calculated by Greener NHS.

Note: This currently only shows the 9 Trusts and not the wider system.

- **Higher:** Estimate is based on site specific activity data, such as meter readings or fuel consumption records
- **Moderate:** Estimate is based on activity data from a similar site or similar activity used as a proxy. (Such data may have been identified through secondary research and may be further adjusted or scaled using actual site information.)
- **Lower:** Estimate is based on much more arbitrary judgements and assumptions informed by secondary, publicly available research. (Included to avoid understating emissions impact to the same extent as using 'nil' emissions value.)



Our impact: baseline

Figure 4a: Proxy Carbon Footprint

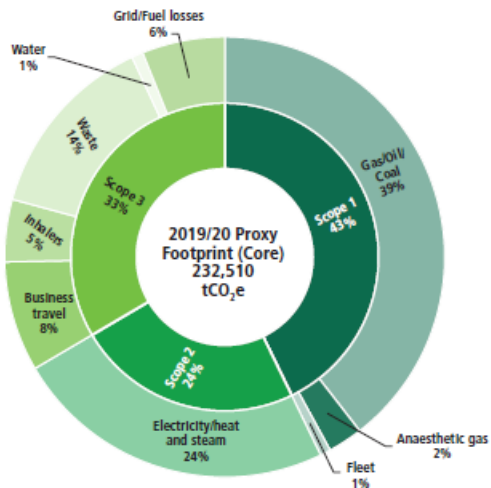


Figure 4b: Confidence

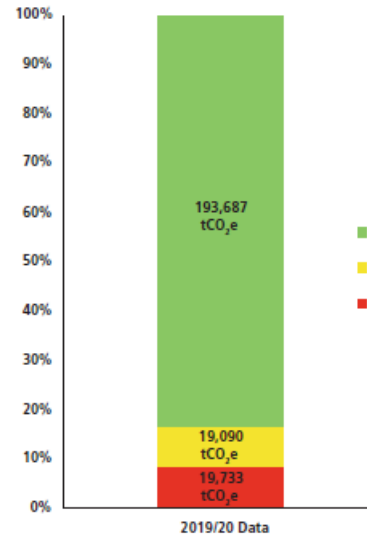


Figure 5a: Proxy Carbon Footprint Plus

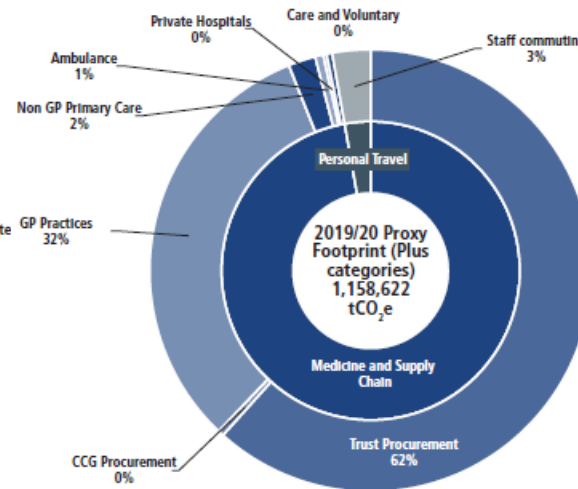
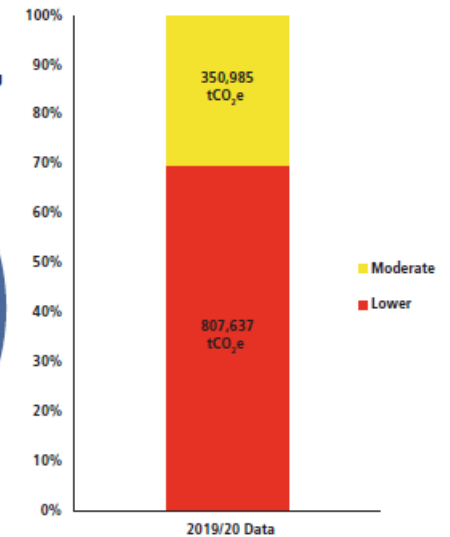


Figure 5b: Confidence



Figures 3a and 4a show the NHS GM Carbon Footprint and Carbon Footprint Plus for all parts of the healthcare system within the remit of this Green Plan, with proxy data introduced. The Core Footprint only includes Trusts and Commissioning. Assumptions have been made in relation to boundaries, for example, what % is private work, and what part of the activities fall within Greater Manchester as opposed to the wider North West region.



Our impact: baseline

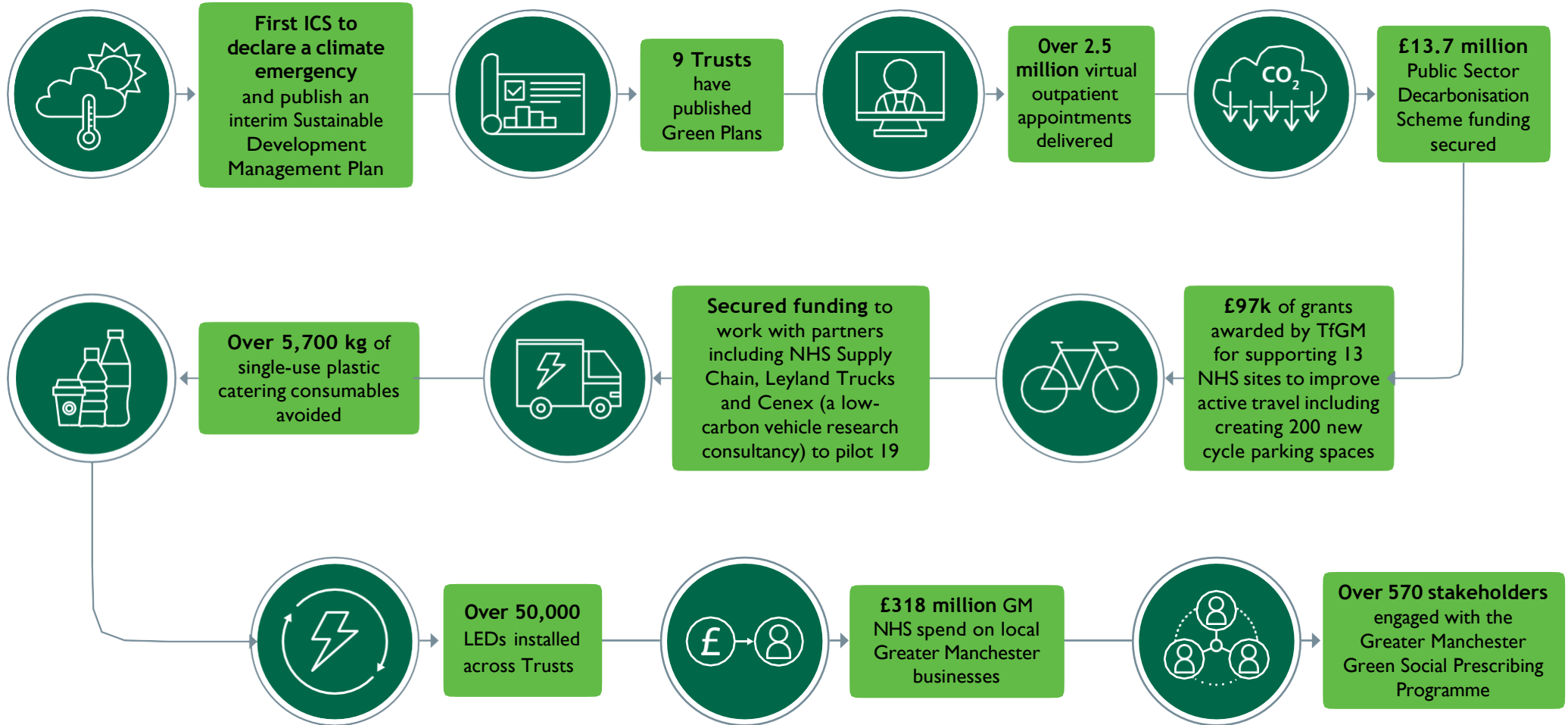
Another way to consider the data is by looking at carbon hotspots, this helps target the most material interventions to the part of the healthcare system that is responsible for the highest emissions, as shown in the chart below. It is also important to consider data confidence when interpreting this chart, as lower confidence sources could materially change as data is improved.

Figure 6: Carbon Hotspots for different parts of the GM Healthcare System





Our journey to date





What do we want to achieve?

We have set out a carbon budget for this 3-year plan related to the carbon emissions we directly control: the NHS GM Carbon Footprint. The budget is calculated in line with the GMCA science-based target of a 13% reduction per year. The NHS GM budget for 2022–23 to 2024–25 is 620,000 tCO₂e. Staying within this budget will not be possible without collective action from all the constituent organisations within NHS GM. There is significant work to do to further refine and improve data and data quality.

By acting now to reduce emissions from our business as usual (BAU) trajectory, we can stay within our budget, smoothing the pathway to Net Zero and avoiding the need for more challenging and costly reductions in future years. We have not considered or budgeted for carbon offsetting as part of our approach, for the first NHS GM 3-year plan, but we will monitor the development and viability of products over the lifetime of this plan. We will remain sighted on what GMCA are doing in relation to offsetting and explore insetting schemes within the GM boundary.

We will also carefully monitor progress and report on key indicators as outlined in Appendix A: Reporting Measures at a Glance.

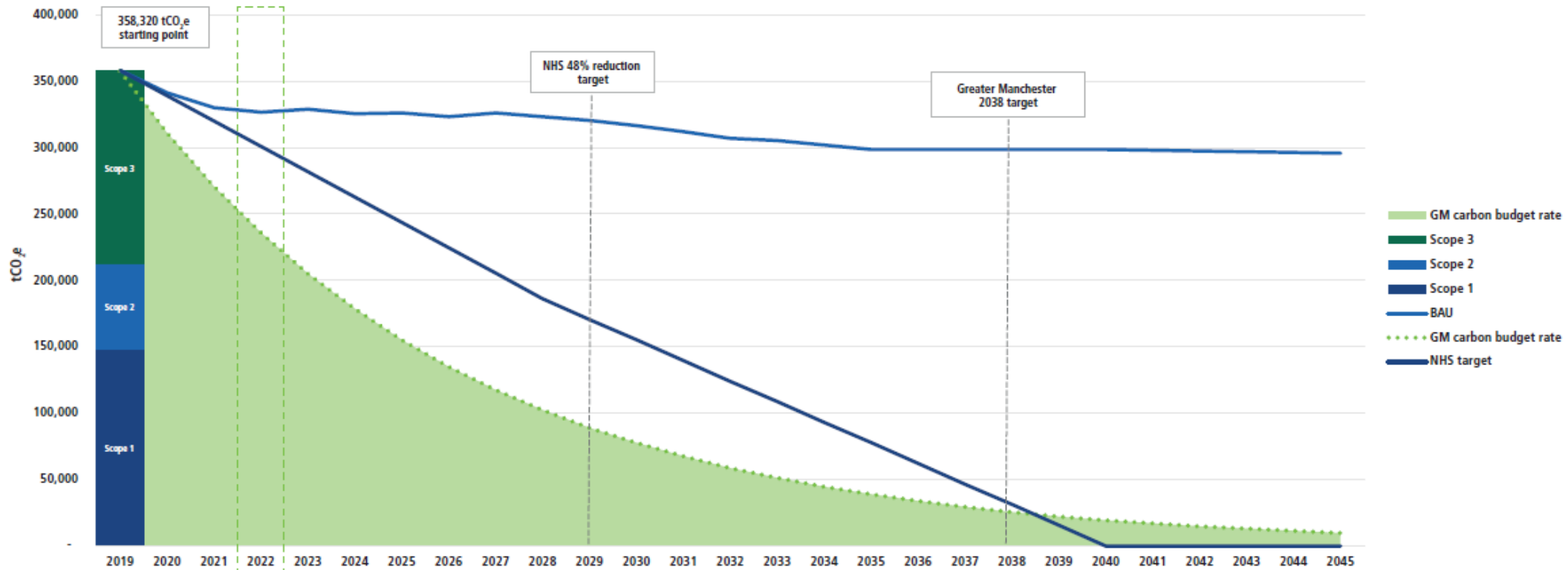
However, it should be noted that meeting such targets will require substantial effort across all partners, with strong leadership and relevant investment.

Year	Indicative Carbon Budget per year tCO ₂ e
2022/23	235,955
2023/24	205,281
2024/25	178,594
Total	619,830



What do we want to achieve?

Figure 7: Carbon Reduction Pathway for the GM Healthcare System



This graph shows the trajectories needed to achieve the GM target of 2038 and the NHS England target of 2045, along with the business as usual (BAU) trajectory without interventions as outlined within this plan.

