

The NHS Greater Manchester Green Plan 2025-28

Version 1.0, July 2025



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Green Plan on a Page



The 10 boroughs which form Greater Manchester

About us

NHS Greater Manchester (NHS GM) is the Integrated Care Board (ICB) responsible for making decisions about health services across Greater Manchester across the ten boroughs and was established on 1st July 2022. NHS GM and the statutory Greater Manchester Integrated Care Partnership (ICP) aim to accelerate improvements in population health and wellbeing, contributing to the city region's vision. Figure 1 outlines the partnership arrangements.

We work closely with partners and communities to enhance health outcomes, improve health, and tackle inequalities. Together we are committed to making a lasting difference now and for future generations.

This Green Plan is our second plan, building on the progress made in delivering the first Green Plan 2022-25. It aligns with both current and emerging national and city-region priorities for delivering the net zero and environmental sustainability agenda. Figure 2 shows how the Green Plan aligns with other NHS GM Strategies and Plans.

Figure 1 The GM System Architecture

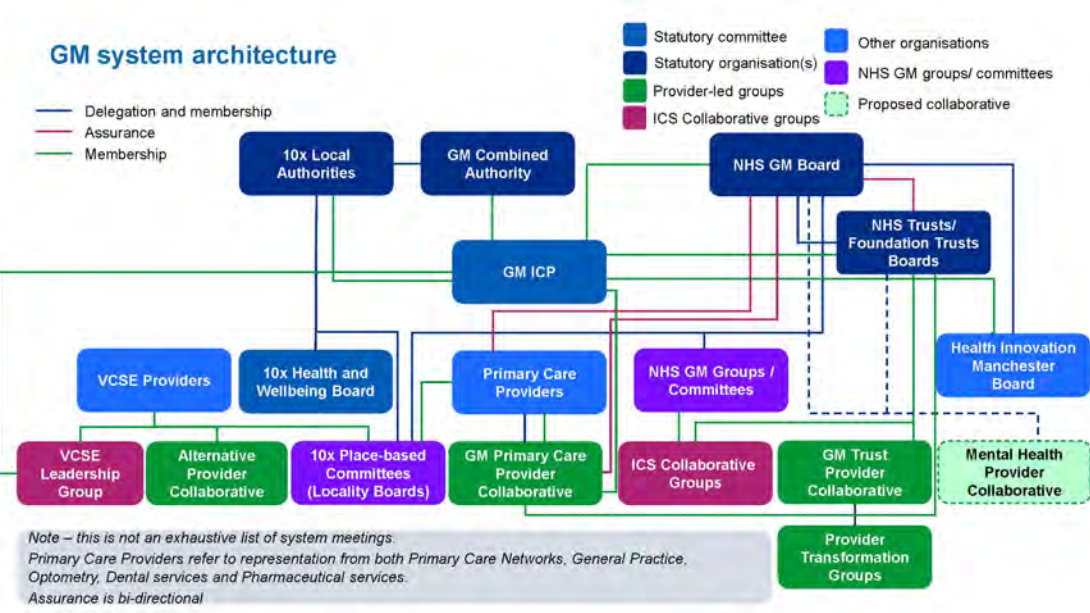


Figure 2 NHS GM Strategy & Plan Alignment



Chairman's foreword

On behalf of the Board and our Executive team, I am delighted to endorse this Green Plan. Climate change and health are deeply interconnected and require effective partnership working across the system to deliver a concerted approach to reducing emissions, adapting to a changing climate and reducing the associated health inequalities.

As [Lord Darzi's report](#) said, there is no trade-off between climate responsibilities and reduced waiting lists. The NHS has many challenges to overcome, including the imperative of delivering our environmental sustainability obligations. This Green Plan builds on the previous plan, increasing the level of ambition.

We need combined efforts to drive down environmental impacts in our energy systems and care models, and to provide access to high quality green space and we will work closely with our national and GMCA colleagues to tackle barriers such as access to capital funding.

We will focus on areas where as an ICB we are best positioned to support and add value to our NHS providers in delivering against their own plans, and work together with our staff, patients, communities, and partners to achieve tangible change.

Sir Richard Leese

Chair of NHS Greater Manchester Integrated Care Board.



Headshot of Sir Richard Leese

Message from the Greater Manchester Combined Authority

In 2019, Greater Manchester declared a climate emergency, followed by a biodiversity emergency in 2022. With the recent launch of the new [5 Year Environment Plan \(2025 – 2030\)](#), and the development of the next Green Plan for NHS GM, we now have a solid foundation upon which to achieve a carbon-neutral city-region. This also presents an opportunity to adopt a more cohesive approach to partnerships across the public sector. We remain committed to reaching carbon neutrality by 2038, which requires coordinated action and investment from both the public and private sectors.

Leadership from the health sector is crucial in creating a green city-region. Climate action has the potential to address broader health inequalities and generate co-benefits, such as improving air quality, improving mental health and wellbeing, and creating green jobs with additional health benefits. The Green Plan complements the delivery of Live Well, Greater Manchester's commitment to ensure everyone has the support, control, connections and resources to lead a healthy happy life.

Cllr Tom Ross

Leader of Trafford Council and portfolio lead for the Green-City Region.



Headshot of Cllr Tom Ross

Executive Summary

Climate change is already impacting the health of the Greater Manchester population, with our most vulnerable populations being the hardest hit. The UK has committed to reaching net zero carbon by 2050, and the NHS has a legal duty to act on the emissions from its activities and an opportunity to go beyond the national ambition as defined in the Delivering a Net Zero NHS report.

In Greater Manchester, we have made significant progress on this over the last three years by delivering system-level interventions to reduce carbon emissions across many areas of our activity, as set out in our 2022 – 2025 Green Plan. We have undertaken a significant process of engagement with our key stakeholders to develop an updated set of priorities for this Green Plan, covering the period 2025 – 2028.

The Green Plan sets out our vision of a healthcare system that is environmentally, socially and financially sustainable, resilient to climate change, and deeply rooted in the principles of climate justice. To realise this vision, we will partner with city-region stakeholders to align our efforts and coproduce solutions.

This includes strengthening alignment with programmes such as GM Live Well, the Multi-Year Prevention Plan, WorkWell Partnership Vanguard, the GM Tripartite Agreement, and the Neighbourhood Model.

Our vision is underpinned by three overarching goals:

1. **Net Zero Carbon Footprint by 2038**, with an ambition to deliver an 80% reduction by 2028-2032.
2. **Net Zero Carbon Footprint Plus by 2045**, for the emissions we can influence, with an ambition to reach an 80% reduction by 2036-2039.
3. **An NHS that is climate-adapted, actively supports nature and health related activities, and promotes interventions that reduce air pollution.**

A detailed annual work programme, guided by our dynamic materiality assessment (see appendix D) and robust governance will drive delivery. Many priorities are interdependent, and some act as enablers for others.

Actions will be prioritised based on impact, resource requirements, feasibility, ability to influence change and alignment with broader strategic goals.

Whilst we have made significant progress to date, substantial work remains to fully integrate this agenda. An engaged and informed workforce is a key enabler, with responsibilities shared across all levels. Interventions must be led by and undertaken within the functions and specialities that are best positioned to act.

The Green Plan support the NHS GM Sustainability Plan, which aims to restore financial balance, across the 5 pillars of cost improvement, system productivity, reducing prevalence, proactive care, and optimising care. Figure 3 illustrates how the Green Plan contributes to these pillars.

Carbon savings also drive cost savings, for example by:

- improving energy efficiency,
- reducing waste, and,
- supporting eligible householders to upgrade their homes and reduce health risks associated with living in cold and damp homes.

Although a fully costed plan is not provided due to the complexity and scale of system-wide priorities, further work will assess investment requirements for specific areas, such as the decarbonisation of the estate.

Together, we can ensure that our healthcare system and the population of Greater Manchester remain sustainable and resilient in the face of climate change.



Figure 3 Green Plan contributions to the 5 pillars of the NHS GM Sustainability Plan

Cost Improvement	System Productivity	Reducing prevalence	Proactive Care	Optimising care
<ul style="list-style-type: none"> • Financial Sustainability Plans (FSPs) to achieve financial balance. • Implementing energy efficiency measures and leveraging funding for estates decarbonisation into the system will reduce utility costs. 	<ul style="list-style-type: none"> • Multi-provider/system activities will improve the financial position. • Many of the priorities in the system and Trust level Green Plans have financial co-benefits. For example, reducing medicinal waste will save cost and carbon. 	<ul style="list-style-type: none"> • Maintaining the population in good health will avoid future costs through prevention. • By reducing air pollution, retrofitting homes to be more energy efficient and improving green spaces, Green Plans support a healthier population. 	<ul style="list-style-type: none"> • Addressing the top modifiable risk factors, and delivering evidence based, cost effective interventions. • Lower carbon diets are healthier, for example, eating less red meat and dairy. Green Plans support programmes such as social prescribing which encourages healthy lifestyles, such as increased physical activity and time spent in nature. 	<ul style="list-style-type: none"> • Transforming the model of care through system actions. • Streamlining care pathways reduces cost and carbon. For example, digital health solutions such as virtual wards reduce the need for transport and lower carbon emissions.