Action	Lead	Timeframe
Calculate potential carbon reductions for the key interventions outlined in this Green Plan.	NHS GM	September 2024
Continue to refine data and data quality.	NHS GM	March 2025



The Green Plan at a glance

Our vision is to improve the health and wellbeing of all residents of Greater Manchester whilst minimising environmental impact through the delivery of sustainable healthcare. We have set out ambitions and intended outcomes for each area of focus that aim to reduce our carbon footprint and promote health equity through the delivery of sustainable healthcare.



Reduce the need for healthcare related travel and promote sustainable and active travel.



Work collaboratively on sustainable and ethical food procurement, and drive down food waste.



Upskill the workforce to understand how they can save carbon and help tackle the climate crisis.



Reduce carbon emissions from existing building estates, and ensure all new healthcare buildings are energy efficient and low or zero carbon



Support the development of plans and infrastructure to mitigate against the impacts of climate change.



Redesign care pathways to be less carbon intensive.



Focus on preventing disease whilst reducing medicine waste and the use of medicines that have a high global warming potential (GWP).



Take an active role in the development of new accessible green spaces and biodiversity on our Estate.



Embed digital transformation in healthcare pathways to reduce carbon footprint.



Influence procurement spend to drive down the carbon impact.



Embed social value in the GM Green Plan delivery programme; providing training and developing networks to build capacity.



Focus areas



Workforce, networks and system leadership



Sustainable models of care



Digital transformation



Travel, transport and air quality



Estates and facilities



Medicines



Supply chain and procurement



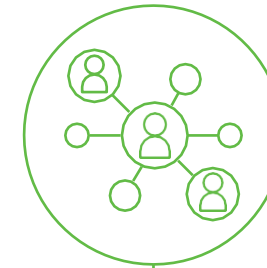
Food and nutrition



Climate change adaptation



Green space and biodiversity



Social value and anchors

Workforce, networks and system leadership

Why it matters

The health and social care workforce in GM comprises over 250,000 staff across primary, secondary and social care. National research shows 87%¹ of NHS staff support the net zero carbon ambition. The breadth of organisations within NHS GM provides significant opportunities for leadership and change at all levels to deliver net zero healthcare.

The NHS, including NHS GM, is the biggest employer of women and people from ethnic minority communities. Training, developing and investing in our staff to tackle the climate crisis is also an opportunity to enhance and promote inclusive work environments. The clinical and corporate expertise of our diverse, dedicated staff can unlock innovations and opportunities within hospitals, alongside primary care, community and mental health settings to take action on climate change.

Our staff also support patients and families in domestic settings. Their trusted expertise therefore has wide reach within local communities.

Upskilling our workforce will empower people to make positive changes in their personal lives, such as how they heat and power their homes, their transport choices and their engagement with local climate action. It will also support people to save money and improve their health.

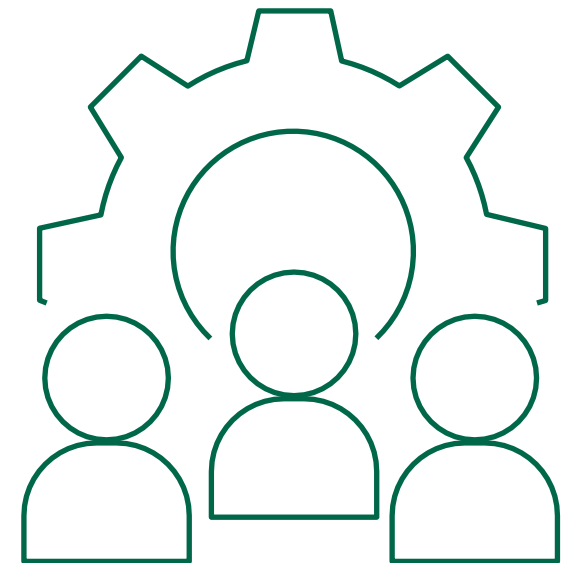
What we are doing

Diverse groups across GM are collaborating to deliver targeted net zero interventions. Further work is needed to integrate, prioritise and align programmes, and to establish formal lines of accountability.

Examples of good practice across GM organisations:

- Institution-wide carbon literacy training for staff at NWAS and in NHS GM Salford locality
- Carbon literacy training tailored for finance and procurement teams
- Engagement with ‘Green Impact for Health’ programme by General Practices
- Manchester University NHS Foundation Trust (MFT) offers ‘Green Rewards’ which aims to incentivise sustainable staff behaviours

- Trusts’ sustainability campaigns such as ‘Save Planet Tameside and Glossop’ and ‘Greener Wroughtington, Wigan and Leigh’
- Collaborative working groups: examples include GM Inhalers Group, Operational Leads Sustainability Group, Sustainable Procurement Group and Pharmacy Sustainability Group.



¹ In 2021, a YouGov survey found that 87% of NHS staff supported the net zero carbon ambition.



Workforce, networks and system leadership

What we want to do

We will support workforce capacity building and encourage a consistent approach to staff development.

We will capitalise on the existing skills and knowledge of providers and staff experienced in sustainability to benefit the wider partnership. By doing so, we will facilitate collaboration and shared learning across different organisations.

We will promote and develop specialist tools and platforms for sustainability to ensure consistent processes and accountability.

Action	Lead	Timeframe
Enable cross-system working to deliver the Green Plan commitments by clearly defining a delivery structure and working groups and defining reporting lines into NHS GM.	NHS GM	July 2022
Pursue funding mechanisms to cover clinician delivery time relating to this programme and develop a role description.	TPC, NHS GM	October 2023
Develop and roll out consistent staff induction on Net Zero carbon and facilitate a Net Zero carbon training programme for the Trust Provider Collaborative and senior leadership across all parts of the healthcare system.	NHS GM Workforce Team TPC via HRDs	December 2023
Enable an enhanced, consistent approach to 'green' staff benefits, such as cycle to work schemes, home energy improvements and low carbon goods and services.	NHS GM	March 2023
Establish a support and oversight process to provide assurance of delivery of trust Green Plans.	NHS GM	December 2023
Establish an NHS GM staff sustainability network to promote sustainable behaviour change programmes and facilitate information sharing.	NHS GM	March 2024
Develop or identify and roll out a suitable 'Climate & Healthcare' training module for primary and secondary care.	NHS GM	September 2024



Sustainable models of care

Why it matters

By reimagining care pathways, we can deliver optimal care that centres on the needs of communities, reduces health inequalities and is less carbon intensive, tackling the arbitrary barriers between primary, hospital, community, mental health, and social care.

Providing care closer to home in primary care or the community, such as better home and social care, social prescribing, Patient Initiated Follow Ups (PIFU), Same Day Emergency Care (SDEC), and Getting It Right First Time (GIRFT), reduces journeys and readmissions to hospitals. Evidence shows that people living in more deprived areas are more likely to need hospital services but are less likely to own a car and afford transport costs for multiple appointments.

What we are doing

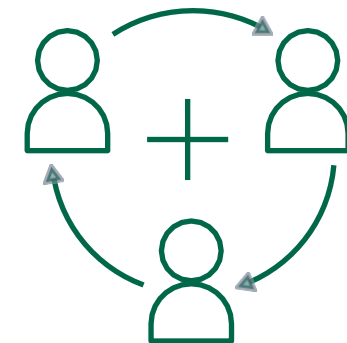
Creative and innovative practices across GM are improving the care pathways for patients and developing more equitable, higher quality care which is less carbon intensive.

Prevention

Prevention is at the cornerstone of sustainable health. By considering the wider social circumstances that influence people’s physical and mental health we can improve wellbeing and reduce the need for healthcare.

- The Community Assets Navigators (CANs) programme in Bolton is working in partnership with Bolton Community and Voluntary Services, Bolton Wanderers Community Trust, The Octagon Theatre, Age UK Bolton, BAND (community mental health services) and Bolton Lads and Girls Club to support people to connect with their local communities and participate in activities that make them feel good.

- Manchester University Foundation Trust has developed a remote monitoring app for heart failure patients that is being rolled out across Greater Manchester. The remote monitoring app is designed to detect early deterioration in heart failure and permit clinical intervention before the patient decompensates and requires admission. Other digital initiatives are in use in the community to monitor patients with frailty and respiratory conditions.
- The GM ‘Covid Oximetry at Home’ programme demonstrated the benefit of technology enabled care at home, giving people at risk of a COVID-19-related admission tools to monitor their oxygen saturation levels monitor their oxygen saturation levels.





Sustainable models of care

What we want to do

We will embed sustainability within commissioning practices. In practice this will translate into centring prevention, designing care pathways that diagnose diseases rapidly and deliver high-quality, flexible care closer to home.

NHS GM will support sustainability training for leads across primary, secondary, mental health, community care, local authorities, TfGM and the VCSE sector to promote healthcare prevention and the re-design of care pathways that will improve patient experience and outcomes. Learning and examples of good practice will be widely disseminated.

Action	Lead	Timeframe
Facilitate Sustainable Quality Improvement training for leads across the Integrated Care Partnership.	NHS GM	May 2023
Link with commissioners, providers, patients, and the public and wider partners to embed carbon reduction considerations, in addition to improving quality of care/ accessibility, into up to five care pathways.	NHS GM Primary Care Networks	March 2025
Identify and promote innovative carbon reduction initiatives across the system via accessing innovation competitions and working with the AHSN.	NHS GM	March 2025



Digital transformation

Why it matters

Digital infrastructure is part of the social landscape. It therefore influences the social determinants of health and inequalities. The COVID-19 pandemic further enhanced the role of digital technology in our everyday lives such as home schooling and the delivery of virtual healthcare. This deepening of digital infrastructure also risks widening existing inequalities. People from economically deprived and ethnic minority backgrounds are significantly less likely to have access to high-quality broadband. Therefore, some children from these communities were unable to access technology-enabled schooling which may impact their life chances and consequently their health.

Digital transformation of healthcare is paramount to delivering sustainable patient-centred care and reducing carbon footprint. The demand for outpatient appointments has nearly doubled over the past decade to nearly 118 million appointments annually. Nationally, non-urgent outpatient appointments constitute almost 85% of hospital care. In 2020/21, the NHS delivered 22 million outpatient appointments virtually. Similarly, in primary care 137 million virtual appointments were delivered. This saved an estimated 75 ktCO₂e.

The commitment to deliver the net zero agenda is embedded within the 'What Good Looks Like' framework for digital transformation, recognising the critical role of digital in reducing the NHS's carbon impact.

However, it should be noted that digital activity will generate its own carbon footprint, but one likely to be smaller than more traditional approaches.

What we are doing

NHS GM has developed Transforming Care through Digital Technology: a digital health and care strategy for Greater Manchester 2019-2022 which has priorities focused on four themes: digitise, integrate, empower and innovate. A further strategy covering the period of 2023-2027 is currently being developed, due for publication in 2023.

As part of this work and in response to the pandemic, 2.5 million outpatient appointments in GM were delivered virtually in 2021. Another example includes Tameside and Glossop Digital Health Service providing specialist urgent care for people in care homes and in their own homes.

Digital Transformation of Non-Urgent Services (2020/2021)



85% of hospital care is non-urgent outpatient appointments



22 million virtual hospital outpatient appointments delivered



137 million virtual primary care appointments delivered



Saves patient time and transport costs, improves air quality, reduces carbon



Digital transformation

What we want to do

The NHS's current digital carbon footprint is 456 ktCO₂e. Digital transformation must mitigate against the increased carbon emissions from expanding data demands and the purchase and use of digital equipment.

Furthermore, learning from the pandemic will be used to ensure equitable digital transformation.

Action	Lead	Timeframe
Embed the Technology Code of Practice across the commissioning cycle/relevant policies, including procurement.	GM Providers	March 2024
Calculate carbon footprint changes from virtual healthcare delivery encompassing: universal access to virtual GP consultations, virtual outpatient appointments, and impact of virtual ward capacity aiming to accommodate 40-50 beds per 100,000 residents.	NHS GM, GM Providers including Primary Care	March 2024
Continue expansion of the GM Shared Care Record to provide integrated patient record access and care across primary, secondary, community, mental health, and social care services, supporting the digitalisation of all facets of patient records.	NHS GM, GM Providers	December 2023
Provide every GM locality with access to advanced case finding tools to support population-level data analytics in health needs assessments. This will support commissioning services based on need, optimise resource use, and reduce carbon emissions.	NHS GM	March 2024



Travel, transport and air quality

Why it matters

Every year, poor air quality makes a major contribution to ill health and early death across communities in Greater Manchester. In our towns and cities, road vehicles are a leading source of air pollution which affects the most vulnerable – children, the elderly, and those experiencing health conditions – the hardest.