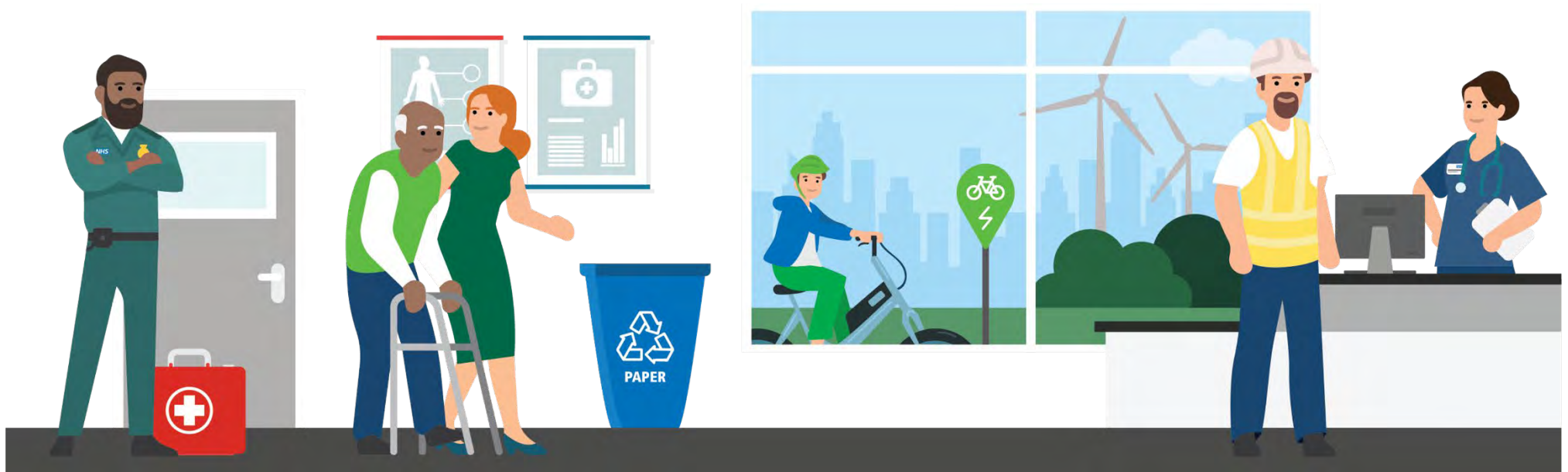
The Green Plan outlines high-level actions across ten focus areas, and a narrative summary is provided on the Green Plan on a Page (page 12). The ten focus areas replicate those in the national ‘Delivering a Net Zero NHS’ strategy, with the addition of content on nature and health, and air quality to ensure the plan also sets out the NHS contribution to deliver the GMCA’s 5 Year Environment Plan 2025 – 2030. Figure 4 provides a high-level summary of the ten focus areas within the plan, the baseline, targets and the key interventions required to deliver the target. Further detail is contained within each of the chapters, and within Appendix A.

Figure 4 High-level summary of the ten focus areas within the Green Plan

Focus area	Why this focus area is in the Green Plan	Baseline	Target change	Main interventions
Workforce, engagement, and system leadership	To educate, engage, and empower the workforce to act on climate change.	All trusts and NHS GM offer sustainable healthcare training options but there is limited take-up. Some plans, strategies and services consider and embed environmental sustainability requirements, but this is not yet widespread practice.	More staff undertaking sustainability training. More plans, strategies and services embedding environmental sustainability requirements, supporting this through an environmental sustainability impact assessment (SIA) process.	Supporting and advocating for improved integration of environmental sustainability across the strategic landscape. This will include improving promotion of training options, as well as oversight and supportive assurance for delivery of trust Green Plans, underpinned by a collaborative sustainability communications approach.
Net zero clinical transformation	To reduce the carbon footprint of clinical care pathways, including supporting the left-shift from treatment to prevention.	A very small number of care pathways e.g. Adult Asthma and COPD consider environmental factors alongside other areas. In 2024/25 there were over 2,900 referrals into the ECO4 Flex home retrofit scheme via the NHS referral route.	An increase in the number of care pathways including environmental sustainability. An increase in the number of referrals into ECO4 Flex via NHS eligibility.	Inclusion of environmental sustainability in care pathway redesign process. Targeted geographical promotion of ECO4 Flex by area of greatest clinical need.
Climate change adaptation	To support the health system to be more resilient to the current and predicted impacts of climate change.	There is a low level of awareness and understanding of the impacts of climate change on the health sector. Some healthcare facilities are located in flood risk areas and aging infrastructure which is not resilient to climate shocks. In 2023/24 there were 1,388 overheating incidents triggering a risk assessment in GM NHS trusts, with extreme heatwaves increasing the risk of overheating in health facilities.	An increase in the number of climate resilience training hours completed, to improve the level of awareness and understanding in the system. Improved understanding of the vulnerabilities of the healthcare estate and services to flooding events.	Promote climate change adaptation training and awareness. Deliver a system-wide climate change adaptation plan with key actions for the health sector.
Digital transformation, research, and innovation	To maximise the environmental benefits of digital technologies and minimise the negative impacts and remain abreast of key innovations in sustainable healthcare.	The number of virtual outpatient and GP appointments has significantly increased with rates of 9% for outpatient & 29.1% for GP appointments in 2022/23, compared to 1.9% and 15.9% respectively in 2019/20. Innovation for net zero is not assessed at a system-level.	Greener Digital guidance is considered and embedded into the broader digital strategy.	Incorporate environmental sustainability considerations into the commissioning of virtual and digital healthcare services. Identify, support, and promote the collective sustainable healthcare benefits of digital transformation.

Focus area	Why this focus area is in the Green Plan	Baseline	Target change	Main interventions
Travel, transport, and air quality	To reduce the carbon and air quality impacts of NHS-related travel and transport and support more staff to travel actively.	14% of the NHS carbon footprint arises from transport and travel. In 2023/24 10% of GM trust fleet was comprised of zero emission vehicles, with carbon emissions of 2,900 tonnes. Currently the majority of NHS staff travel is by single occupancy car travel, with staff travel survey data from 2023 & 2024 showing 22% of staff use public transport and 14% travel actively.	A measurable change in the composition of all new NHS fleet vehicles that aligns with national priorities for electrification by 2027. A change in modal split towards sustainable travel options, evidenced through travel surveys.	Implement a healthy travel strategy to enable and support increases in active travel (walking, wheeling, cycling) and public transport use for healthcare journeys, and support trust fleet electrification.
Estates and facilities	To support the NHS estate to operate efficiently, reducing carbon emissions and waste, and secure funding to support this.	In 2024/25, GM trusts secured over £10M to support installation of renewable energy generation, installation of new LED lighting, and submetering to increase energy efficiency. In 2023/24, GM trust energy emissions were 476 kWh per m ² , with total energy costs of £77M and carbon emissions of 173,000 tonnes. 51% of the trust estate is covered by LED lighting. 586 MWh of energy consumption is provided by on-site renewables, which is less than 1% of overall energy. In 2023/24, GM trusts generated 9,277 tonnes of clinical waste, costing £5.56M to dispose of. 3,800 tonnes of carbon emissions were generated across all types of waste.	An increase in the funding secured by GM NHS healthcare organisations for estates decarbonisation, with a corresponding reduction in the carbon footprint of the estate and associated waste. An increase in the percentage of LED lighting. An improvement in reported Greener NHS metrics such as waste segregation.	Facilitate best practice in energy, water and waste management across GM trusts, and work closely with GMCA on funding mechanisms.
Medicines	To reduce the carbon footprint of pharmaceuticals and pharmacy practices, with a focus on those with emissions occurring at the point of use such as volatile anaesthesia, nitrous oxides and pressurised metered dose inhalers.	Medicines account for 25% of the NHS Carbon Footprint Plus, with anaesthesia and inhalers together accounting for around 4% of NHS carbon emissions. In 2023/24 the average carbon emissions of salbutamol inhalers was 18.7 kilograms per inhaler, and 53% of non-salbutamol inhalers were prescribed as metered dose inhalers. In 2023/24, over 12,700 tonnes of carbon emissions came from nitrous oxide & gas and air usage.	Reduction in the average carbon emissions of salbutamol inhalers to 13.4 kilograms per inhaler, and a reduction in the percentage of non-salbutamol high emission inhalers to 25%. Measurable reduction in nitrous oxide waste and its associated carbon footprint.	Provide training and support to enable providers to implement the high quality, low carbon respiratory care approach and tackle nitrous oxide waste. Engage with community and secondary care pharmacy teams to support medicines optimisation and reduce the carbon footprint of pharmacy practices.

Focus area	Why this focus area is in the Green Plan	Baseline	Target change	Main interventions
Supply chain and procurement	To minimise carbon emissions from the goods and services the NHS buys through contract management and procurement processes.	Two thirds of the NHS Carbon Footprint Plus comes from the supply chain. Nationally over 700 suppliers have used the Evergreen sustainable supplier assessment and recorded their maturity level. In GM this includes over 50% of the top 100 suppliers.	An increase in the adoption, spread and scale of low carbon supply chain interventions by GM NHS trusts. An increase in the number of suppliers (top 100) using the Evergreen assessment from 50% to 75%. The impact of specific interventions will be monitored and reported.	To hold our suppliers to account for delivering nationally mandated net zero requirements and ensure that environmental sustainability is embedded into our procurement policy.
Low carbon food	To contribute to city-region food policy and support food and drink procurement to reduce carbon footprint alongside supporting the left shift from sickness to prevention, with poor diet linked to many diseases.	7/9 GM trusts report undertaking regular menu reviews and making continuous improvements to the environmental sustainability of their catering offer. All GM trusts measure food waste and in 2023/24 1,138 tonnes of food waste from GM trusts was recorded.	All GM trusts to improve the environmental sustainability of their catering offer, as reported via the Greener NHS quarterly data return.	Integrate environmental sustainability and health considerations into both GM trusts and city-region food policies, and support trusts to integrate sustainable food principles into food and drink procurement.
Nature for health	To maximise the opportunities presented by the healthcare estate to support nature-based interventions.	Greater Manchester’s State of Nature Report (2024) outlines key trends and insights about species and habitat decline across the city-region. There is currently no separate baseline for the healthcare system.	An increase in the number of reported schemes in healthcare settings that contribute to the overall priorities for the city-region.	To support delivery of the GM Local Nature Recovery Strategy and the enhancement of green spaces across the NHS estate, maximising the impact of mechanisms such as Biodiversity Net Gain (BNG).



Introduction

We are already witnessing the impacts of climate change on Greater Manchester’s population, including disruptions to medicines supply, flooding, wildfires, and heatwaves. These impacts are most severe for the most vulnerable and disadvantaged communities.

Climate change affects the physical environment, social and economic conditions, undermining many social determinants of health, such as food, education, and housing conditions. By taking action on climate change, the NHS can address these health inequalities.

The NHS treats patients with conditions that are caused or exacerbated by climate change and/or poor air quality, such as respiratory and cardiovascular diseases. Psychological climate impacts such as anxiety, depression and stress, are especially prevalent in young people.

NHS climate initiatives not only mitigate environmental harm but also promote health equity and climate justice. They also align with the fundamental principle of ‘First, do no harm’.

The healthcare system aims to improve the populations health and wellbeing; however, an unfortunate consequence is that the healthcare sector itself is a significant polluter, negatively impacting public health. Globally the sector is responsible for 4.4% of greenhouse gas emissions and if it was a country, it would be the fifth largest emitter.

The UK has committed to reaching net zero carbon by 2050, and the NHS has a legal duty to act on the emissions from its activities and an opportunity to go beyond the national ambition as defined in the [Delivering a Net Zero NHS report](#). Health professionals, being trusted figures, are well-positioned to advocate for climate action and action change within their own specialties.

Integrated Care Boards (ICBs) and NHS Trusts are required to develop and report progress against a Green Plan. These should be integral to an organisations core business, providing a structured approach to delivering and reporting progress. They also offer co-benefits such as financial savings, supporting local biodiversity and improved green spaces, boosting the local economy, reducing air pollution and improving public health.

Working collaboratively at system level enables the delivery of shared priorities aligned with our core purpose as an ICB and a coordinated approach to working with the combined authority, transport authority, and public health network. Figure 5 shows a condensed view of the role of system partners in Green Plan delivery, with a full table in Appendix C.

The [5 Year Environment Plan](#) for Greater Manchester Combined Authority (GMCA) sets out the priorities for the city-region, and this, the second Green Plan for NHS GM, outlines our system-level priorities aligned with both GMCA and national NHS context.

Our priorities include:

- **Delivering and advocating for interventions** that reduce the organisational carbon footprint of NHS GM,
- **Collaborating** with GMCA, Transport for Greater Manchester and other city-region and national stakeholders to coordinate and amplify climate action, maximising the opportunities presented by devolution,
- **Enabling conditions for change** by influencing, supporting, and contributing to local and national strategy,
- **Coordinating a set of impactful ‘do-once’ actions** across our partner organisations,
- **Developing, signposting to, and delivering support via a ‘one-to-many’ model** for primary care organisations,
- **Assuring and supporting the delivery** of Trust Green Plans and the nationally mandated requirements placed on our suppliers.

Figure 5 The role of system partners in Green Plan delivery

System partner	Role
NHS GM	Leading development and delivery of the NHS GM Green Plan, leading system-wide activity and managing relationships with NHSE regional and national teams. Reporting GM-wide progress and performance to ICB.
Trusts	Developing and delivering organisational Green Plans. Supporting system-wide activity. Reporting organisational progress and performance to Trust Board.
Locality Teams	Integrating environmental sustainability into wider locality activities and neighbourhood working incorporating commissioning, quality and performance.
Primary care providers & VCFSE	Support delivery of pan-GM and locality Green Plan priorities. Consider developing a mini-Green Plan.

Full table in Appendix C.

Links to Trust Green Plans are located on the [NHS GM Green Plan](#) webpage. Key legislative and other drivers can be found in Appendix B.

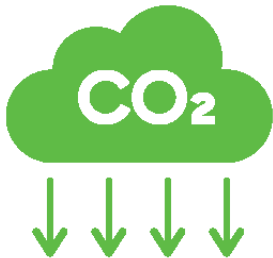
Our vision

Our vision is to achieve a healthcare system that is environmentally, socially and financially sustainable, resilient to climate change, and deeply rooted in the principles of climate justice.

The core purpose of the NHS is diagnosing, treating, and improving health and wellbeing for the whole population, and we are committed to embedding sustainable healthcare principles into service delivery, and supporting a system that is focused on prevention and keeping people well, with minimal environmental impact.

To achieve this vision, our mission is to:

- **Partner with healthcare providers and key city-region stakeholders** such as GMCA and Transport for Greater Manchester (TfGM), to deliver a cohesive and aligned programme of work and coproduce solutions. This approach will also support national NHS sustainability priorities.
- **Lead and coordinate action** within areas where we have control, such as in our role as a strategic commissioner, and where there are combined wins for both health and climate.



We will contribute to the delivery of three overarching goals:

1. **Net Zero Carbon Footprint by 2038**, in line with the carbon budget set for Greater Manchester and closely aligned with the NHS's target of net zero by 2040, with an ambition to deliver an 80% reduction by 2028 to 2032.
2. **Net Zero Carbon Footprint Plus by 2045** for the emissions we can influence, with an ambition to reach an 80% reduction by 2036 to 2039. Whilst most of the activity required to achieve this will be driven nationally, we will both support and hold our major suppliers accountable where we are well positioned to do so.
3. **An NHS which is climate-adapted, actively supports nature and health related activities, and promotes interventions that reduce air pollution.** Although progress against these areas is more challenging to measure than carbon emissions reductions, they are vital to protecting the health of our communities and aligned to the core purpose of an Integrated Care System (ICS).

Our commitment:

We will monitor progress against a suite of carbon and non-carbon metrics to ensure a resilient and equitable healthcare system. Our approach will be inclusive, innovative, and forward-thinking, building on the pioneering spirit of our city-region. We will empower staff and communities to be more actively involved in the delivery of this vision.

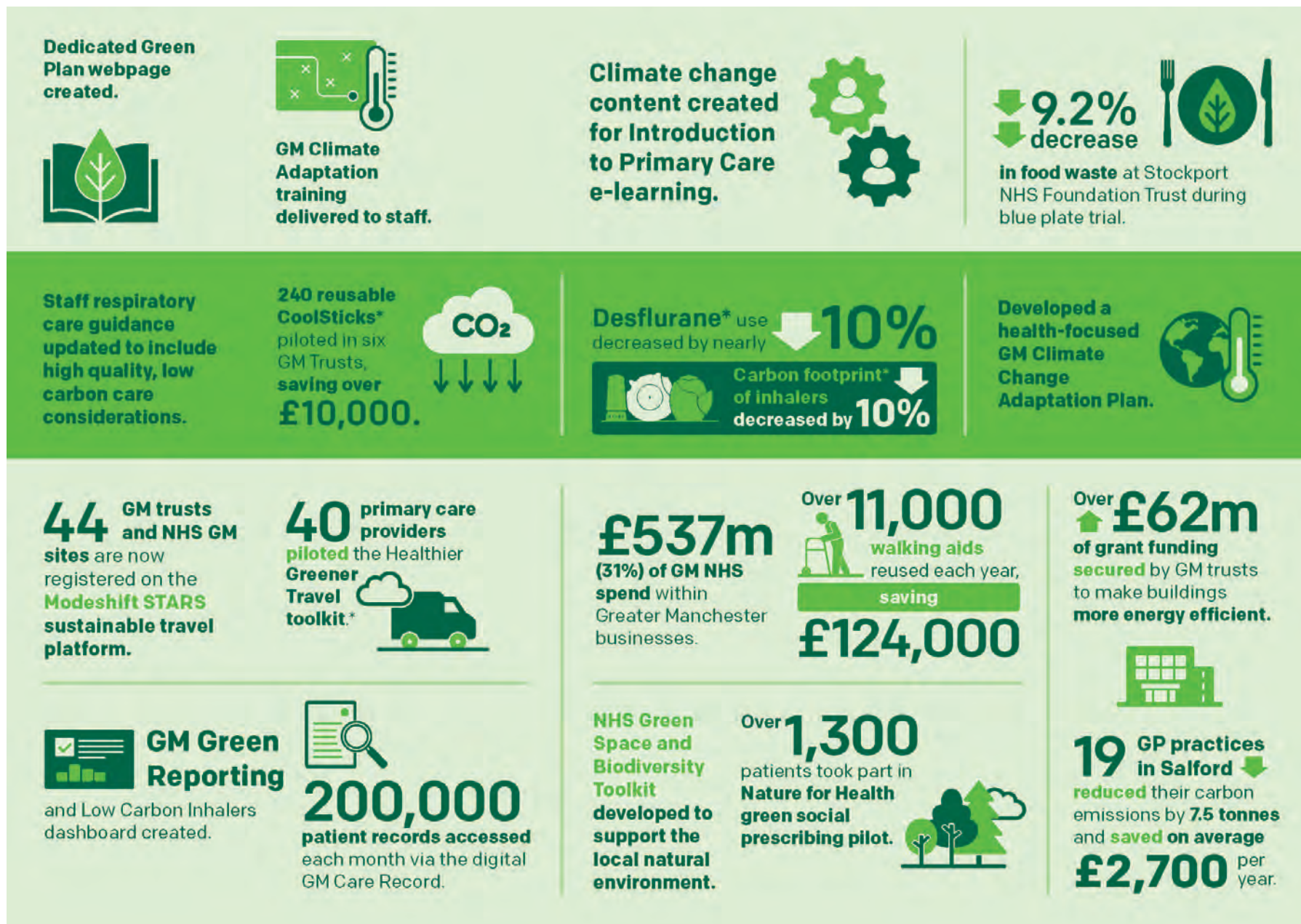
We will take action and share resources to develop, monitor and measure net zero clinical transformations, prioritising interventions which simultaneously improve patient care and community wellbeing whilst addressing the climate emergency, carbon reduction and broader environmental sustainability issues.



A gardener in an allotment

Progress since the Green Plan 2022-25

Figure 6 Infographic detailing the progress made since 2022



*Terminology is detailed in Appendix F: Glossary

Our carbon footprint: baseline, progress to date and target

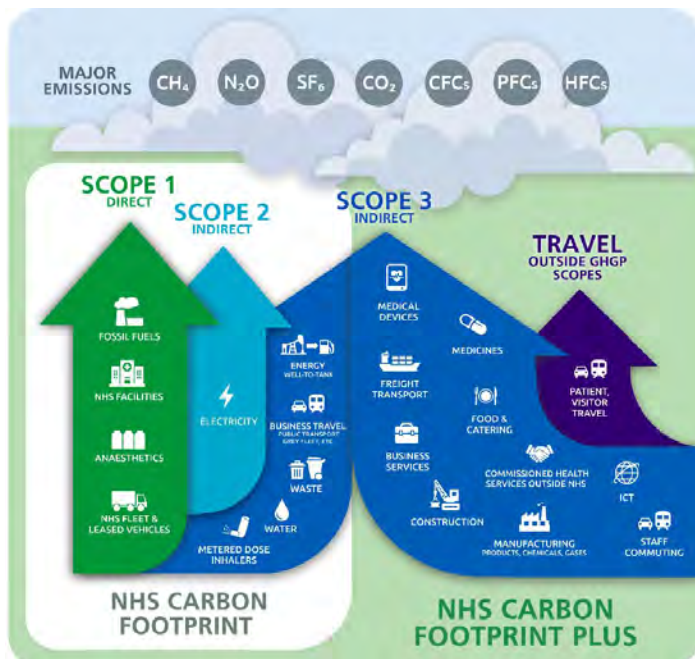
Background

The carbon footprint of the NHS is divided into the three Greenhouse Gas Protocol (GHGP) scopes, as shown in figure 7.

NHS England (NHSE) have developed a methodology for calculating an estimate of the NHS Carbon Footprint and NHS Carbon Footprint Plus, based on the best available nationally collected data and modelling.

NHSE report progress against these for the NHS in England as a whole, as part of their annual report. Therefore, we are not currently required to report progress against our carbon emissions at the organisational level, although doing so is considered best practice and is one way in which we can measure progress of the Green Plan.