Across England it is estimated that NHS business, staff, patient/ carer and visitor travel make up 9.5 billion miles of road travel. In addition to the air quality impact, this constitutes 14% of the NHS's total carbon emissions: 4% for business travel and fleet transport, 5% for patient travel, 4% for staff commutes and 1% for visitor travel.

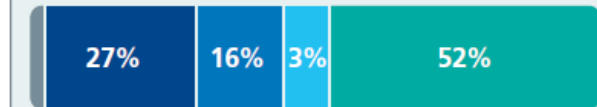
As of 2022, 90% of the NHS GM business fleet is comprised of diesel and petrol vehicles, with the remainder a mix of hybrid and electric vehicles. NHS business travel across NHS GM is responsible for 59,760 ktCO₂e annually, the equivalent of a passenger flying from Manchester to Sydney and back 12,000 times.

More significantly, across NHS GM, staff travel contributes 63,320 ktCO₂e annually, whilst patient and visitor travel emits 79,640 ktCO₂e, an amount that would take 38 million trees to absorb from the atmosphere.

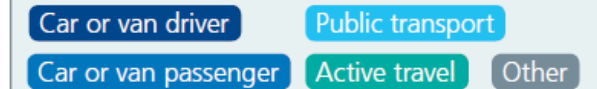
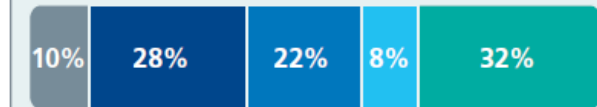
We can address both health and carbon impacts by reducing the need for healthcare related travel, alongside greater access to affordable, sustainable forms of travel. To do this, we must support improvements to Greater Manchester's plan for an integrated transport system and encourage the development of cycling infrastructure around healthcare sites whilst incentivising car-sharing and active travel.

How GM residents travel for journeys under and over 2km (Source, TfGM, Nov 2019)

All journeys under 2km



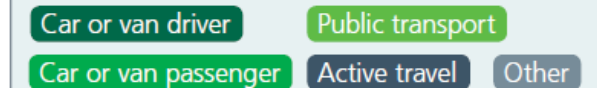
Health journeys under 2km



All journeys over 2km



Health journeys over 2km





Travel, transport and air quality

What we are doing

As a partnership we collaborate with Transport for Greater Manchester (TfGM) to expand and improve public transport services to and from our healthcare sites.

GM NHS Trusts' estates departments are prioritising sustainable travel and transport by improving on-site active and sustainable travel infrastructure. All Trusts have a cycle-to-work lead and salary sacrifice scheme to support active commuter travel. As of 2022, GM Trusts had 57 on-site Electric Vehicle (EV) charge points.

Other innovations include:

- Collaborating with NW local authorities to pilot innovative DAF/Leyland electric heavy goods vehicles for NHS businesses.
- At MFT, some hospitals receive medical samples for testing from GP practices by e-cargo bike. This substitutes 500km of diesel vehicle travel every month.

- Taking advantage of business support grant applications to improve active travel infrastructure: cycle parking, pool bikes and changing facilities for staff and patients.

The Northern Care Alliance have worked with TfGM to improve access to care by locating a new Community Diagnostic Centre at a site that reduces the travel burden for people living in deprived areas. Furthermore, the care pathway has been designed to undertake multiple tests in the same visit to reduce repeat travel.

In 2020, Greater Manchester saved around 7.8 patient miles through remote consultations. That's equal to:



Driving around the world **310** times



310,661 hours of patient time



181,122 car parking spaces



The amount of carbon (1,464 tonnes) captured by **770** hectares of forest in a year



Travel, transport and air quality

What we want to do

Recognising the links between the impacts of transport and poor health, NHS GM will be a positive advocate for low carbon and active travel. This will support small and large organisations within the GM healthcare system to reduce travel and benefit from improved travel infrastructure.

- We will expand our procurement of low and ultra-low emission vehicles.
- We will expand our active and green travel infrastructure by improving our estates to have secure places for cycles and increase provision of on-site EV charge points.
- We will work with partners to encourage active travel by staff for home visits by procuring bikes, e-bikes and e-cargo bikes.
- We will embed learning from the pandemic to allow some non-clinical staff to work from home where practical. This will reduce emissions and support us to work towards becoming a family-friendly, flexible employer. support us to work towards becoming a family-friendly, flexible employer.

Action	Lead	Timeframe
Encourage and support trusts to solely purchase and lease ULEVs and ZEVS to observe the ICS' progress towards the 90% low emissions fleet by March 2024. Including 11% Ultra-Low Emissions (ULEV) and Zero Emission Vehicles (ZEV) and ensure that all vehicles (under 3.5 tonne) purchased or leased are ULEVs and ZEVs.	TPC	March 2024
Support all trusts to have a Travel Plan in place and develop a Healthy Travel Plan for NHS GM.	NHS GM, TPC	March 2024
Identify a public health lead to collaborate with TfGM and wider partners, and drive this collaboration to support the development of affordable, accessible public transport to GM health sites.	TfGM Mayor's Challenge Fund, NHS GM	March 2024
Promote low carbon travel options to staff and patients via: improved messaging and customer travel information, a staff / business travel portal, and cycle-to-work leads embedded in every trust.	TfGM, NHS GM	March 2024
Collaborate with local authorities, providers and other partners to review staff private car behaviours to explore incentivising sustainable alternatives such as shared car use/mobility opportunities, car clubs, shorter journeys, reimbursement for grey fleet activity and public transit use.	TPC	March 2025
Work with stakeholders and innovators to coordinate a needs-responsive non-emergency patient transport offer that incorporates new technologies to create efficiencies.	NHS GM	March 2025
Baseline current and planned provision of cycling infrastructure (including secure cycle parking, lockers and showers) at healthcare sites and develop an improvement plan, including guidance on funding.	NHS GM	March 2025
Work with TfGM to identify and promote safe, accessible and high-quality cycling and walking routes to healthcare sites.	NHS GM	March 2025



Estates and facilities

Why it matters

The NHS Estate is a key enabler in the delivery of high-quality sustainable healthcare. The pandemic demonstrated that estates can be a responsive, flexible part of our healthcare delivery infrastructure. Examples include converting non-clinical space into Covid wards and Nightingale facilities.

The Estate is responsible for 63% of the NHS GM Carbon Footprint and 16% of the Carbon Footprint Plus. It is the area where we have more direct control to reduce carbon emissions by considering building energy, water and waste. £1 in every £187 of NHS spend is on buildings' energy use. Climate change and the current energy crisis further incentivises us to ensure that resources are used efficiently.

Decarbonising the GM Healthcare Estate is a huge challenge and opportunity. The NHS Estates Net Zero Carbon Delivery Plan sets out a four-step approach:

1. Making every kWh count: investing in no-regrets energy saving measures
2. Preparing buildings for electricity-led heating: upgrading building fabric

3. Switching to non-fossil fuel heating: investing in innovative new energy sources
4. Increasing on-site renewables: investing in on-site generation

What we are doing

NHS GM is an active member of the Strategic Estates Group, working in conjunction with other public sector partners. Across GM, the NHS estate varies in age, condition, quality and occupation arrangements such as owned, leased and PFI (Private Finance Initiative). There are budget limits, called the capital departmental expenditure limit (CDEL). Across our variable estates landscape, we are scoping opportunities for decarbonisation as part of our maintenance processes within the parameters of these budgets.

We are also working with partners to improve our green and active travel infrastructure across our estate.

Other GM examples of good practice include:

- Primary Care – production of Estates design guide
- The Northern Care Alliance and MFT have partnered on an approach to assess the feasibility of on-site waste treatment technologies
- Hospitals are upgrading to smart LED lighting
- Tameside and Glossop Integrated Care NHS Foundation Trust have a scheme to re-use unwanted furniture and equipment

What we want to do

New developments will be built to net zero carbon standards. We will continue to scope decarbonising opportunities in estates maintenance.

NHS GM will support providers to implement the four-step Estates Net Zero Carbon Delivery Plan. We will do this through collaboration, supporting smaller providers and scaling up. We will also work with the GMCA Estates Teams to look for shared opportunities.



Estates and facilities

Action	Lead	Timeframe
Commission a high-level baseline assessment of the GM NHS Estate to identify shared opportunities and indicative costs for decarbonisation.	NHS GM	March 2024
Identify and implement existing decarbonisation initiatives across the primary care estate to deliver early benefits to the sector.	NHS GM	March 2024
Identify an Estates lead to work with regional energy hubs and the District Network Operator to identify and address constraints and opportunities for heat decarbonisation.	NHS GM	March 2024
Maintain oversight of estates decarbonisation performance across GM, signposting to and providing support with funding opportunities.	NHS GM	March 2025
Reduce carbon emissions from the building estate by at least 25% from 2019 baseline, maintaining oversight of delivery of Trusts' provider plans and collectively supporting primary care colleagues.	TPC, NHS GM	March 2025
Support better waste management and increased recycling rates in trusts through sharing and signposting to tools and best practice, and work with the GMCA to explore opportunities for general domestic waste.	TPC	March 2025
Work with national NHS colleagues and local authorities to develop and share innovative energy framework agreements such as Power Purchase Agreements (PPAs) for off-site renewables and battery storage and facilitate partnerships between primary care and secondary care to access these.	NHS GM	March 2025



Medicines

Why it matters

Medicines account for a quarter of the NHS Carbon Footprint Plus. Impacts are predominantly related to manufacturing and transportation but there are some medicines with a high global warming potential (GWP) at the point of use. For example, volatile anaesthetic and medical gases (such as desflurane, sevoflurane and nitrous oxide) and propellant gases in metered dose inhalers (MDIs) account for 5% of NHS emissions.

Reducing emissions from medicines (excluding production and transportation) considers four key areas:

- Focusing on prevention rather than treating diseases
- Ensuring appropriate prescribing including lower carbon alternatives where appropriate
- Reducing waste and ensuring safe disposal
- Avoiding/minimising medicines with high GWP

Shifting from healthcare to prevention is key to driving down carbon.

For example, tooth decay is the most common reason for paediatric anaesthesia in the UK but is preventable with a low sugar diet. Children in the North West experience the greatest levels of tooth decay in the country, with ethnic minority children and those living in the most deprived communities most affected.

When people need medicines, optimal care plans ensure they take their medications appropriately to improve their health but also reduce waste. Improving care also reduces the need for hospital admissions and repeat visits. Clinicians have a vital role to play in tackling the carbon impact of medicines and working with patients and families to consider carbon in prescribing decisions.

What we are doing

- Tameside General Hospital has stopped adding sugar to staff and visitor meals. It has also banned sugary and fizzy drinks.
- The Greater Manchester Medicines Management Group (GMMM) approved Management Plans for COPD and Asthma that incorporates CO² equivalents to guide prescribing choices. The children's Asthma Management Plan is under review.
- The Greater Manchester Inhaler Steering Group, including primary and secondary care, community pharmacy and commissioning, promote the use of dry powder inhalers (DPI) over metered dose inhalers (MDI) where clinically appropriate.
- Desflurane use across GM has been reduced from 26.6% in April 2019 to 0.12% in April 2023 as a proportion of all volatile anaesthetics. Desflurane is a volatile anaesthetic with a GWP more than 2,500 times higher than CO₂.



Medicines

What we want to do

- We will work across the system to embed prevention in healthcare commissioning pathways and procurement practices.
- We will ensure appropriate prescribing by supporting social and low carbon options.
- We will work with primary and secondary care partners to develop sustainable prescribing models and support patients to use their medication optimally, reducing medicines waste.
- We will oversee the transformation of anaesthetic and medical gas practices and inhaler prescribing to drive down carbon emissions from medicines with high GWP.

Action	Lead	Timeframe
Implement Green Inhaler approach to prescribing across GM, ensuring only 25% of non-salbutamol inhalers are MDI's and reducing the mean life-cycle carbon intensity of salbutamol inhalers to 13.4 kg.	NHS GM	March 2024
Expand the uptake of green social prescribing referrals by 10% in each locality against 2019/20 baseline, and collate and promote opportunities being delivered across GM.	NHS GM	March 2024
Ensure training and briefing materials on the health benefits of exercise and social prescribing available to all Primary Care Networks.	Primary Care Networks	March 2024
Eliminate use of desflurane as a volatile anaesthetic gas and facilitate shared learning to reduce carbon emissions associated with all volatile anaesthetic gases.	TPC	March 2024
Ensure all provider Trusts have programmes in place to minimise wasted nitrous oxide and Entonox and share approach.	TPC	March 2025
Support medicines waste reduction projects and projects tackling overprescribing through carbon footprint impact calculation.	TPC, Primary Care Networks	March 2025

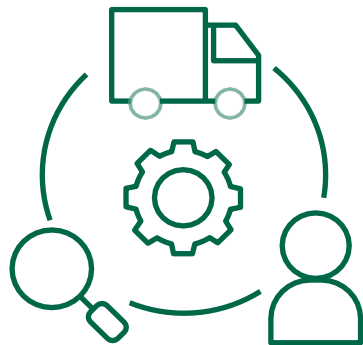


Supply chain and procurement

Why it matters

NHS GM accounts for around 5.7% of national NHS spend. A significant proportion of this resource is related to the NHS supply chain and procurement. Every year, the equivalent of 220 full-time staff across GM Trusts raise over 240,000 purchase orders. In GM, £827m is deemed ‘influenceable’ by procurement.

The supply chain, or Scope 3 emissions, account for 61% of the GM NHS Carbon Footprint Plus, the equivalent of 1,060,520 tCO₂e. It is clear we must re-think our supply chain and procurement practices. The NHS’ Procurement Target Operating Model (PTOM) encourages integrated sustainable procurement at system level.



The pandemic has exacerbated existing challenges to sustainable procurement. Examples include the increased use of PPE, resource diversion and supply chain issues. Nevertheless, the Green Plan is an opportunity to re-focus our attention on sustainable procurement. We can capitalise on the current strong will to achieve this. At COP26 in Glasgow in 2021, the Chief Executives of some of the NHS’s largest suppliers such as GSK, AstraZeneca, Biogen, BT Group, Novo Nordisk, Microsoft, Smith and Nephew, Medtronic and Elis committed to reach net zero by 2045 to support a healthier future.

By including sustainable procurement principles into our tenders, we can work towards a circular economy that is less carbon intensive and supports local communities.

What we are doing

The GM NHS Procurement Programme has a team that is developing and implementing PTOM.

All Trusts have a sustainable procurement lead. The Trust Leads have monthly meetings with the GM NHS Procurement Team to agree priorities and update on progress.

GM has a Primary Care Sustainability Group. The group has a dedicated work stream focused on the supply chain.

What we want to do

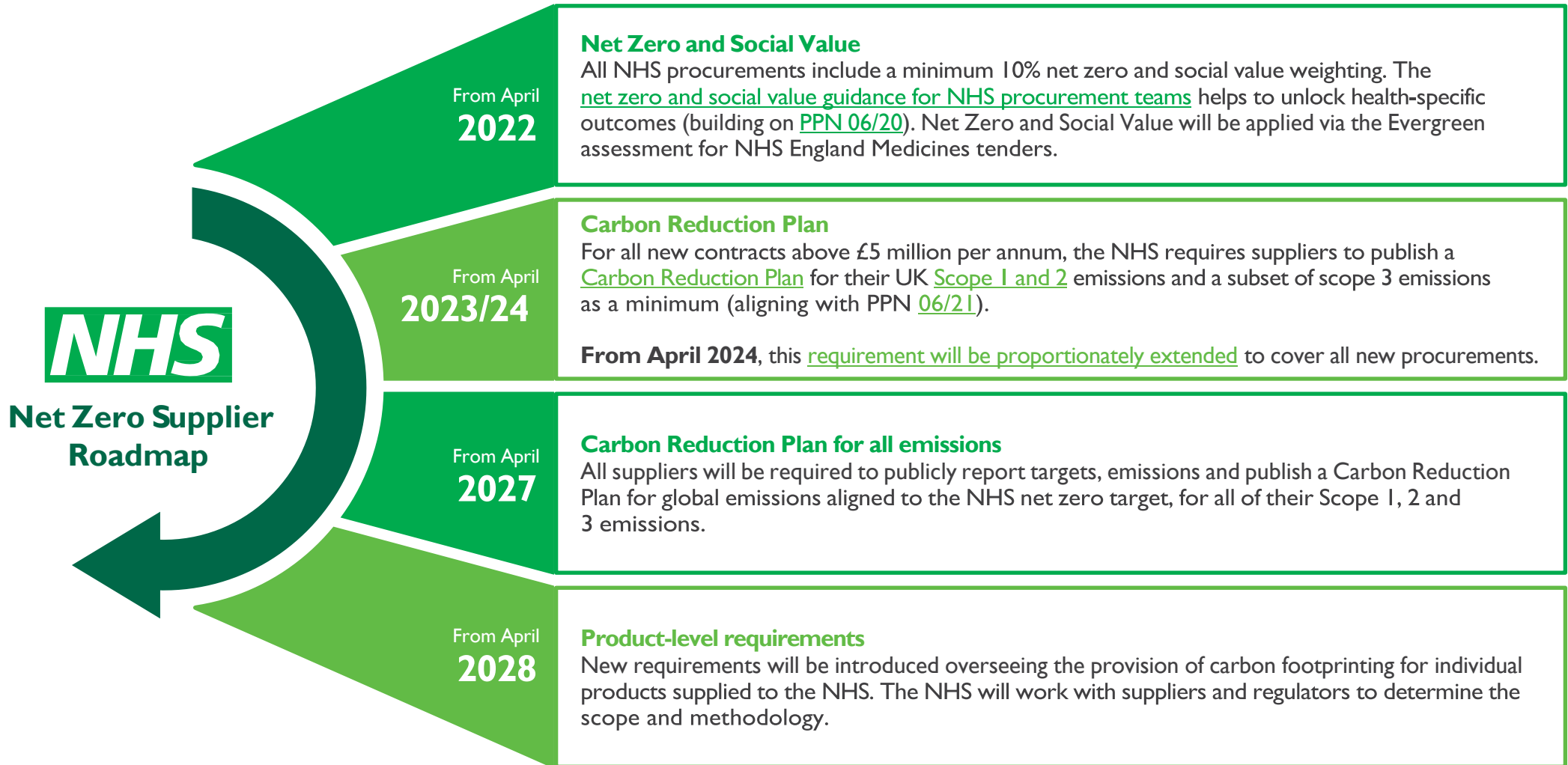
We will work towards embedding sustainable procurement in the commissioning cycle.

Procurement is conventionally measured in terms of monetary savings and stock availability. We will need to establish consistent measures for sustainable procurement to measure progress and allow comparison.



Supply chain and procurement

NHS Net Zero Supplier Roadmap





Supply chain and procurement

Suppliers

Action	Lead	Timeframe
Adopt the Government's 'Taking Account of Carbon Reduction Plans' (PPN 06/21), required for all suppliers with new contracts for goods, services, and/or works with an anticipated contract value above £5 million per annum.	GM Procurement Programme	April 2022
Adopt the Government's 'Taking Account of Carbon Reduction Plans' (PPN 06/21), required for all suppliers with new contracts for goods, services, and/or works for all values.	GM Procurement Programme	April 2024

Transport and logistics

Action	Lead	Timeframe
Encourage suppliers to use low carbon delivery mechanisms, including zero-emission vehicles, consolidation centres and zero-emission last mile logistics.	GM Procurement Programme & Providers Directors of Estates	March 2024

Procurement target operating model

Action	Lead	Timeframe
Nominate an NHS GM lead for sustainable supply chain and procurement to incorporate sustainability into the foundations of NHS GM delivery.	NHS GM	July 2022
Adopt the national approach for incorporating environmental and social value in procurements at ICP level.	GM Procurement Programme	Ongoing
Encourage suppliers to adopt the Evergreen Supplier Framework as a mechanism to improve maturity and enable benchmarking.	GM Procurement Programme	December 2023



Supply chain and procurement

Primary care

Action	Lead	Timeframe
Embed net zero into future procurements/commissioning.	NHS GM	March 2023
Undertake spend analytics and benchmarking at pilot sites to identify areas of high-carbon-generating procurements and high priority interventions to address these.	Primary Care: Practice Managers	March 2024

Waste and packaging

Action	Lead	Timeframe
Establish a system-level scheme for walking aid collection and refurbishment, and ensure providers have schemes in place.	NHS GM, TPC	March 2023
Undertake at least five pilot projects to reduce packaging with suppliers.	GM Procurement Programme	March 2024

Sustainable consumption

Action	Lead	Timeframe
Phase out easily replaceable unsustainable products: <ul style="list-style-type: none"> Replace all plastic based single use catering items with non-plastic and more sustainable alternatives. Ensure office paper use is reduced by 50% by 2025 against 2019/20 baseline, and 100% recycled content white paper is used. Reduce overall use of single-use plastics. 	GM Procurement Programme	March 2024
Pilot at least five re-usable or remanufactured products as an alternative to single use.:	GM Procurement Programme	March 2025



Food and nutrition

Why it matters

It is estimated that food and catering services in the NHS account for approximately 6% of the NHS's Carbon Footprint Plus. Food is essential to health and wellbeing and plays a central role in community connections and relationships. Furthermore, food plays an important role in GM's local economy. The sector employs over 100,000 people in industries ranging from agriculture to hospitality.

However, food production, processing, supply, consumption, and waste generate carbon emissions. Locally sourced foods have the potential to be lower carbon by reducing transport miles. Furthermore, the food and hospitality sectors have experienced huge losses during the pandemic. Buying local therefore supports post-pandemic recovery within local communities.

According to WRAP, the UK healthcare sector serves 13% of all meals eaten outside of the home, producing 121,000 tonnes of food waste and 49,300 tonnes of associated packaging waste every year. As well as the true cost impact of this (around £1,900 per tonne) food waste that goes to landfill generates methane, a potent greenhouse gas. Therefore, tackling food and associated packaging waste is also a priority.

What we are doing

Good Food Greater Manchester, supported by NHS GM, is a network of organisations and individuals from across the city-region to make the vision for good food a reality.

Other relevant initiatives include:

- GM's social prescribing models include food-related initiatives such as cooking classes, food growing and community cafes
- Most GM Trusts collect food waste and send off-site for anaerobic digestion which produces biogas
- All Trusts have agreed to reduce their use of single-use plastic crockery and cutlery with over 5,700 kg of single-use plastic catering consumables avoided to date
- The GM Sustainable Procurement Group have led on joint tenders for milk and bread to provide opportunities for local suppliers





Food and nutrition

What we want to do

We will work collaboratively on sustainable and ethical food procurement and tackle food waste across the healthcare sector in GM, considering how food waste can be reduced at source as well as improving disposal methods. We will work proactively with our GMCA colleagues and through Primary Care Networks to identify opportunities at neighbourhood and locality level.

Action	Lead	Timeframe
Provide training and materials to encourage healthier greener diets for patients.	Primary care	March 2023
Monitor the sale of bottled water, encouraging trusts to increase the use of reusable water bottles.	TPC	March 2025
Increase opportunities to make menu options healthier and lower carbon by increasing proportion of fruit, vegetables, beans, pulses or other low carbon ingredients/proteins.	TPC	March 2025
Ensure all providers have programmes in place to tackle food waste and facilitate shared learning.	TPC	March 2025



Climate change adaptation

Why it matters

We are already experiencing the effects of climate change including increased frequency of extreme weather events, rising temperatures and flooding. These pose threats to human health, healthcare buildings and critical infrastructure. People living in the most deprived communities within GM will be disproportionately impacted due to pre-existing social and health inequalities.

We can respond to the threats posed by climate change in two ways:

1. Mitigation to reduce our current and future carbon emissions
2. Adapting to the irreversible impacts of past emissions

This plan predominantly seeks to address mitigation; however, we must not neglect adaptation. Mitigation actions will take decades to have an effect and rely on internal action across all sectors of the global economy. To ensure that we are prepared for the effects of climate change, we need to adapt to unavoidable changes that are already underway. We can be better prepared by developing adaptation plans to build resilience in places and communities.

Since pre-1994, there has been an almost threefold increase in the frequency of extreme weather events in GM.

Past occurrence of extreme weather and climate change hazard events across Greater Manchester

Action	1945-1969	1970-1993	1994-2017
Flood (all forms)	36 (44%)	24 (36%)	109 (52%)
Storm	18 (22%)	24 (36%)	44 (21%)
Cold	17 (21%)	11 (16%)	27 (13%)
Fog	8 (10%)	2 (3%)	10 (5%)
Heat	2 (2%)	4 (6%)	10 (5%)
Drought (water shortages)	1 (1%)	2 (3%)	5 (2%)
Total Events	82	67	210

NHS GM has a role in building a culture and infrastructure that understands and can respond to the effects of climate change. It can support system-level staff training, risk assessments and adaptation plans to ensure an NHS fit for the future.

What we are doing

- In August 2019, what was then the Greater Manchester Health and Social Care Partnership (GMHSCP) was the first Integrated Care System to declare a climate emergency.
- We are working in collaboration with partners across GM and are part of the GM Resilience Forum.
- We are supporting GM Trusts to develop Climate Change Adaptation Plans (CCAPs), a number of which already have these in place.