Figure 7 Diagram illustrating scopes of NHS Carbon Footprint and NHS Carbon Footprint Plus. From 'Delivering a Net Zero NHS', NHS England (2020).



To support regions, systems and trusts with understanding their Carbon Footprint, NHSE have produced estimates of individual secondary care trusts contributions to national emissions. However, due to data validation processes, these are not available until December following each financial year.

Most emissions from the GM healthcare system are under the operational control of our provider trusts, primary care providers, and their suppliers. Most of the nationally collated and reported emissions data pertains to NHS trusts only.

NHSE are working on providing estimates of the Carbon Footprint at system level for all providers; however, these are not available presently and there are several gaps in the emissions data currently available to us, as indicated below.

Filling these information gaps would require considerable financial and time resources. Despite some of the limitations, we have taken a pragmatic approach to make use of the available data to monitor performance and identify priority interventions within our Green Plan.

There are several components to the carbon footprint of the NHS in GM, as described below:

- **Primary care emissions** are generated from the consumption of energy and water, waste, travel, purchased goods and services and prescribed medicines from the four main contracted services of General Practice, Community Pharmacy, Dentistry and Optometry. Currently, we can only report carbon emissions from inhalers prescribed within General Practice.

- **Trust emissions** are generated from energy and water, fleet, anaesthetic and medical gases, air conditioning, waste, travel, purchased goods and services, prescribed medicines and medical devices and equipment. We have access to good data for Trust carbon emissions, except for emissions associated with air conditioning refrigerants.
- **NHS GM emissions** are generated from commissioned services, office facilities, purchased goods and services and business travel. As our offices are leased buildings shared with other occupiers, obtaining an accurate carbon footprint is challenging and expected to be minimal. We would also need to omit trust and primary care commissioned services from our commissioning footprint to avoid double counting. Therefore, NHS GM carbon emissions are excluded from this version of the Green Plan, until sufficient work is done to provide an accurate representation.

We do not yet report a baseline for the NHS GM Carbon Footprint Plus, scope 3 emissions of our supply chain and the wider healthcare system in GM (e.g. hospices), as this would involve considerable work, and the spend-based methodology for calculating supply chain emissions has a high degree of inaccuracy.

Most of the interventions to reduce emissions from the supply chain will be led nationally, as set out in the NHS Net Zero Supplier Roadmap, with national requirements implemented through our procurement activity in GM.

While we will collate and report system-level emissions, the responsibility for reducing the associated carbon emissions ultimately lies with the various organisational entities that have direct operational control of the sources of those emissions. As NHS GM, our input is through system leadership and influencing our providers through the strategic commissioning process.

We will calculate and report the carbon benefits of relevant system-wide scope 3 interventions, for example, by using the net zero product savings calculator.

Baseline and progress to date

The baseline year for measuring carbon emissions is 2019-20. Figure 8 illustrates the contribution of each component to the system’s reported carbon footprint for the NHS system in GM, based on the available data.

The previous Green Plan covered the years 2022 to 2025. While we do not yet have the 2024-25 data to be able to report the change in carbon emissions during this full period, the data shows a 9.7% decrease in carbon emissions from the baseline year 2019-20, and a 0.6% decrease between 2022-23 and 2023-24 which is shown in Figure 9.

A more detailed and granular analysis for each organisation would reveal the impact of specific interventions to reduce emissions, as presenting an amalgamated view tends to mask these details.

A comprehensive benchmarking report will be presented annually to the Green Plan Oversight Group to ensure transparency and track progress. This report will include benchmarking against available patient contact data, and narrative describing any relevant information on a national level, such as changes to the carbon factor of grid electricity.

Figure 8 Contribution to GM NHS Carbon Footprint by source of emissions (2023-24 data)

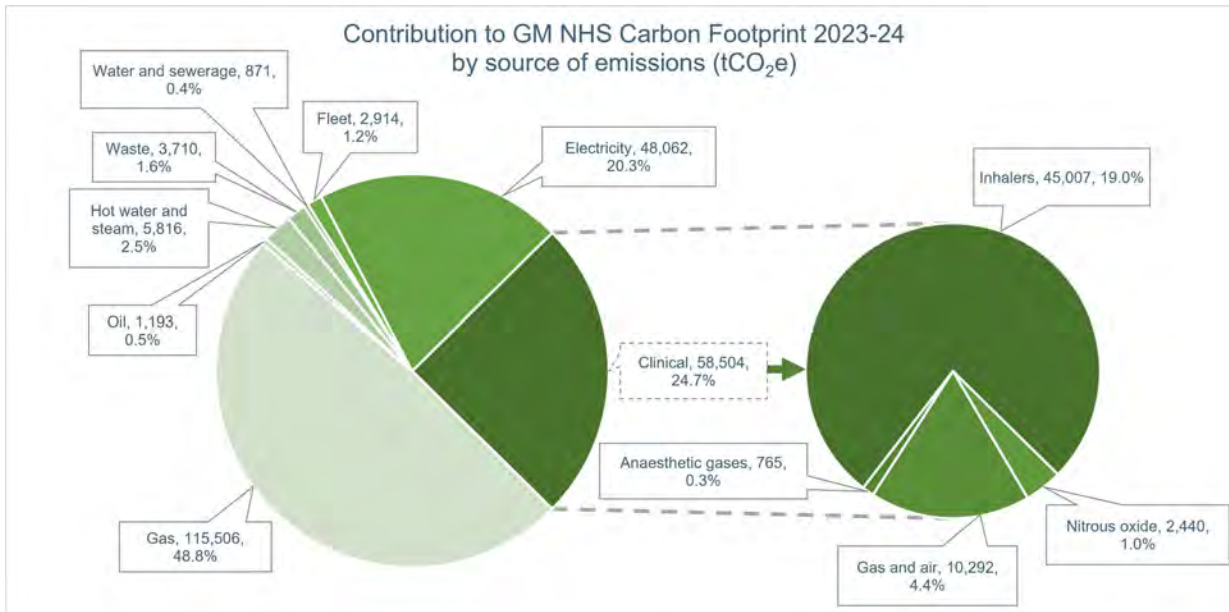
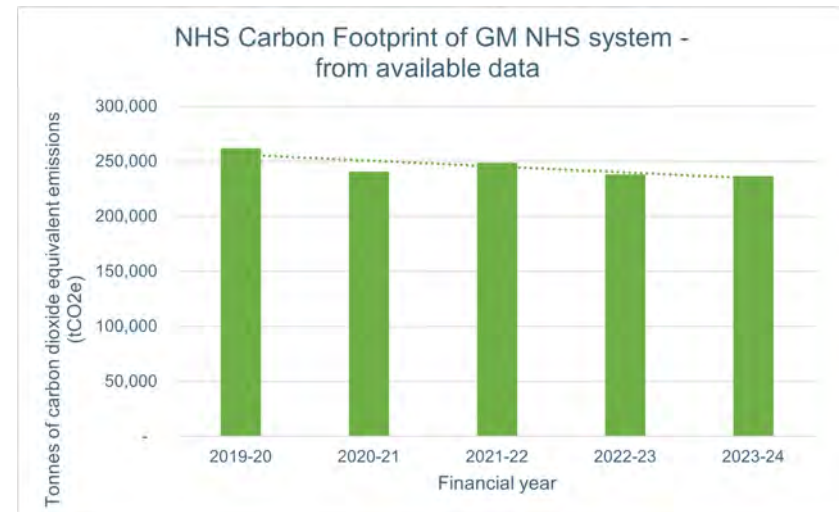


Figure 9 NHS Carbon Footprint of GM NHS system



Carbon budget

Figure 10 shows the carbon budget for the period of this Green Plan, to reach the NHSE target of an 80% reduction by 2028-32 from the 1990 baseline, which equates to a 47% reduction in carbon emissions from the 19-20 baseline. This is an indicative trajectory and progress will be non-linear, as this depends on funding for continued interventions.

Carbon offsetting

Carbon offsetting can help address residual emissions that are technically or economically challenging to eliminate. It is acknowledged that it may not be possible to eliminate all NHS carbon emissions by the GMCA’s target date of 2038, or the NHSE target date of 2045 for the Carbon Footprint Plus. Consequently, there are likely to be residual emissions.

Currently, offsetting is not utilised across the NHS and any future use would be subject to sector-wide guidance that considers value for money and integrity. Therefore, this iteration of the NHS GM Green Plan will not consider offsetting carbon emissions should the carbon budget for any given year be exceeded but will focus all efforts on reducing emissions as quickly as is feasible.

Carbon insetting involves investing in emission reduction or removal activities within an organisation’s value chain, for example, within the GMCA boundary or broader NHS estate. Should GMCA or national NHS teams further develop their approach to carbon insetting, we will support this as a key stakeholder.