Climate change adaptation

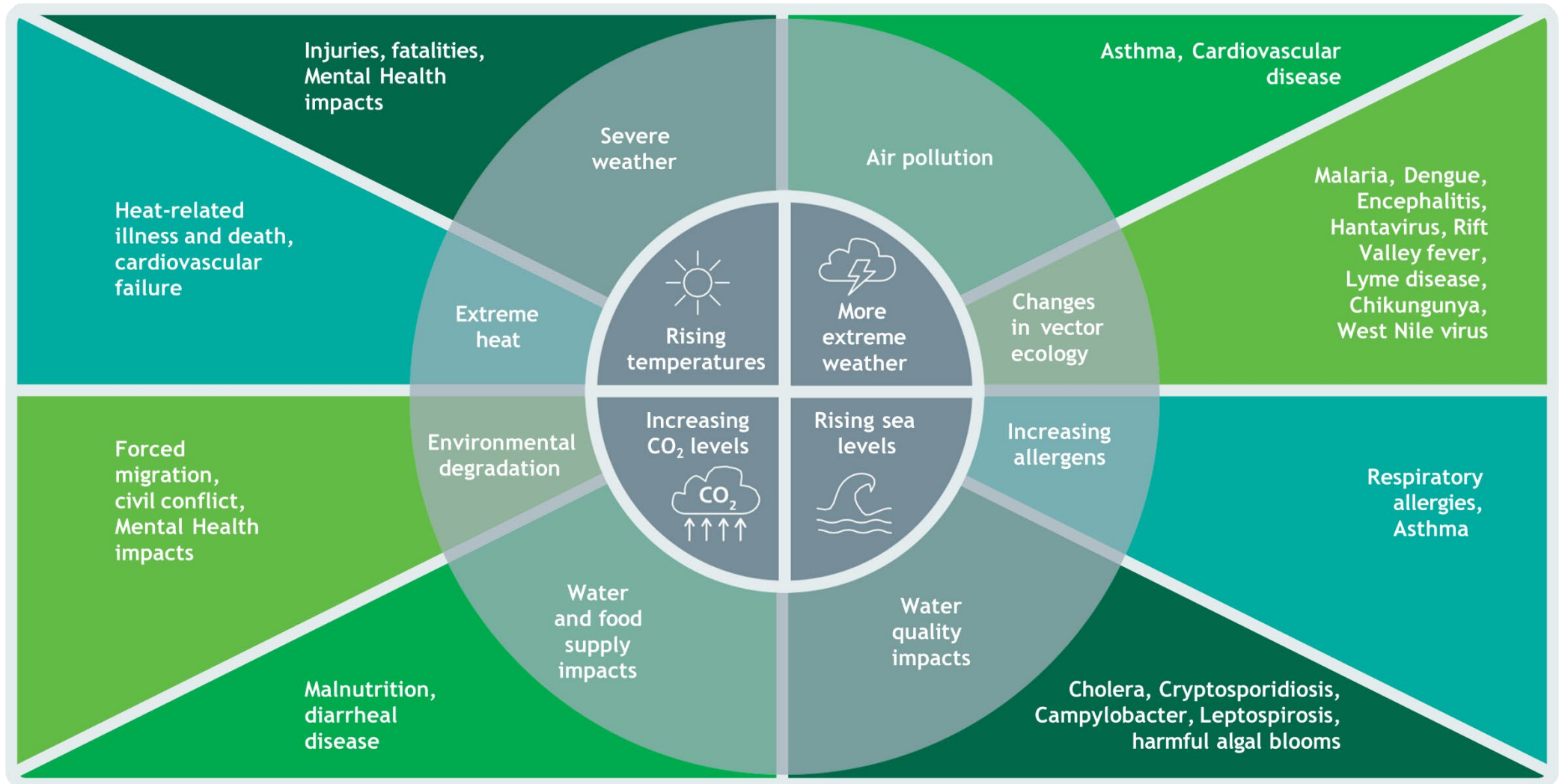
What we want to do

- We will continue to support our Trusts to develop and implement CCAPs.
- We will upskill our workforce to improve their understanding of the effects of climate change and implement CCAPs.
- We will support Trusts to identify healthcare sites that are vulnerable to the effects of climate change. We will invest in targeted interventions to reduce the vulnerability of key sites to these effects, such as extreme weather events.

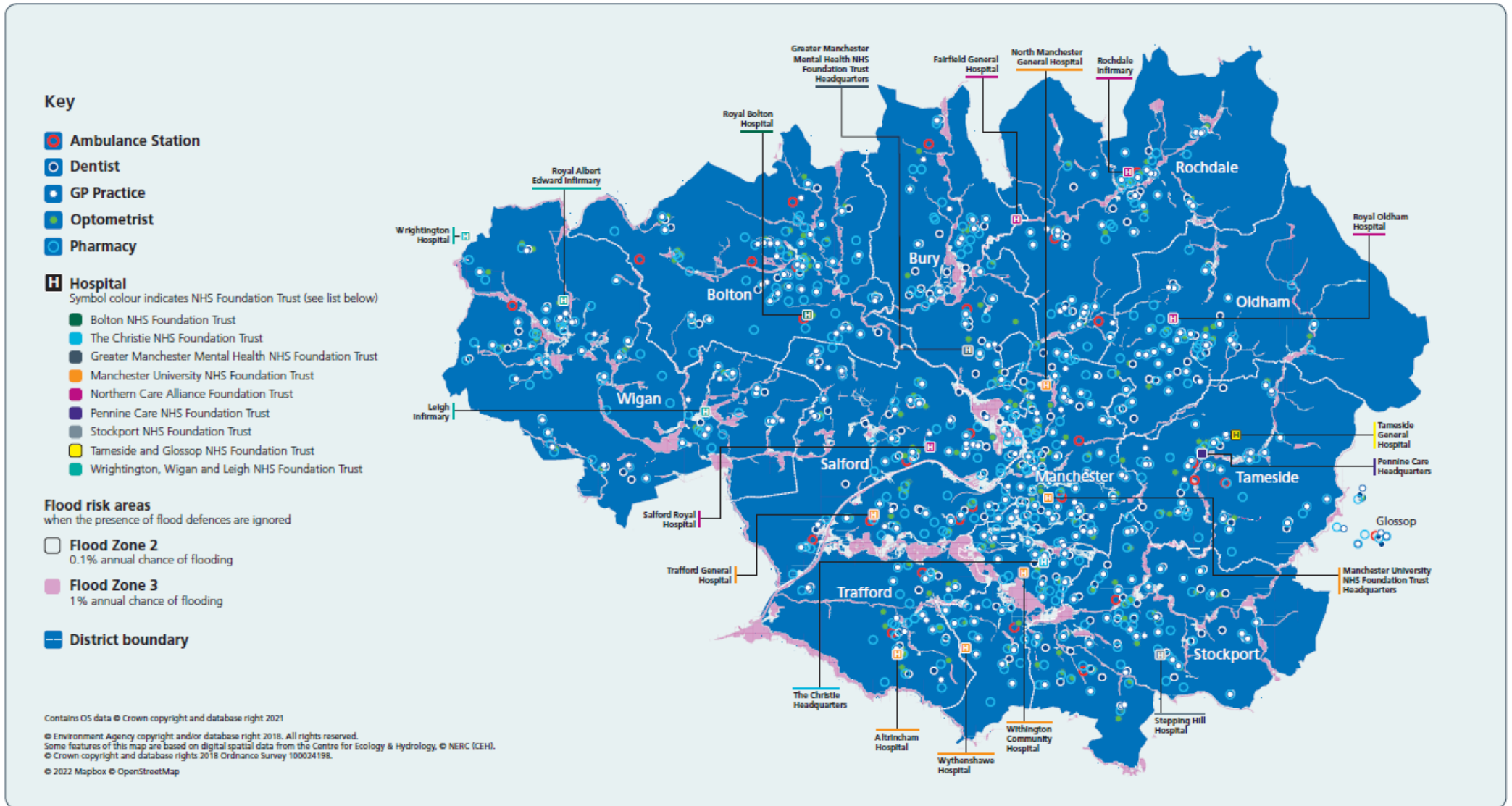
Action	Lead	Timeframe
Ensure NHS GM has climate risks on the risk register, and encourage all provider Trusts to do the same.	NHS GM	March 2024
Work with Combined and Local Authority partners to build a more collaborative approach and improve understanding of climate change impacts encompassing supply chains, key transport infrastructure, areas vulnerable to flooding and prioritised opportunities for adaptation.	NHS GM	March 2024
Provide support and guidance to enable all provider Trusts to have Climate Change Adaptation Plans (CCAPs) in place and maintain oversight of delivery.	NHS GM	September 2024



Climate change adaptation



Climate change adaptation





Green space and biodiversity

Why it matters

Green space and biodiversity are social determinants of health. But biodiversity has declined rapidly over the past 50 years. The UK is one of the most nature-depleted countries in the world with only half of its entire biodiversity left, putting it in the bottom 10% globally.

The benefits of both green and blue (open waters, rivers, canals) spaces for improving general health and wellbeing are well documented.

Green spaces improve air quality, increase carbon storage, buffer noise, provide shade and heat deflection in urban areas, and reduce risks from surface water and soil erosion during flooding events. Plus, views of trees have been shown to reduce the need for pain medication.

Over a quarter of GM is made up of urban green space, including parks, gardens, grass and woodland. During the pandemic some parks in Salford saw 450% increased use, supporting physical activity and mental wellbeing. However, access to green space is unequal. 40% of people from ethnic minority communities live in the most green space deprived areas.

What we are doing

Some GM examples of good practice include:

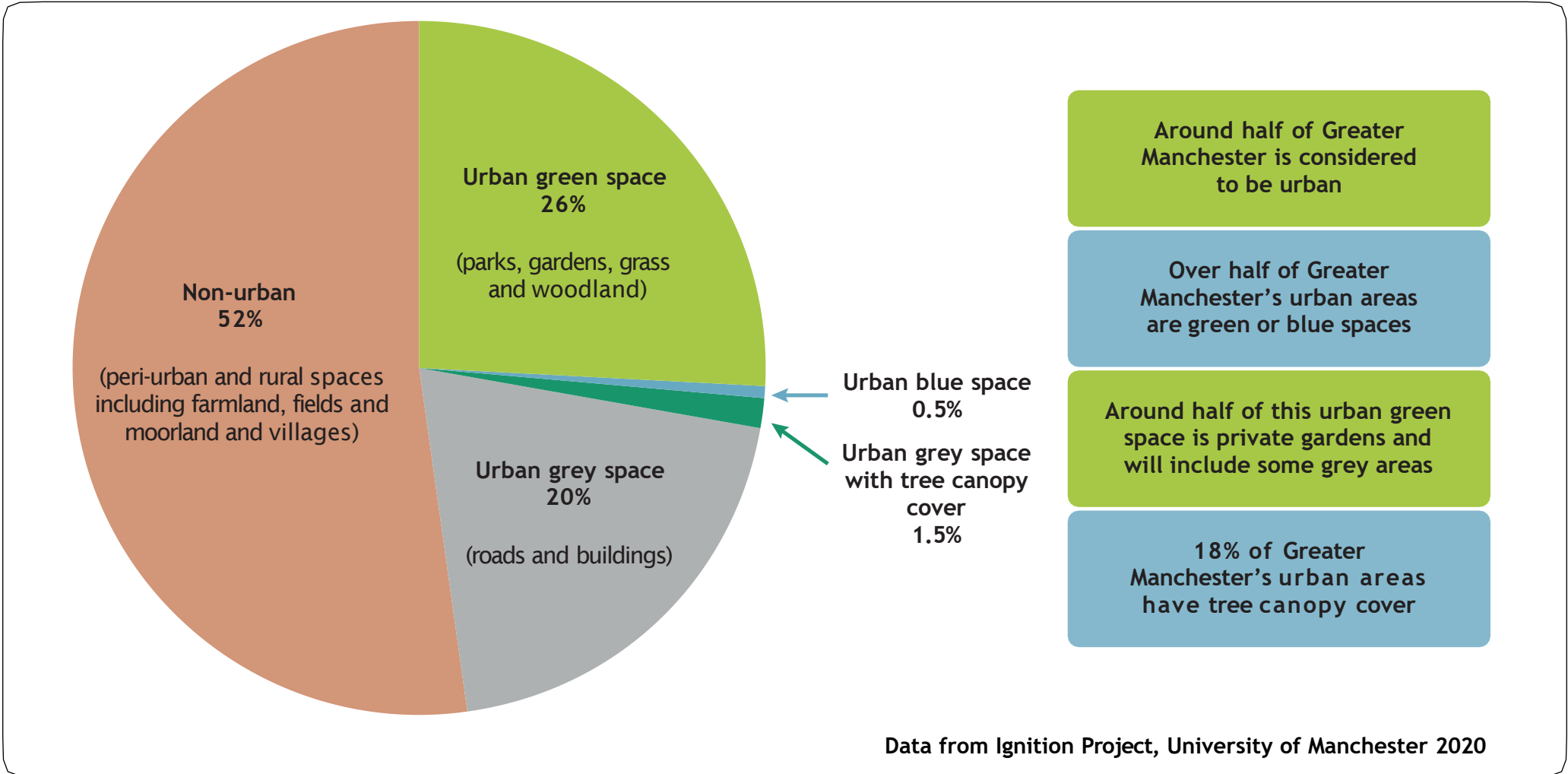
- GMMH worked with Sow the City to develop a Green Health Walk at Prestwich Hospital incorporating orchard and wildflower areas and planters for food growing, allowing staff, patients, carers and visitors to enjoy the hospital grounds, promoting physical and mental wellbeing.
- Petrus, who provide nature-based programmes for people experiencing mental health issues, have a permanent presence in a local GP practice. Here, a Social Prescribing Link Worker engages directly with patients to provide nature-based programmes to suit their needs and interests.
- Lancashire Wildlife Trust's MyPlace programme is a green wellbeing service. The service supports people to connect with nature through nature-based interventions as a way of managing their wellbeing. MyPlace provide different seasonal activities such as bushcraft, practical conservation, carpentry, mindfulness, survey skills and nature walks.