Figure 10 GM NHS System Carbon Footprint Trajectory to Net Zero

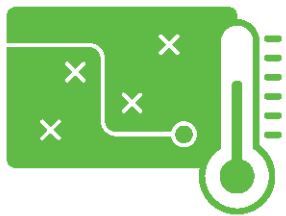
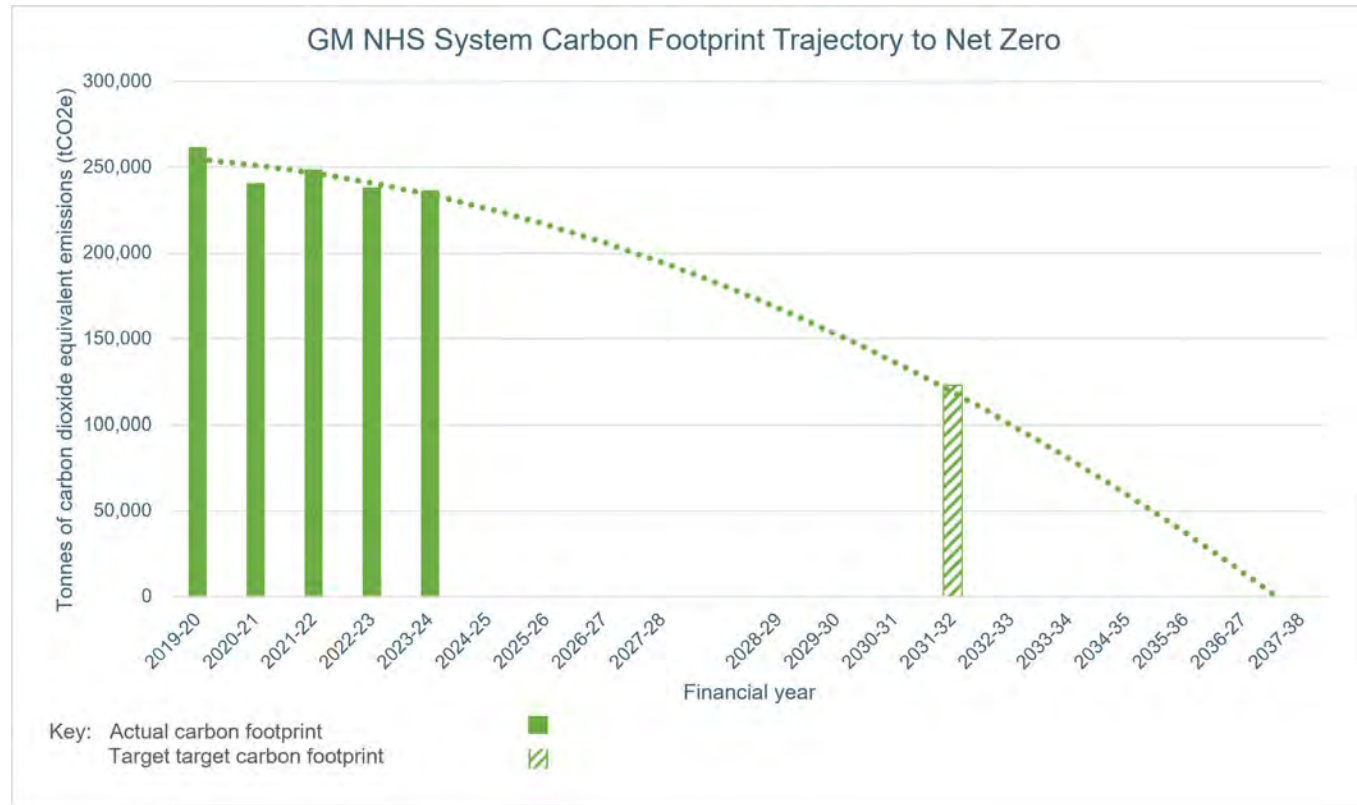
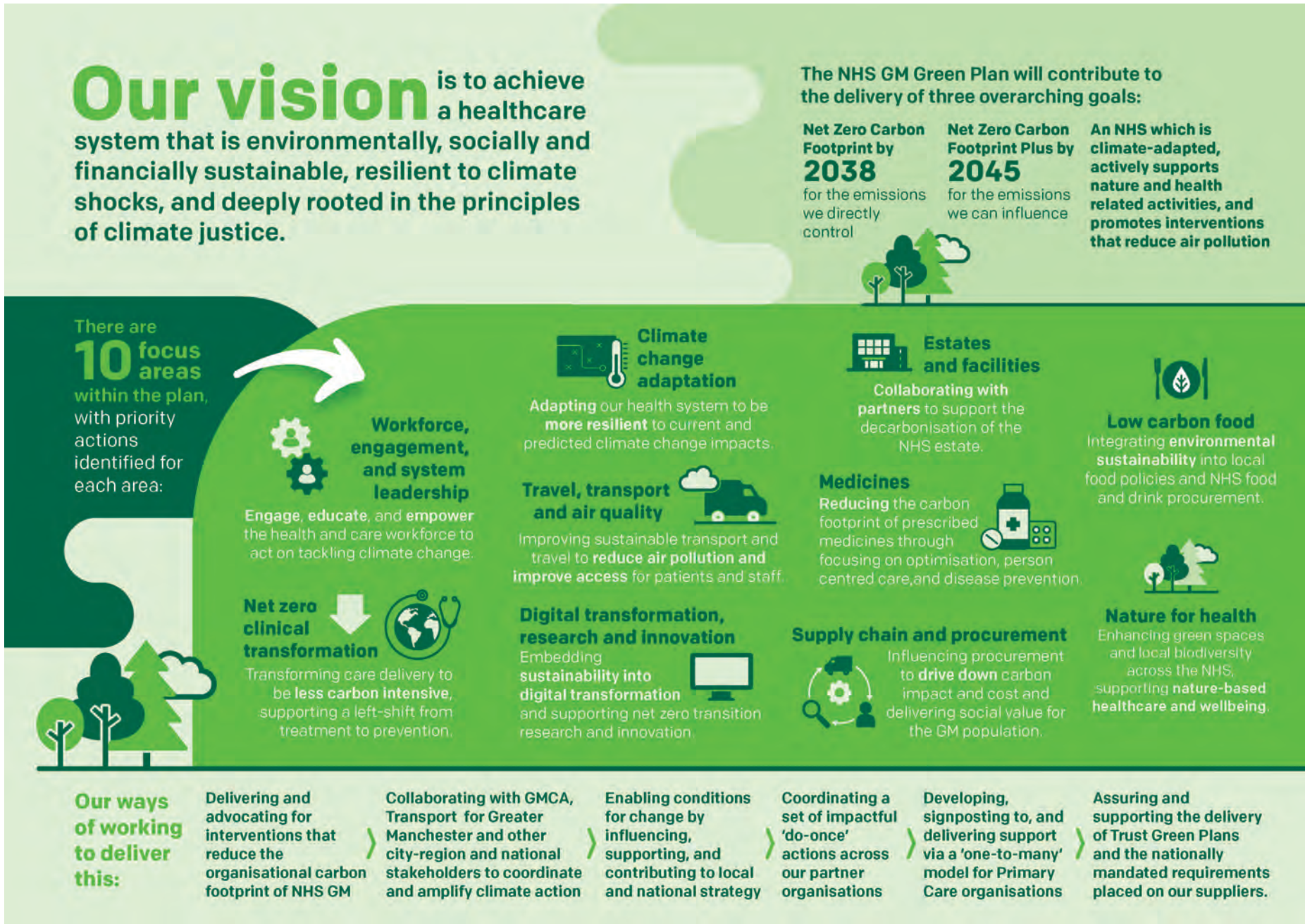


Figure 11 Infographic showing the Green Plan on a Page





Focus Areas

Workforce, engagement, and system leadership

Net zero clinical transformation

Climate change adaptation

Digital transformation, research, and innovation

Travel, transport, and air quality

Estates and facilities

Medicines

Supply chain and procurement

Low carbon food

Nature for health





Workforce, engagement, and system leadership

Why it matters

Addressing climate change requires profound behavioural changes to the way we live, work and provide care. Engaging, educating, and empowering staff is key to implementing the necessary individual, societal and healthcare changes.

Working at system level offers both opportunities and barriers to tackling climate change. In GM, over 250,000 staff work in health and social care across almost 2,000 healthcare settings. National research shows 87% of NHS staff support the net zero carbon ambition. However, progress has been hampered due to the ongoing permacrisis facing the system.

Despite broader challenges like longer waiting lists, a rise in chronic health conditions, deteriorating infrastructure, and workforce shortages, the climate crisis cannot be ignored.

Younger age groups experience greater fear about the impacts of climate change compared to older generations, including an increase in mental health conditions related to climate change, with Environmental, Social and Governance (ESG) factors increasingly influencing employment decisions.

Healthcare workers, with their knowledge, understanding and experience, are ideally placed to identify sustainable changes to services. Mobilising staff to drive and implement change is key to improving care quality, reducing inequalities, and decreasing healthcare-related carbon emissions.

Empowering staff is essential to unlock these changes, for example, through Making Every Contact Count (MECC) training. By using empathy, collaboration, and positive influence, leaders can effectively engage and motivate others. This support will enable them to enact both workplace and individual changes.

As a strategic commissioner, our role is to ensure accountability for delivery from ourselves and our providers. We will achieve this by implementing a supportive assurance process that aligns with nationally mandated requirements.

What we are doing

- Climate change is a risk on all trust & ICB corporate risk registers, helping to ensure senior oversight.
- A strong network supports environmental sustainability across GM, detailed further in the Governance chapter.
- Introductory sustainable healthcare training videos were developed with the Greater Manchester Training Hub for the Introduction to Primary Care course.
- Staff Sustainability Advocates work within trusts, primary care, and NHS GM to drive action.
- Environmental sustainability actions are embedded within the delivery plan.
- The [10-step plan to Greener Primary Care](#) was developed and published.
- **Spotlight:** Pennine Care and Wrightington, Wigan and Leigh NHS Foundation Trusts rolled out an interactive sustainability workshop to their Board and Senior Leadership (Plan-It).



Plan-It training attendees at Pennine Care NHS Foundation Trust

Actions for 2025-28:

- Advocate for a delivery model that integrates Green Plan requirements into broader strategic priorities and associated plans.
- Support operational delivery of Green Plans across the wider healthcare system by promoting hybrid roles, clinical fellowships, public health registrar placements, apprenticeships, and clinical speciality leads.
- Act as a facilitator and system convener to support the delivery of trust Green Plans.
- Ensure that environmental sustainability considerations are incorporated into the impact assessment process and share learning across wider system partners.
- Promote role-specific sustainability training to enable the workforce at all levels to support the delivery of Green Plans.
- Deliver a collaborative sustainability communications approach, aligned with GM-wide and national NHS priorities.





Net zero clinical transformation

Why it matters

We can think of patient journeys through healthcare systems as care pathways. Every interaction with the NHS generates a carbon footprint. Therefore, transforming how care is delivered to provide high quality, equitable care that is also less carbon intensive is critical. This transformation requires incorporating an environmental sustainability domain when care pathways are reviewed and updated. The principles of sustainable healthcare are shown in figure 12.

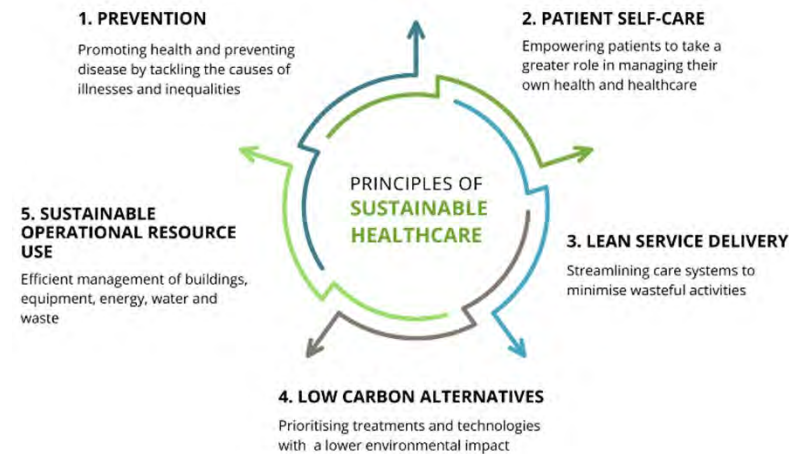
A proportionate universalism approach aims to improve the health of all, with the intensity of action proportionate to degree of disadvantage. By addressing the broader determinants of health before individuals require healthcare, we can make a substantial impact. In Greater Manchester, a Marmot Place, efforts are underway to promote health equity. For example, increasing home insulation and energy efficiency can lead to warmer more comfortable surroundings, better indoor air quality due to less damp and mould, and reduced living costs through lower energy bills alongside improving health.

Primary prevention, which delays the onset of ill health, requires tackling modifiable risk factors and benefits both population and planetary health. Preventing illness reduces the need for people to access healthcare and the associated carbon footprint. When healthcare is needed, it must be delivered sustainably, considering social, financial, and environmental impacts. Trauma-informed and patient-centred care is at the heart of this approach, ensuring the right care is delivered in the right place at the right time. For example, providing care closer to home reduces the need for travel, and we can ensure clinical service locations support active travel and access to public transport, thereby delivering health benefits and reducing air pollution.

Reducing inefficiencies and unnecessary waste offers financial and environmental benefits. Sustainability in programmes like GIRFT (Getting It Right First Time) can support reduction in unwarranted variation and the decarbonisation of carbon-intensive surgical pathways locally. Embedding sustainability into commissioning, clinical strategies, and care pathway review processes provides a framework to progressively incorporate environmental factors alongside clinical outcomes, quality, and performance.

Secondary and tertiary prevention can stop recurrent illness or reduce the impact of a condition, leading to improved quality of life and avoid the need for more carbon intensive treatment. Increasing the sustainability of care pathways requires collective effort and continuous improvement.

Figure 12 The Principles of Sustainable Healthcare (Centre for Sustainable Healthcare)



What we are doing

- The Adult Asthma and COPD care pathways focus on optimising patient care and low carbon inhalers as first-line prescribing where clinically appropriate.
- Social value requirements are emphasised in commissioning healthcare services.
- CoolSticks, a reusable alternative to ethyl chloride spray (for testing spinal blocks), were introduced in 6 GM trusts in 2023, replacing the need for over 1,400 spray canisters and saving more than £10,000 each year.
- **Spotlight:** One example from the Nature for Health social prescribing project, the Bury Greenwood Group, meets weekly at Phillips Park in Prestwich, providing opportunities for individuals to socialise, learn new skills and connect with nature.
- Decarbonisation is included within the weight management model of care redesign, with an implementation guide on decarbonising all models of care being developed.
- **Spotlight:** Manchester University NHS Foundation Trust's Trafford Elective Hub provides patients with the right care, first time, and has reduced the elective waiting list and carbon emissions from care due to fewer bed days per patient.



Actions for 2025-28:

- Embed environmental sustainability principles and requirements within commissioning.
- Embed environmental sustainability considerations into clinical strategies and care pathway review processes.
- Support the delivery of the GMCA ECO4 Flex programme for energy efficient housing retrofit.



Climate change adaptation

Why it matters

As the climate crisis accelerates, it is essential that the health system adapts its estate and services to climate risks and impacts locked in from historical emissions. Greater Manchester is already experiencing these changes. During the 2022 heatwave, the UK reached 40°C for the first time (37°C in GM) and issued its first ever red warning for extreme heat.

Heavy rainstorms are causing danger and disruption to people, travel, homes, and businesses. Greater Manchester declared a major incident on New Years Day 2025 as devastating floods caused by intense rainfall impacted areas across the city-region.

As detailed in the [Fourth Health and Care Adaptation Report](#), risks from more frequent and intense weather events include disruptions to food systems and global supply chains. Climate change-led health impacts include the risk of rises in vector-borne diseases and skin cancers. Soaring temperatures are associated with earlier seasons and increasing intensity for some pollen, triggering asthma and allergy sufferers.

Climate change could widen health inequalities and is a 'threat multiplier', disproportionately affecting the physical and mental health of our most vulnerable populations such as the young and the elderly, ethnic minorities, people who are socially excluded and those living with pre-existing health conditions or in poor quality housing (see figure 13 for future emission scenarios).

Historically, Green Plans focused more on mitigation, or reducing carbon emissions. This plan integrates adaptation actions. Adaptation actions aim to reduce vulnerability by adjusting behaviours and improving infrastructure. Clear messaging to the public and vulnerable groups is vital. Adaptation offers many co-benefits, for example, nature-based solutions provide amenity spaces, whilst absorbing increased rainfall.

Climate change adaptation requires coordinated action at all levels, from global to neighbourhood. NHS GM plays a key role in improving understanding of this agenda and coordinating and supporting health-system action. The Climate Change Adaptation Plan for NHS Greater Manchester and GM trusts builds upon the Green Plan, setting out evidence and prioritising system-level interventions.

What we are doing

- In 2024, NHS GM supported a GMCA-led approach, to develop a city-region Climate Change Risk Assessment (CCRA).
- NHS GM has developed its first Climate Change Adaptation Plan, complementing national, city-region and trust CCRA, adaptation plans, and activities.

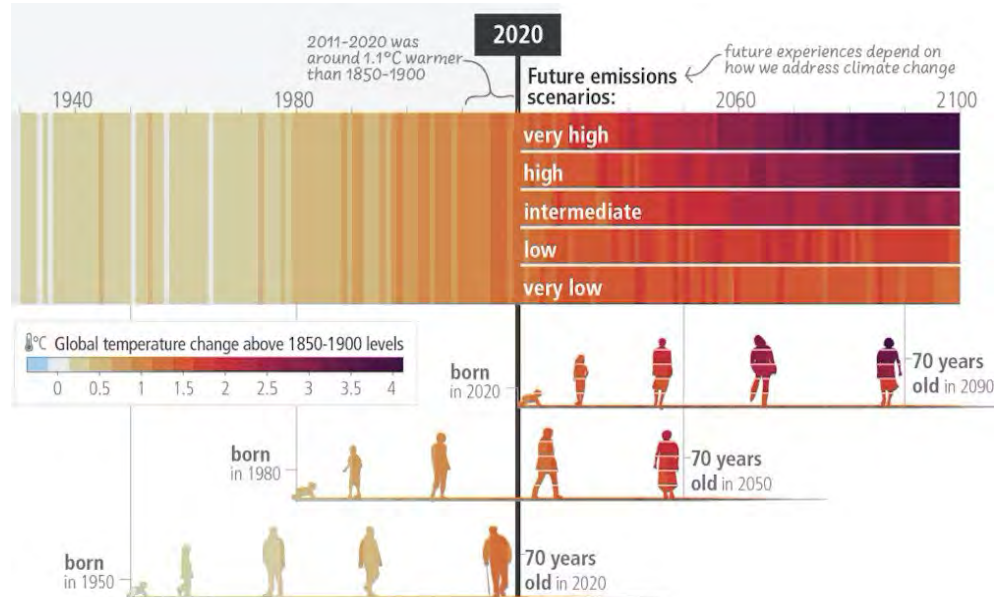


- In 2024, we worked with regional NHSE colleagues supported by Verture and Sustainability West Midlands to develop adaptation capability, including a framework, templates and training, available via [weADAPT online platform](#).
- Adaptation included within training developed for the Greater Manchester Training Hub (GMTH).

Actions for 2025-28:

- Deliver a health-focused Climate Change Adaptation Plan, based on the GMCA Climate Change Risk Assessment.
- Support Trusts to develop and deliver climate change adaptation action plans.
- Promote climate change adaptation training and awareness sessions for staff and ensure effective relevant messaging.

Figure 13 Future emissions scenarios. Intergovernmental Panel on Climate Change, sixth assessment report





Digital transformation, research, and innovation

Why it matters

The increasing digitalisation of the NHS brings both environmental benefits and challenges. Digital technologies can enhance health and care delivery, help people stay healthier for longer and aid management of long-term conditions.

To ensure that digitalisation of care pathways reduces inequalities, it is vital to address digital literacy, digital inclusion and provide alternative access options. The GM Digital Inclusion Taskforce, with over 180 members including healthcare professionals, collaborates to bridge the digital divide.

Digital technologies can play a key role in reducing the environmental impact of healthcare delivery through virtual consultations and wards, remote monitoring, paperless communications and virtual collaboration tools and apps. However, digital services also have environmental impacts. The production, use and disposal of devices all contribute to this. There is often a lack of transparency throughout the supply chain. The extraction of rare earth metals used in device production disrupts ecosystems, requires substantial water consumption, generates large quantities of waste, and negatively impacts human rights.

Data storage is responsible for around 2% of global carbon emissions, and approximately 55% of stored data is “dark data” (unused or under-analysed data), continuing to use up energy for storage and cooling at data centres. The NHS has significant and growing requirements for data storage and archiving.



iPad used to manage stock in a pharmacy

Embedding sustainability into the digital transformation agenda is essential to ensure that environmental impacts are considered in all decisions and processes, minimising the downsides, and maximising the benefits.

Additionally, climate change poses significant risks to digital infrastructure from overheating and flooding. Responsible and resilient ICT and digital services can make a meaningful contribution to the decarbonisation of the healthcare system.

Research and innovation are key for the NHS to reach net zero carbon, and we are committed to being a strategic partner in this agenda through supporting transdisciplinary research and innovation that deliver co-benefits in transitioning to net zero.

What we are doing

- NHS Greater Manchester Integrated Care Partnership have developed and published the [GM Health and Care Digital Transformation Strategy 2023-2027](#), which contains three focus areas: Digitise, Integrate and Innovate and a focus on digital inclusion to ensure fairer access to healthcare for all.
- Moving away from paper-based systems and processes through use of the Electronic Patient Record (EPR).
- Increasing availability of digitally enabled primary and outpatient care in GM, for convenient and lower-carbon consultations:
 - 9% of outpatient appointments in 2022/23 were virtual, a significant increase from 1.9% in 2019/20.
 - 29% of GP appointments in 2023/24 were virtual, almost double the rate of 15.9% in 2019/20.
- Increasing the availability of Virtual Wards to support people to receive safe and effective care in their home, with a reduced carbon footprint.



Actions for 2025-28:

- Embed Greener Digital Guidance into digital strategy and processes.
- Incorporate environmental sustainability considerations into the commissioning of virtual and digital healthcare services.
- Identify, support, and promote the collective sustainable healthcare benefits of digital transformation.



Travel, transport, and air quality

Why it matters

Delivering high-quality healthcare across Greater Manchester requires a complex multi-modal transport network connecting hospitals, clinics, communities, and suppliers. NHS-related travel accounts for almost 10 billion road miles annually, contributing to air pollution and carbon emissions.