- Many GM Trusts have planted trees provided by NHS Forest, an initiative managed by the Centre for Sustainable Healthcare.
- NHS GM is a member of the Local Nature Recovery Steering Group with GMCA.





Green space and biodiversity





Green space and biodiversity

What we want to do

NHS GM aims to take a leading and active role in the development of new accessible green spaces and biodiversity on our Estates.

- We will deliver 10% biodiversity net gain in new developments
- We will increase the natural capital asset value of our health estate
- We will fully embed green social prescribing across GM
- We will measure and minimise the impact of procurement on natural capital

Action	Lead	Timeframe
Undertake a high-level baselining exercise of current healthcare green space provision including natural capital asset value to identify and prioritise opportunities.	NHS GM	September 2024
Play an active role in Local Authority works, informing relevant programmes and disseminating opportunities through our healthcare networks.	NHS GM	March 2025
Actively encourage healthcare providers to develop and enhance incidental green spaces and implement small biodiversity measures such as tree planting, pocket parks, bat/bird boxes and beekeeping programmes, identifying relevant funding pots wherever possible.	NHS GM	March 2025



Social value and anchors

Why it matters

NHS GM is an anchor institution, connected to local communities, healthcare organisations such as hospitals, universities, local authorities, businesses and the VCSE sector. We can use our position as an anchor institution to embed equity and social value across all areas of our Green Plan. Social value considers the positive economic, environmental and social impacts of our actions on communities. It therefore seeks to influence the social determinants of health and reduce inequalities.

Examples of how we can positively influence communities include:

- As the region’s biggest employer, we can role model good labour rights including gender and ethnic minority equity. This will positively influence the wellbeing of our employees, their families and reduce inequalities.
- We can have sustainable and ethical procurement practices. Procuring from local communities and suppliers with ethical environmental and labour practices, allowing us to work towards a circular economy.

- We can build networks with local partners to collectively identify and focus on local priorities, building both resilient communities and a resilient healthcare service.

The pandemic has widened existing inequalities. A focus on social value is a pathway to pandemic recovery and ‘building back fairer’.

What we are doing

NHS GM is an active member of the Health Anchors Learning Network and the GM Implementing Social Value Group. These learning and action networks support us to embed social value across our healthcare delivery and practice. They also support us to better understand and evaluate the impacts of influencing the social determinants of health.

Recent spend analysis shows 17.61% of GM NHS supply is locally sourced from Greater Manchester, with Trust local spend ranges from 6.03% to 32.87%.

Some other examples of good practice in the region include:

- Northern Care Alliance NHS Foundation trust are developing employment pipelines working with low income and under represented communities to increase the number of local people employed. The program, including work experience, pre-employment courses and apprenticeships can be found on the dedicated [WorkSTART microsite](#).





Social value and anchors

What we want to do

We will embed social value in our Green Plan and associated work programme, identify an Executive Social Value/ Anchor Institution Lead for all Trusts and provide training and networks to build capacity.

Action	Lead	Timeframe
Ensure 10% social value weighting is applied to all GM Trust tenders, which NHS GM can influence.	NHS GM, TPC	April 2022
Provide initial training for procurers and commissioners on inclusion of social value within tenders and contracts, and signpost to training as part of continual promotions.	NHS GM	March 2024
Require all Trusts and Localities to have a Social Value/Anchor Institution Executive Lead and delivery vehicle (programme, approach or strategy).	NHS GM, TPC	March 2023 (Trusts) March 2024 (Localities)
Implement an NHS GM Social Value Leads network (to also include wider organisations) and develop a Social Value Charter/Framework for the NHS GM (in conjunction with the local authorities and other significant anchors such as NHS providers and universities).	NHS GM	March 2023
Develop supporting resources (guidance, strategies, how to guides, best practice tools, and reporting templates) for inclusion of Social Value and agree on the use of a social value measurement tool (such as the National TOMS Framework and the Social Value Calculation) with agreed reporting schedules.	NHS GM	September 2024
Ensure 40% of GM trust influencable spend is with local suppliers.	NHS GM	March 2025



Accountability



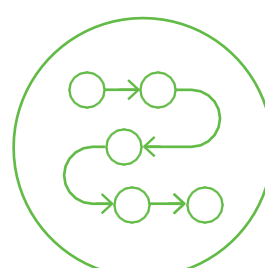
Delivery



Governance



Communications



Next steps



Delivery

To ensure successful delivery of this plan, investment will be needed with relevant resources being assigned.

Finance

Some actions may be cost neutral or actually deliver cost savings. Examples include reducing food and medicines waste. Some actions need capital investment that will yield medium to long term efficiency savings such as LED lighting and electrification of transport fleets.

Some actions could bring cost pressures but will also deliver wider social value benefits that will need to be accounted for as part of any decision making process.

There are examples of funding available to healthcare organisations to deliver Green Plans, such as £260 million awarded to the NHS from the government’s Public Sector Decarbonisation Scheme.

A business case will be developed for the additional financial and personnel resources for delivery of specific priorities within Trusts and primary care.

Risks

The programme will maintain a system-level risk register and mitigation plan. Key risks already identified are listed in the table below.

Risk	Mitigation
Inadequate resources – including staff and budgets.	Senior leadership commitment to ringfence resources.
Insufficient training.	Ringfence resources and protected time for staff development and training.
Primary care engagement – due to the absence of a clear mandate for integration.	Support links with Primary Care Network.
Poor data quality - inconsistent data capture and reporting may impact monitoring progress and evaluation.	Support adequate training and forums for peer learning to enable consistent data capture.
Carbon emissions may increase with emphasis on elective recovery.	Key actions, especially around theatres, may need to be prioritised.



Governance

To ensure delivery of this Green Plan, it is essential to ensure that there are clear lines of governance and accountability. This plan requires a genuine system-wide delivery approach if it is to be effective. In addition to the NHS GM Governance, there are clear links to the national Greener NHS team and the NW Net Zero Board.

The NHS GM Governance for the Green Plan consists of four key groups.

GM Integrated Care Partnership Board (ICP) fulfils the legislative remit of the ICP and sits centrally between the ICB, local authorities, GMCA and the Mayor's Office. A board-level Net Zero lead will be nominated and appointed by the ICP and be a member of the ICP and ICB.

NHS GM Integrated Care Board (ICB) is responsible for the strategic planning of NHS GM's statutory functions and the GM delivery of nationally agreed NHS priorities including those outlined in the "Greener NHS - Delivering a Net Zero NHS" strategy.

GM Population Health Committee, which acts with delegated authority on behalf of the NHS GM ICB and oversees the development and delivery of public health services and supports implementation of population health management approaches including delivery of the NHS GM Green Plan.

GM NHS Net Zero Delivery Board meets quarterly to support the strategic delivery of the NHS GM Green Plan. The group is chaired by the Executive Net Zero Lead. Membership includes representation from primary care, social care, Academic Health Science Network, commissioning, and trusts. The group will also oversee the delivery of Trust Green Plans, and will link to the GMCA 5-year Environment Plan delivery structure.

Sub-groups

Wherever possible, this programme will be linked to existing relevant sub-groups. However, where there is a clear gap, then groups will be established as needed, either on a substantive or task and finish basis. Groups will be asked to provide reports to the programme team on an agreed frequency.

A two-way reporting mechanism will be established between subgroups and the GM NHS Net Zero Delivery Board. Role descriptions will be developed for key personnel, such as the Board-level Net Zero lead and other voluntary leads.

Sub-groups will include:

- **Operational Sustainability Leads Group** – supports the operational delivery of the Green Plan. The group is chaired by the GM Net Zero programme lead. Its membership includes trust and category leads. The group is a forum for sharing good practice and managing specific task and finish activities.
- **Primary Care Sustainability Group** – This cross-sector group will focus on net zero activities within the primary care sector.
- **Sustainable Procurement Leads** – This cross-sector group will focus on net zero activities within procurement. It will work closely with other groups as needed to ensure that progress is made across the wider health and care system.
- **Health System Transport and Travel Collaborative Working Group** – will oversee coordinated working between TfGM and NHS GM around travel demand, carbon, freight and other transport matters.



Who's Who in the Greater Manchester Integrated Care System (ICS)

The operating model brings together health and care organisations, local authorities and other partners which operate within GM ICS. They include:

NHS GM – The Greater Manchester-wide NHS body in the ICS – referred to in guidance as an Integrated Care Board (ICB). Holds overall responsibility for system performance and commissioning of NHS services across the ICS. Governed by a board with representation from multiple sectors, and a series of committees support focused delivery of the board's responsibilities.

Local Authorities – Greater Manchester has ten upper tier Local Authorities responsible for the provision of social care and other wider public sector services.

GM Combined Authority – The GMCA has 11 members, including ten directly elected councillors from the GM metropolitan boroughs and the Mayor of Greater Manchester. Responsible for planning and strategy for regional transport, skills training and economic development. Responsibility for Police and fire and to provide a vehicle for local authority collaboration.

Acute Care Providers – Includes services such as accident and emergency (A&E) departments, inpatient and outpatient medicine and surgery in Greater Manchester.

Primary Care Providers – Provides the first point of contact in the healthcare system, and includes General Practice, Community Pharmacy, Dentistry and Optometry services

Voluntary, Community or Social Enterprise Organisations – Charities, public service mutuals, social enterprises, and many other non-profits playing a key role in improving health, well-being and care outcomes as partners to statutory health and social care agencies.

GM ICP – The partnership body of the ICS – referred to in guidance as an Integrated Care Partnership (ICP). Responsible for developing the ICS strategy, providing direction for Greater Manchester and the plan for how we meet the wider health and care needs of people in GM.

Health and Wellbeing Boards – Brings together representatives from NHS, public health, social care and children's services and Healthwatch to plan health and social care services



Who's Who in the Greater Manchester Integrated Care System (ICS)

The operating model brings together health and care organisations, local authorities and other partners which operate within GM ICS. They include:

Place-based Partnership Committees – Also referred to as Locality Boards. The collaboration of health, care and voluntary sector providers in each of the 10 localities, represented in the Greater Manchester ICP, and reporting to NHS GM. Arrange and deliver health and care services within a local area, combining resources to improve population health and tackle inequalities. They are not statutory bodies and have no legal requirements detailed in The 2022 Health and Care Act, leaving flexibility for local areas to determine their form and functions.

Neighbourhoods – GM has 66 neighbourhoods who support delivery of the plans that are co-designed within place. Multidisciplinary teams from across primary care, secondary care, social care, community groups and the voluntary sector offer varied perspective and detailed knowledge of population needs which they can use to maximise the use of resources within a local area.

GM Trust Provider Collaborative – A membership organisation made up of the NHS Trusts and Foundation Trusts who provide NHS funded services across Greater Manchester.

GM Mental Health Provider Collaborative – A group bringing together all mental health providers in GM to support transformation and commissioning of mental health services at scale.

GM Primary Care Provider Collaborative – Formal, structured collaboration between primary care providers in Greater Manchester, collaboratively setting strategy, driving decision making and assuring delivery as an active partner all levels of the ICS.

GM Alternative Provider Collaborative – A three-way collaboration agreement between the GM Combined Authority, ICS and GM VCSE Leadership Group, working towards a greater role for social businesses and charities within the NHS.

Health Innovation Manchester – GM's integrated innovation organisation, HInM includes the GM AHSN, the MAHSC, the Manchester NIHR Applied Research Collaborative and the GM health & care digital transformation office, leading collaboration with industry and academia.