Poor air quality contributes to 1,200 early deaths each year in Greater Manchester, affecting the most vulnerable in our society, children, older people, and those experiencing long term health conditions. Key pollutants include nitrogen oxides and particulate matter (PM2.5), from vehicle exhaust fumes. Poor housing conditions, such as prolonged exposure to damp and mould, exacerbate respiratory conditions and may require carbon-intensive treatment.

Over 250,000 people work in health and social care across GM, with most NHS staff commuting via single-occupancy vehicles, creating car parking pressures and impacting local communities. Encouraging sustainable transportation in line with the sustainable travel hierarchy (figure 14), such as active travel (walking, wheeling, cycling) and public transport, and improving multi-modal connections can reduce greenhouse gas emissions and air pollution whilst enhancing physical and mental health.

The Bee Network, Greater Manchester’s integrated transport system comprising of bus, train, tram, cycling, walking and wheeling routes, offers a unique opportunity to shift from cars to sustainable travel modes, supporting clinical service redesign, and helping patients and staff to access healthcare sites.

In 2024 the majority of the GM NHS fleet comprised of diesel and petrol vehicles; 14% were high emission vehicles and 76% were low emission vehicles.

Electric vehicles (EVs) do not produce tailpipe gas emissions; however, they generate particulate matter (PM) from tyres and brakes and contribute to congestion and collisions. In line with the [NHS Net Zero Travel and Transport Strategy](#) and the sustainable travel hierarchy more active modes of transport should be prioritised where possible. Essential vehicle electrification, including ambulance fleet requires supporting infrastructure.

Addressing the carbon footprint and air pollution generated by NHS-related travel and healthcare delivery, requires close collaboration with partners to enhance access to affordable, sustainable forms of travel, electrifying the NHS fleet, improving active travel and EV charging infrastructure around healthcare sites, supported by effective spatial planning, and ensuring that engines are not left idling.

Tackling poor indoor and outdoor air quality requires a partnership approach to define and deliver agreed priorities. This provides an opportunity to establish a joined-up agenda across multiple agendas, including neighbourhood health.

Figure 14 Sustainable travel hierarchy, NHS Net Zero Travel and Transport Strategy



What we are doing

- The staff salary sacrifice schemes at NHS GM and 3 GM trusts exclusively offer Ultra Low Emission (ULEV) and Zero Emission vehicles (ZEV).
- Collaborating with TfGM to leverage the opportunities presented by the Bee Network. In September 2024 the [TfGM Nighttime Economy pilot](#) launched, providing a 24-hour bus service along two routes, supported by nursing staff.
- All GM NHS trusts are taking steps to prioritise sustainable travel by improving on-site infrastructure for active and sustainable travel and electrifying their business fleets. There are now over 2,100 cycle parking spaces at GM hospitals and 10% of trust fleet is ZEV.
- In 2023 the [Healthier Greener Travel toolkit](#) was developed and piloted by 40 primary care providers. The updated toolkit includes a site and culture audit, staff and patient travel survey, and a travel plan template.

Actions for 2025-28:

- Develop and implement a healthy travel strategy to support interventions and modal shifts across the healthcare sector.
- Work with partners to increase active travel accessibility and connectivity to healthcare sites.
- Work with partners to drive increased public transport use for healthcare journeys.
- Align NHS activities with the Greater Manchester 5 Year Environment Plan air quality improvement principles.



Estates and facilities

Why it matters

The NHS estate accounts for the largest source of direct carbon emissions from energy usage within trusts and primary care. Whilst NHS GM does not directly generate these emissions, they play a key role in strategic estates planning and improving estate productivity and efficiency across the healthcare system. Estates decarbonisation is supported through stakeholder partnerships, unlocking funding, and supporting the development of a costed decarbonisation pipeline.

Decarbonising the NHS estate is challenging due to the estate's condition, suitability, and utilisation pressures. The estate is categorised into core, flex, and tail, with the movement of services into core estate supporting the reduction of carbon emissions. Restrictions on access to funding add to the complexity.

The estate can unlock numerous co-benefits that support the environmental agenda and reduce health inequalities. For example, by ensuring facilities are accessible by public transport and active travel, support economic development, by repurposing unused land for affordable housing and by co-locating services.

Each of the ten districts in GM has developed a Local Area Energy Plan (LAEP), outlining a strategic framework for transitioning to net zero. Several heat networks are in development across GM, and the NHS plays a key role in implementation.

The NHS is also a large waste producer. Guidance is available to ensure appropriate waste segregation and enable the move towards a circular economy. A data-driven approach to understanding utilities consumption and waste production helps target interventions.



Requirements, opportunities, and challenges for estates decarbonisation vary across:

New Build Estate: The [NHS Net Zero Building Standard](#) provides guidance for sustainable, resilient, and energy-efficient new builds, considering carbon throughout the building lifecycle.

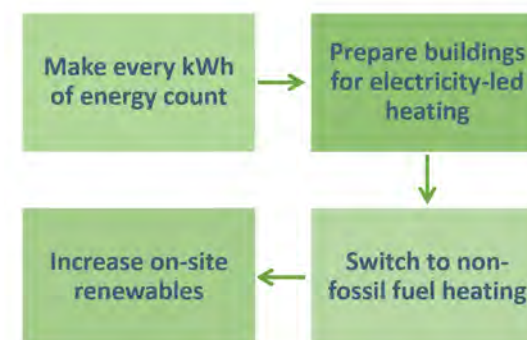
Retained Estate: Most existing NHS Estate will be retained. The Estates Net Zero Carbon Delivery Plan outlines steps to improve energy infrastructure.

Leased & Privately Owned Estate: Ensuring energy efficiency in new leases and working with landlords and Private Finance Initiative (PFI) partners to decarbonise the estate. Some primary care estate is privately owned and difficult to influence.

What we are doing

- Collaborating with GMCA and other stakeholders to share learning and drive a multi-agency approach to estate decarbonisation following the four-step approach (figure 15).
- GM Trusts have secured over £15.7 million for LED, building management systems and solar panels via the National Energy Efficiency Fund (NEEF) and Great British Energy Partnerships.
- Embedded environmental sustainability throughout the GM Estates Infrastructure Strategy and developed a prioritisation framework for primary care business cases.
- Developed an [NHS Guide to Installing Solar Power](#) with GMCA and the North West Net Zero Hub to provide guidance for primary care providers.
- Completed an energy efficiency pilot project with 19 Salford GP practices to tackle premises energy efficiency, with average estimated savings of 7.5 tCO₂e and £2,700 per year per practice.
- £47.7 million Public Sector Decarbonisation Scheme funding secured by GM trusts.

Figure 15 A simplified four-step approach to decarbonising NHS estates, NHS Low Carbon Estates Delivery Plan



Actions for 2025-28:

- Develop and maintain a high-level pipeline and roadmap for estates decarbonisation across the NHS estate, including high level oversight of Heat Decarbonisation Plans (HDP's) development and delivery.
- Collaborate with GMCA, regional and national partners to develop, identify and access financing mechanisms for NHS estates decarbonisation.
- Facilitate best practice across NHS estates in energy, water, and waste performance.
- Ensure that sustainability is integral to the transformation of the NHS estate, as detailed in the GM Estates Infrastructure Strategy.





Medicines

Why it matters

Medicines account for a quarter of the NHS Carbon Footprint Plus, with most emissions occurring in the supply chain, during manufacture and distribution. Some emissions also occur at the point of use, notably from inhalers and anaesthetic gases, which together account for 5% of NHS emissions.

Inhalers are a key part of asthma and COPD management; however, the management of these conditions is not always optimal. Improving health outcomes and reducing emissions can be achieved by ensuring patients have the right inhaler and know how to use it effectively. Shared decision-making and patient choice are key. Many patients want to consider the environmental impact of inhalers.

Another key area to tackle is emissions from anaesthesia and medical gases. Within hospitals we can ensure our population receives high quality care alongside reducing emissions by switching to lower carbon anaesthetic gases and ensuring we reduce waste of nitrous oxide and mixed nitrous oxide.



A school nurse explaining how to use an inCheck device

Waste and contamination are also problematic. Antimicrobial resistance (AMR) poses a significant threat to health, leading to higher mortality rates and increased healthcare costs. Following antibiotic guidelines, including optimal course length and appropriate intravenous to oral switches can benefit both patients and AMR reduction measures (e.g. by reducing hospital stays which will reduce cost and carbon footprint). Pharmaceuticals in waterways threaten aquatic life, other animals, and humans. Medicine packaging, particularly single use plastics is also a concern.

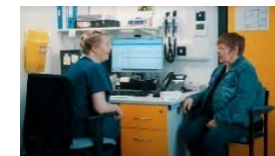
Preventing disease is critical for reducing the carbon footprint of medicines. A strong focus on prevention keeps people healthier for longer, reducing the need for medications. If people do become unwell, optimising their medicines reduces inappropriate polypharmacy and prevents adverse reactions. Person-centred and holistic care, such as social prescribing can improve mental and physical health whilst benefiting the environment. Clinicians and patients working together play a vital role in reducing the carbon and environmental impact of medicines.

What we are doing

- The GM Pharmacy Sustainability Group led on the re-launch of the 'Your Medicines Matter' campaign in 2024 to encourage patients to bring their medicines into hospital with them to reduce medicine wastage.
- The Greater Manchester Medicines Management Group (GMMMG) approved [adult Asthma and Care Pathways](#) supporting first line low carbon inhalers, with kgCO₂ equivalents to complement patient choice. The children's Asthma Care Pathway is under review.



- **Spotlight: [Kirkholt Medical Centre](#)** in Rochdale saved over 1,500kgCO₂e each month in inhaler emissions by delivering patient centred, optimised asthma care.



- The Greater Manchester Inhaler Steering Group promote the use of dry powder inhalers (DPI) over pressurised metered dose inhalers (pMDI) where clinically appropriate. The average carbon footprint per inhaler decreased by 10% from 14.6 kgCO₂e in 2021/22 to 13.2 kgCO₂e in 2023/24.
- Desflurane use across GM reduced from 10.8% in 2020/21 to 0.9% in 2023/24 as a proportion of all volatile anaesthetics.
- Significant reductions in nitrous oxide emissions have been made through decommissioning old and inefficient manifolds and replacing with cylinders, with a reduction in emissions of 54% from 2021/22 to 2023/24.