Communications

To help to fully embed this Green Plan we will lead by example, developing a comprehensive and far-reaching communications plan. We will work with staff, patients, partners (including local authorities and GMCA), and local communities to develop key principles and messages, ensuring they are accessible and aligned with relevant national and local campaigns.

We will develop a strong voice on why reducing carbon emissions matters, and what organisations and individuals can do to make and drive change. We will ensure our communications are inclusive, so they effectively reach a wide audience.

Available channels for communications will include:

- NHS GM website, bulletins and social media
- Primary and secondary care websites, bulletins and social media
- Reports and targeted updates to key stakeholder groups
- Press releases
- Campaigns
- A bespoke Net Zero newsletter

We will proactively identify, create and share best practice case studies across primary, community, mental health, and secondary care and ensure these are widely shared. Some of these case studies will be further developed and shared with regional and national teams. We will ensure that case studies include robust carbon data where applicable and are consistent with the key interventions outlined in the national strategy ‘Delivering a Net Zero National Health Service’ and subsequent updates.

From 2023 onwards, we will include a disclosure in our Annual Report that details performance of the NHS GM Green Plan, including progress against the Green Plan commitments, performance data and key challenges.

This Green Plan will be reviewed annually and refreshed at key intervals as required, to incorporate key updates and lessons learnt. We anticipate that the next iteration of this Green Plan, covering the period from 2025 to 2028 will be considerably more ambitious as the maturity of the NHS GM programme develops.

Action	Lead	Timeframe
Develop and maintain a net-zero communications plan that includes progress updates, key events and proactive production of case studies encompassing all the key themes.	NHS GM	July 2022
Publish progress as part of NHS GM Annual Report, starting in March 2023.	NHS GM	March 2023
Provide strong and consistent messaging/materials about the risks to health from climate change and air pollution and the need for individual and collective action to address this.	NHS GM	September 2024
Dedicate NHS GM bespoke web space for the Green Plan.	NHS GM	September 2023
Enable patient and public feedback involvement in programme campaigns as appropriate.	NHS GM	March 2025



Next steps

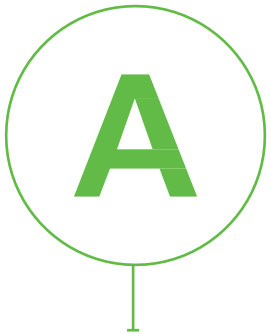
To co-ordinate the delivery of this Green Plan and ensure a collaborative system-wide approach, a small team will be created within NHS GM. The team will comprise of a Programme Director and thematic Leads, including a specific Primary Care Lead. There will also be a defined link to both the GMCA Environment Team and the regional Greener NHS Team. However, without adequate resourcing within the many NHS organisations across GM, implementation will not be possible.

The aim is not to duplicate any local or wider system activity but to enhance and support, whilst ensuring a clear focus on delivery of shared system-wide priorities. A detailed annual workplan will be produced, with clearly defined responsibilities, timelines and expected outcomes.

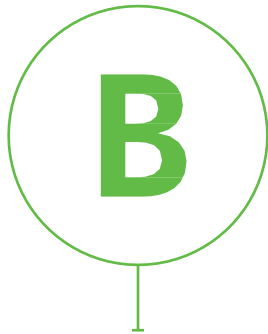




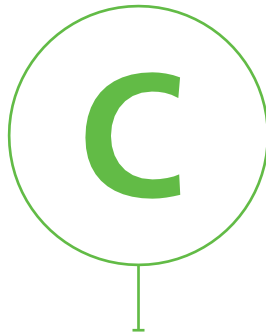
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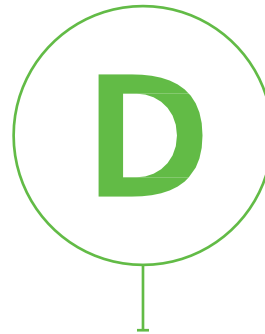
Appendix A:
Reporting measures
at a glance



Appendix B:
Provider Green Plans



Appendix C:
Legislative and
policy drivers



Appendix D:
Abbreviations



Appendix E:
Glossary



Appendix A: Reporting measures at a glance

The reporting measures outlined below are indicative only and not intended as an exhaustive list. Regular reporting will be undertaken using the best available data over the duration of the three-year plan and there will be continuous improvement of reporting metrics.

Areas of focus	Principal aim	Reporting measures
Workforce, Networks and System Leadership	Upskill the workforce to understand how they can save carbon and help tackle the climate crisis.	<ul style="list-style-type: none"> • Number of staff completing Net Zero carbon training. • Take up of 'green' staff benefits such as cycle to work schemes.
Sustainable Models of Care	Redesign care pathways to be less carbon intensive.	<ul style="list-style-type: none"> • Measurable carbon savings through re-designed care pathways.
Digital Transformation	Embed digital transformation in healthcare pathways to reduce carbon footprint.	<ul style="list-style-type: none"> • Number of localities with access to advanced case finding tools to support population-level data analytics in health needs assessments. • Number of virtual GP consultations. • % of virtual outpatient appointments. • Number of virtual beds per 100,000 residents.
Travel, Transport and Air Quality	<p>Reduce the need for healthcare related travel and promote sustainable and active travel.</p> <p>Reducing the number and proportion of journeys under 2km made by car.</p>	<ul style="list-style-type: none"> • % of ULEVs and ZEVs in fleet. • Number of cycle parking spaces. • Carbon emissions from non-emergency patient transport. • Staff travel survey data and change over time.



Appendix A: Reporting measures at a glance

Areas of focus	Principal aim	Reporting measures
Estates and Facilities	Reduce carbon emissions from existing building estates, and ensure all new healthcare buildings are energy efficient and low or zero carbon.	<ul style="list-style-type: none"> • Carbon footprint of building estate. • £ Estates decarbonisation funding secured/spent. • kWh of on-site renewable electricity generated. • kWh energy purchased via PPAs.
Medicines	Focus on preventing rather than treating disease and reduce the use of medicines that have a high global warming potential (GWP).	<ul style="list-style-type: none"> • CO₂e reduction from medicines. • % non-salbutamol inhalers that are MDIs. • The mean life-cycle carbon intensity of salbutamol inhalers in kg. • Proportion of desflurane use relative to overall volatile anaesthetic gases. • Carbon emissions from nitrous oxide and Entonox. • Tonnes of medicinal waste.
Supply Chain and Procurement	Influence procurement spend to drive down the carbon impact.	<ul style="list-style-type: none"> • Carbon footprint of supply chain. • Carbon savings from specific supplier-led carbon reduction schemes. • Reduction in single-use plastics. • Percentage reduction in office paper use. • Proportion of recycled paper use. • Number of pilots for re-usable or remanufactured products. • Number of pilots to reduce supplier-related packaging.



Appendix A: Reporting measures at a glance

Areas of Focus	Principal Aim	Reporting Measures
Food and Nutrition	Work collaboratively on sustainable and ethical food procurement, and drive down food waste.	<ul style="list-style-type: none"> • Food waste tonnage.
Climate Change Adaptation	Support the development of plans and infrastructure to mitigate against the impacts of climate change.	<ul style="list-style-type: none"> • Number of Climate Change Adaptation Plans. • Number of overheating incidents. • Number of organisations with climate change risks on their risk register.
Green Space and Biodiversity	Take an active role in the development of new accessible green spaces and biodiversity on our Estate.	<ul style="list-style-type: none"> • Number of nature-based social prescribing interventions • Number of nature-based schemes reporting validated mental health outcomes e.g., SWEMWBS and ONS4
Social Value and Anchors	Embed social value in the GM Green Plan delivery programme and providing training and networks to build capacity.	<ul style="list-style-type: none"> • Number of organisations with identified Social Value/Anchor Institution Executive Leads. • Number of staff trained in embedding social value in commissioning and procurement. • % of Trust spend with SMEs and with local suppliers.



Appendix B: Provider Green Plans

Links to Provider Green Plans:

- [Bolton NHS Foundation Trust Green Plan](#)
- [Greater Manchester Mental Health NHS Foundation Trust Green Plan](#)
- [Manchester University NHS Foundation Trust Green Plan](#)
- [Northern Care Alliance NHS Foundation Trust Green Plan](#)
- [Pennine Care NHS Foundation Trust Green Plan](#)
- [Stockport NHS Foundation Trust website](#) (Link on About Us page)
- [Tameside and Glossop Integrated Care NHS Foundation Trust Board Papers](#) (Green Plan is in Board papers, page 92)
- [The Christie NHS Foundation Trust Green Plan](#)
- [Wrightington, Wigan and Leigh NHS Foundation Trust Green Plan](#)



Appendix C: Legislative and policy drivers

Legislative

- **Building Regulations (2010):** Minimum standards for design, construction and alterations to buildings.
- **Civil Contingencies Act (2004):** Legislative framework for those responsible for preparing and responding to emergencies.
- **Climate Change Act (2008):** Established powers for the government to ensure that organisations in key sectors are aware of and prepared for the impact of a changing climate.
- **Environment Act (2021):** Includes provisions to establish a post-Brexit set of statutory environmental principles, a new environmental watchdog and provisions relating to waste, air, water and biodiversity.
- **Environmental Protection Act (1990):** Defines fundamental structure and authority for waste management and control of emissions into the environment.
- **Health and Care Bill (2021):** Puts Integrated Care Systems on a statutory legal footing. Integrated Care Boards will be responsible for NHS planning functions previously undertaken by clinical commissioning groups (CCGs).
- **Public Services (Social Value) Act (2012):** Requires people who commission public services to think about how they can also secure wider social, economic and environmental benefits. Requires minimum 10% weighting for social value on contracts.
- **The Waste Regulations (2011):** Built on the concept of the waste hierarchy and requires anyone managing waste to prevent, reuse and recycle.
- **Health and Care Act (2022):** Places duties on NHS England, and all trusts, foundation trusts, and integrated care boards to contribute towards statutory emissions and environmental targets.
- **NHS England Clinical Waste Strategy:** Sets out how the NHS will transform the management of clinical waste by eliminating unnecessary waste, finding innovative ways to reuse, and ensuring waste is processed in the most cost-effective, efficient, and sustainable way. Supported by the Revised Healthcare Technical Manual 07-01 and the waste management support tool.
- **NHS Provider Licence:** Forms part of the oversight arrangements for the NHS and sets out conditions that NHS-funded providers must meet, including having regard to guidance on tackling climate change and delivering net zero emissions.
- **Delivering a 'Net Zero' National Health Service:** Sets out how the NHS will respond to the climate and health emergency and provides a robust analytical process regarding how the health system can reach net zero carbon.
- **Fair Society, Healthy Lives (The Marmot Review):** Report concludes that reducing health inequalities requires action on six policy objectives including health and sustainable places and communities.

Public Health and Healthcare Specific Guidance, Strategies And Policies

- **NHS Net Zero Buildings Standard:** Provides technical guidance to support the development of sustainable, resilient, and energy efficient buildings that meet the needs of patients now and in the future.



Appendix C: Legislative and policy drivers

- **Greener NHS Programme delivery reports and regional Memorandum of Understanding (MOU):** National programme working to deliver the NHS Net Zero Plan, engage the workforce and share learning to reach net zero across the healthcare system.
- **Health Technical Memoranda and Health Building Notes:** Health Technical Memoranda give comprehensive advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare. Health Building Notes give best practice guidance on the design and planning of new healthcare buildings and on the adaptation or extension of existing facilities.
- **NHS Constitution for England:** Sets out the statutory rights and responsibilities for patients, public and staff in the NHS in England. Expected to be updated to embed climate change.
- **NHS Long-Term Plan:** A 10-year plan to ensure that the NHS is fit for the future.
- **NHS Operational Planning and Contracting Guidance - 2023/24:** Sets out priorities and operational planning guidance reconfirming the ongoing need to recover our core services and improve productivity, making progress in delivering the key NHS Long Term Plan ambitions and continuing to transform the NHS for the future.
- **NHS Standard Contract - 2023/24:** Mandated by NHS England for use by commissioners for all contracts for healthcare services other than primary care. Current (2023/24) contract strengthens the requirements on green issues and net zero procurement, in line with commitments set out in Delivering a 'Net Zero' National Health Service.
- **NHS X - What Good Looks Like:** Builds on established good practice to digitise, connect and transform services safely and securely.
- **Public Health Outcomes Framework:** Sets out a vision for public health to improve and protect the nation's health and improve the health of the poorest fastest.
- **Report of the Independent Review of NHS Hospital Food:** Highlights the main challenges for NHS catering and makes recommendations including sustainability.
- **Third Health and Care Adaptation Report:** Summarises the current and future effects of climate change on the sector and outlines practical next steps to build resilience and adaptation.

International Guidance and Agreements

- **Glasgow Climate Pact:** An agreement reached at COP26, the 2021 United Nations Climate Change Conference.
- **Intergovernmental Panel on Climate Change Global Warming of 1.5C Report:** A special report on the impacts of global warming of 1.5 degrees.
- **Paris Climate Change Agreement:** A legally binding international treaty on climate change, adopted in 2015.
- **The Global Climate and Health Alliance:** An alliance of health NGOs, health professional organisations, and health and environment alliances from around the world. Includes Healthcare without Harm, UK Health Alliance on Climate Change and Centre for Sustainable Healthcare.



Appendix C: Legislative and policy drivers

- **UNFCCC Race to Zero campaign:** A global campaign to rally leadership and support from businesses, cities, regions, investors for a healthy, resilient, zero carbon recovery.
- **United Nations Sustainable Development Goals (SDGs):** A call for action for all countries to promote prosperity while protecting the planet. Includes 17 goals to transform the world.
- **World Health Organisation: European Policy for Health and Wellbeing:** Supports health and wellbeing of populations and ensure people-centred health systems are universal, equitable, sustainable and of high quality.

UK strategies and guidance

- **A Green Future: 25 Year Plan to Improve the Environment:** Sets out the UK government action to help the natural world regain and retain good health.
- **Clean Air Strategy 2019:** Sets out the comprehensive actions required across all parts of government and society to improve air quality.
- **Greening Government: ICT and digital services strategy 2020-2025:** Sets out how the government can provide responsible and resilient Information and Communications Technology (ICT) and digital services to all its end users and customers.
- **HM Treasury's Sustainability Reporting Guidance:** Assists those in the public sector to report on sustainability within annual reports and accounts.
- **National Adaptation Programme 2018-2023:** Sets out the actions that government and others will take to adapt to the challenges of climate change in England.

- **National Policy and Planning Framework:** Sets out the government's planning policies for England.
- **Net Zero Strategy: Build Back Greener:** Sets out policies and proposals for decarbonising all sectors of the UK economy.
- **Procurement Policy Notes 06/20 (PPN 06/20):** Provides best practice for public sector procurement, including social value and carbon reduction plans.
- **Resources and Waste Strategy:** Sets out how we will preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy in England.
- **Sustainable procurement: the Government Buying Standards (GBS):** Minimum mandatory standards when buying goods and services for central government departments and their related organisations. The wider public sector is also encouraged to specify GBS in tenders.
- **The Stern Review 2006: The Economics of Climate Change:** An evidence-based report that concluded that the benefits of strong and early action on climate change far outweigh the economic costs of not acting.



Appendix D: Abbreviations

Abbr	Meaning
AHSN	Academic Health Science Network
BU	Biodiversity Unit
BREEAM	Building Research Establishment Environmental Assessment Method
CCAP	Climate Change Adaptation Plan
CCG	Clinical Commissioning Group
CDEL	Capital Departmental Expenditure Limit
COPD	Chronic Obstructive Pulmonary Disease
DPI	Dry Powder Inhalers
EV	Electric Vehicle
GM	Greater Manchester
GMCA	Greater Manchester Combined Authority
NHS GM	NHS Greater Manchester
GMMH	Greater Manchester Mental Health
GMMM	Greater Manchester Medicines Management Group
GP	General Practitioner
GWP	Global Warming Potential
GSK	GlaxoSmithKline
HRD	HR Directors
ICB	Integrated Care Board
ICP	Integrated Care Partnership

Abbr	Meaning
ICS	Integrated Care System
LED	Light-emitting diode
MDI	Metered Dose Inhaler
MFT	Manchester University NHS Foundation Trust
NCA	Northern Care Alliance NHS Foundation Trust
NHS	National Health Service
NWAS	Northwest Ambulance Service
PFI	Private Finance Initiative
PPA	Power Purchase Agreement
PPE	Personal Protective Equipment
PPN	Procurement Policy Note
PTOM	Procurement Target Operating Model
SME	Small and medium-sized enterprise
TfGM	Transport for Greater Manchester
TOMS	Themes, Outcomes, Measures
TPC	Trust Provider Collaborative
ULEV	Ultra-Low Emission Vehicle
VCSE	Voluntary, Community and Social Enterprise
WRAP	Waste and Resources Action Programme
WWL	Wrightington, Wigan and Leigh NHS Foundation Trust
ZEV	Zero Emission Vehicle



Appendix E: Glossary

Climate change is a long-term shift in global temperatures and weather patterns. Human activity causes higher volumes of **greenhouse**

gases (GHGs) to be released into the atmosphere. Different GHGs have a stronger or weaker effect on global temperature changes, so GHG emissions are measured in **tonnes of carbon dioxide equivalent (tCO₂e)** – the equivalent amount of carbon dioxide (CO₂) in tonnes that would have to be released to cause the same warming effect as the emitted GHGs.

To measure the impact that NHS GM has on climate change, we count the GHGs emitted as a result of our activity – this is called our **carbon footprint**.

A

- **Air Quality:** The extent to which air is pollution-free. Poor air quality is damaging to human health, particularly children, the elderly and those with existing medical conditions. Major pollutants are emitted as a result of human activity, especially from fossil-fuelled transport and industry.

- **Anchor Institution:** A large organisation with a significant stake in their local area. They have sizeable assets that can be used to support their local community's health and wellbeing and tackle health inequalities, for example, through procurement, training, employment, professional development, buildings and land use.
- **Anthropogenic:** An environmental change caused or influenced by people, either directly or indirectly.

B

- **Biodiversity/Biodiversity Net Gain:** The variety of life found in a particular space, including plants, animals, bacteria, and fungi. Generally, a high level of biodiversity denotes a healthy ecosystem. Biodiversity net gain is an approach to development which seeks to enhance the biodiversity of an area.
- **Building Research Establishment's Environmental Assessment Method (BREAM):** Sustainability rating scheme for buildings. The application of BREAM standards to buildings helps measure and reduce their environmental impacts.

C

- **Clinical Commissioning Groups (CCGs):** commission most of the hospital and community NHS services in the local areas for which they are responsible.
- **Carbon Budget:** The maximum amount of carbon dioxide (CO₂) or carbon dioxide equivalent (CO₂e) that can be emitted over a defined period of time to limit the impacts of climate change to a specific global average temperature.
- **Carbon Dioxide (CO₂):** A gas present in the atmosphere that is produced when carbon or organic matter, such as fossil fuels, are burned. Carbon dioxide is a prominent greenhouse gas (GHG), and increased levels of carbon dioxide in the atmosphere lead to climate change.
- **Carbon Footprint:** A measure in tonnes of carbon dioxide equivalent (tCO₂e) of the greenhouse gases (GHGs) emitted by an individual, organisation, service or product. For definitions of NHS Carbon Footprint & NHS Carbon Footprint Plus, see Delivering A Net Zero National Health Service.



Appendix E: Glossary

- **Carbon Neutrality:** The balance between emitting carbon and absorbing carbon emissions from carbon sinks.
- **Carbon Sinks:** Anything that absorbs more carbon from the atmosphere than it releases; for example, plants, the ocean and soil
- **Circular Economy:** A model of production and consumption which maximises the useful life of resources through reuse, repair, refurbishment, sharing, leasing, and recycling.
- **Climate change adaptation:** Action to prepare for the current or expected impacts of climate change, in the short, medium, and long term.
- **Climate Emergency:** Political declaration to acknowledge the severe acceleration of human caused climate change and the dangers this causes.
- **Care pathway:** A tool used by the NHS to map out a patient journey from diagnosis and through treatment. They are used to set out best practice and enable the delivery of consistently high quality care to patients. To read more visit the [NHS Digital website on NHS Pathways](#).

- **Co-benefit:** The positive effects that a policy or measure aimed at one objective might have on other objectives; e.g. active travel reduces air pollution and benefits health and wellbeing.

D

- **Desflurane:** Volatile anaesthetic drug used for general anaesthesia, with a global warming potential over 2,500 times higher than CO₂.
- **Digital exclusion:** Individuals being unable to benefit from digital services due to one or more barriers, including: access, skills, confidence, motivation, ease of use, and awareness. To read more visit the [NHS Digital website on digital exclusion](#).

E

- **ERIC:** The Estates Return Information Collection collates information on the running costs of providing, maintaining and servicing the NHS Estate. To find out more visit the [NHS Digital website on ERIC](#).

G

- **Getting it Right First Time:** Helps to improve the quality of care within the NHS by bringing efficiencies and improvements. To find out more visit the [NHS England Getting it Right First Time website](#).
- **Greenhouse Gases (GHGs):** Gases found in the atmosphere which trap heat. Many of these gases are emitted as a result of human activity, and when accumulated in the atmosphere, they cause global climate change. Carbon dioxide (CO₂), water vapour and methane are the most prevalent greenhouse gases. In the healthcare sector, volatile anaesthetics and medical gases are also significant.
- **Green Infrastructure:** Planned natural or semi-natural areas which enhance the environment by improving water quality, air quality, climate change mitigation and adaptation, biodiversity, as well as providing space for recreation/leisure.
- **Greener NHS:** A campaign to tackle the climate 'health emergency' including a national team to support the programmes of work which is part of NHSE/I. To find out more visit the [Greener NHS website](#).



Appendix E: Glossary

H

- **Health Equity:** The absence of unfair, avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or by other dimensions of inequality (e.g. sex, gender, ethnicity, disability, or sexual orientation).
- **Health Inequalities:** Unfair and avoidable differences in health between different groups in society, defined socially, economically, demographically, and geographically

I

- **Integrated Care System:** Partnerships between health organisations within a geographical area to collectively plan health and care services to meet the needs of their population and tackle health inequalities.

K

- **Kilo-watt Hour (kWh):** Unit of energy equal to one kilowatt of power sustained for one hour

L

- **Life-cycle:** A concept that considers the environmental, social, and economic impacts of a product or service through the entirety of its life, from extraction to disposal. Term is also used in a PFI context in relation to asset management and maintenance.

N

- **Natural Capital:** Stocks of natural assets which include geology, soil, water, air and all living things. It is from natural capital than humans derive a wider range of services, often called ecosystem services, which make life possible.
- **Net Zero Carbon:** Greenhouse gas (GHG) emissions produced are balanced with emissions removed from the atmosphere. Emissions produced are reduced as close to zero as possible, and anything remaining is offset.

O

- **The Office of National Statistics Personal Wellbeing Domain for Children and Young People (ONS4):** Uses four wellbeing measures asking about life satisfaction, happiness, worthwhileness and anxiety.

P

- **Patient Initiated Follow Up (PIFU):** Gives patients and their carers flexibility to arrange follow-up appointments as and when they need them, avoiding unnecessary trips to hospitals and clinics. To find out more visit the [NHS England website on patient initiated follow-ups](#).
- **Power Purchase Agreement (PPA):** Long term contract between a power producer and a consumer of electricity.
- **Private Finance Initiative (PFI):** A method of funding major capital investments, where private firms are contracted to complete and manage public projects.



Appendix E: Glossary

S

- **Same Day Emergency Care (SDEC):** Sometimes called ambulatory care, emergency care is clinical care which is not provided within the traditional hospital bed base. To find out more visit the [NHS England website on same day emergency care](#).
- **Science Based Approach/Targets:** Approaches or targets which align with latest climate science, usually the Paris Agreement to limit global average temperature rise to well below 2°C.
- **SWEMWBS:** The short version of the Warwick–Edinburgh Mental Wellbeing Scale which enables the monitoring of mental health in the general population and helps the evaluation of projects which aim to improve mental health.
- **Social Prescribing:** Method of local referral to holistic care focusing on a patient’s health and wellbeing, usually instigated in a community setting.
- **Social Value:** It requires those who commission public services to think about how they can also secure wider social, economic and environmental benefits.

- **Sustainable Quality Improvement:** An approach to improving healthcare in a holistic way by assessing quality and value through the lens of a ‘triple bottom line’. To find out more visit the [Centre for Sustainable Healthcare website on sustainability in quality improvement](#).

T

- **T&D:** Transmission and Distribution emissions are lifecycle emissions from electricity, steam, heating and cooling that are lost in a transmission and distribution system.
- **Trajectory:** The projected path of future emissions, often designed to stay within a certain carbon budget.
- **Transport Mode:** The type of transport used to travel, including: walking/running, cycling, bus, Metrolink, train, single occupancy car, car share etc. The most sustainable travel modes are active travel (walking/running and cycling) and the use of public transport.

U

- **Ultra Low Emissions Vehicles (ULEV)/ Zero Emissions Vehicles (ZEV):** Motorised vehicles which emit zero or close to zero carbon dioxide (CO₂) during use.

W

- **WTT:** Well to Tank are carbon emissions associated with the processing and delivery of fuel.

NHS Greater Manchester Green Plan 2022-2025

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