Actions for 2025-28:

- Support providers to implement the high quality, lower carbon respiratory care approach.
- Support acute trusts to deliver against national priorities to reduce the carbon footprint of anaesthesia, wasted nitrous oxide, and gas and air.
- Support pharmacy and medicines optimisation teams to reduce the carbon footprint of the service.



Supply chain and procurement

Why it matters

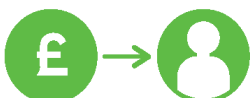
Almost two thirds of the NHS Carbon Footprint Plus emissions come from the supply chain. These emissions are generated throughout the entire value chain, from the extraction of raw materials, production, packaging, and transportation to the support for the products and services the NHS uses. Decarbonising supply chain emissions is critical if the NHS is to reach net zero. However, this is also the area where we have the least control over emissions and the lowest measurement accuracy.

Most NHS purchasing is done through NHS Supply Chain and NHS-approved procurement frameworks to ensure greater efficiencies and reduces price variations. Since suppliers under these agreements are common to all NHS organisations, a national approach is in place, including examples of contract wording and supporting tools as outlined in the [NHS Net Zero Supplier Roadmap](#).

Key requirements for suppliers include producing Carbon Reduction Plans (CRPs) and driving continuous improvement in their sustainability maturity through voluntary uptake of the Evergreen Sustainable Supplier Assessment.

NHS procurement can also play a key role in delivering social value and wider co-benefits. For example, using local suppliers where possible can create jobs in disadvantaged areas, and employment improves health and wellbeing.

By increasing the weighting of social value in procurement processes, and driving delivery within the city-region, the NHS can effectively leverage its purchasing power to reduce health inequalities and support community wealth building.



There are also opportunities to enhance the health and wellbeing of GM communities through initiatives such as apprenticeship schemes, employment opportunities for care leavers, and engagement with schools and charitable funding.

What we are doing

- In 2023/24, 31% of influenceable GM NHS spend (£537 million) was with local Greater Manchester businesses.
- Primary care providers procure across a smaller footprint than NHS GM and hospital trusts, but still have a significant impact. Providers have been taking steps such as sourcing 100% recycled paper products including hand towels and bed rolls, and scheduling bulk deliveries to reduce both cost and environmental impact.
- As an organisation, NHS GM has implemented a 20% social value weighting on applicable procurements, exceeding the NHS-wide 10% mandatory weighting.



- All acute NHS trusts that issue walking aids to patients operate in-house walking aid return and reuse schemes, resulting in over 5,000 walking aids being reused each year – saving over £62,000.



- Contracting arrangements for a new clinical waste service for primary care are progressing which include a strong emphasis on social value.
- The GM Procurement team, working on behalf of all GM trusts, worked with the top 100 suppliers to check status on the Evergreen Sustainable Supplier Assessment and encourage and support suppliers with completion.

Actions for 2025-28:

- Establish a continual improvement process to assess and contract manage supplier Carbon Reduction Plans and commitment to net zero proportionate to contract value.
- Proportionally incorporate the Evergreen Sustainable Supplier Assessment into all new supplier procurements.
- Support the GM Anchors Network to ensure environmental sustainability metrics are captured and reviewed within dashboards for measuring social value.
- Integrate circular economy and value-based procurement principles into procurement policy.



Low carbon food

Why it matters

Poor diet is one of the most significant preventable risk factors for ill-health, linked to non-communicable conditions such as cardiovascular disease, some cancers, type 2 diabetes and hypertension. The cost-of-living crisis, rising food prices, and increased availability and advertising of ultra-processed foods have exacerbated food inequalities.

Some areas within Greater Manchester have also been identified as food deserts, meaning households without access to a car struggle to access affordable fresh fruit and vegetables. Additionally, climate change and biodiversity loss pose severe risks to food security and nutrition, with nearly half of the UK's food sourced from overseas.

Food plays a significant role in the economy in Greater Manchester; however, the agricultural and hospitality sectors face substantial pressures due to rising costs. Creating an accessible, sustainable and healthy food system offers many co-benefits. The NHS in England spends around £600 million a year on hospital food, serving inpatient meals to about 125,000 patients every day.

NHS organisations are anchor organisations; procuring local food can help support the local economy and reduce the carbon footprint associated with food transport. This also provides employment opportunities to the local community which is a key wider determinant of health.

Healthier foods mainly align with low carbon emissions, and social prescribing activities such as community food growing in both rural and urban areas, and cooking classes can help improve patients mental and physical health. Additionally, redistributing surplus food can support communities with limited or no access to healthy foods and reduce food waste.



Fresh Produce at Ryder Brow Allotments as part of the Nature for Health Scheme



The WRAP (Waste Resources and Action Programme) estimate, that up to 18% of food in hospitals may be wasted, equivalent to 1 in every 6 meals. Food packaging also has a significant environmental impact, contributing to air and water pollution, greenhouse gas emissions and makes up a significant proportion of municipal waste streams. National initiatives to address this include digital meal ordering and improved data collection on food waste, and the introduction of a single-use plastics ban in the catering industry in October 2023.

What we are doing

- Cross-sector representatives from the 10 localities come together to explore how to continue to help the city region strategically improve the food system through the new Greater Manchester Food Programme Board.
- A new Sustainable Food Taskforce has been formed as part of the GM Mayor's Food Security Acton Network (FSAN), bringing together multi-sector representatives to address sustainable food awareness, education and accessibility.
- Trusts are reviewing the carbon footprints of food served on site, and increasing healthy, tasty and environmentally sustainable offers such as plant-based meals and the use of game meat which has a lower carbon footprint than beef.
- GM's social prescribing models include food-related initiatives such as cooking classes, food growing and community cafes.
- **Spotlight:** Stockport NHS Foundation Trust saw an average reduction in food plate waste of 9% through trialling the use of coloured crockery.



Actions for 2025-28:

- Advocate for city-region food policies, interventions and behaviour change programmes that deliver both health and environmental benefits.
- Support Trusts to integrate sustainable food principles into key food and drink procurement opportunities.



Nature for health

Why it matters

Access to green and blue spaces is important for both physical and mental health. These spaces regulate ecosystem services, such as urban temperatures and water flows and provide recreational and social areas. They also act as noise buffers and can reduce air pollution, especially particulate matter.

People living in areas with greater access to green space tend to have higher life expectancy, and spending time in nature can relieve stress. Conversely, those living in deprived areas are less likely to have access to green space, which can lead to health inequalities.

The Dasgupta Review, undertaken in 2021 described nature as ‘our most precious asset’ and found that biodiversity is declining at an unprecedented rate, endangering the prosperity of current and future generations. Biodiversity supports human and societal needs, including pharmaceuticals, food and nutrition and energy security.



Nature for Health scheme participants gardening

The Conference Of the Parties (COP16) – the UN Convention of Biological Diversity – took place in October 2024, with the UN Secretary-General Antonio Guterres urging delegations from 190 countries to ‘make peace with nature’ and highlighting how the world is not on track to meet biodiversity targets.

The GMCA declared a biodiversity emergency in 2022, and the subsequent [State of Nature report](#) published in March 2024 found that Greater Manchester is echoing national trends in the decline of key species, the state of waterways and peatland habitats, and the condition of sites protected for nature. The report also estimated that a third of Greater Manchester’s residents do not live within 15 minutes travel of a decent sized green space.

Nature-based or green social prescribing can support improved physical and mental health and can help reduce carbon emissions compared to pharmaceutical interventions such as antidepressants. Promoting physical activity associated with green spaces is an upstream intervention that can reduce pressure on waiting lists, support patients with conditions such as weight management, and prevent progression to chronic long-term conditions such as diabetes or hypertension.

What we are doing:

- NHS GM commissioned a local Social Enterprise, Sow the City, to develop a [Green Space and Biodiversity Toolkit](#) aimed at estates and sustainability leads to guide improvements in all sizes of settings, from small primary care sites to larger hospital estates.
- NHS GM is a member of the Local Nature Recovery Steering Group with GMCA and has supported the development of the [GM Local Nature Recovery Strategy \(LNRS\)](#).

- **Spotlight:** [The Christie NHS Foundation Trust](#) has used careful landscaping and gardening to enhance biodiversity across the site, including creative urban initiatives.



- [‘Greater Manchester Nature for Health’](#) was one of seven national green social prescribing programmes testing and learning how to best connect people with nature for their mental wellbeing. The pilot programme ran from 2021 to 2023 with over 1,300 participants, and additional funding was awarded in 2024 to build on the successes of the pilot.

- **Spotlight:** [Fairfield Hospital](#) have enhanced 9,174m² of green space, planted 13,000+ bulbs and 190 trees, and created three specialised gardens for wildlife, well-being, and education. By working with the Royal Horticultural Society to make nature more accessible, they have created an educational space where biodiversity thrives, and patients & staff can connect with nature.



Actions for 2025-28:

- Collaborate with key partners to enhance green spaces across the NHS estate.
- Support delivery of the GMCA Local Nature Recovery Strategy across the NHS estate.



Accountability and governance

Taskforce of Climate Related Financial Disclosures

Governance, risk and progress reporting

Finance

Communications and engagement

Next steps



Taskforce on Climate Related Financial Disclosures (TCFD)

The [TCFD](#) was established in 2015 by the Financial Stability Board (FSB) to develop recommendations for voluntary climate-related financial disclosures. In 2023/24, HM Treasury introduced a phased approach for public sector performance reporting. Organisations must either provide these disclosures or explain why they have not been included. TCFD recommended disclosures for the NHS are outlined within the Group Accounting Manual (GAM). The TCFD framework covers four key pillars (figure 16).

1. Governance: The organisations governance around climate-related risks and opportunities

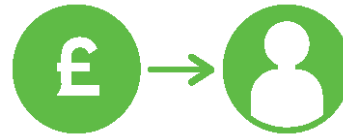
The Net Zero Board Lead role is held by the Chief Officer for Strategy, Innovation and Population Health. All Board and committee papers require a cover sheet which includes questions on how the report topic mitigates the Board Assurance Framework (BAF) risks and whether sustainability impacts have been considered, and all Board committees have a sustainability oversight requirement within their Terms of Reference (ToR). Roles and responsibilities are detailed within the Sustainability Policy.

2. Strategy: The actual and potential impacts of climate-related risks and opportunities on the organisation's business, strategy, and financial planning

Climate risks for the health sector are detailed within the NHS GM Climate Change Adaptation Plan and were supported by an extensive city-region stakeholder engagement exercise led by GMCA covering different scenarios as detailed in the UK Climate Change Risk Assessment (CCRA).

The NHS GM approach to managing climate risks sits within a broader context of national, GMCA, Local Authority (LA) and Trust climate change risk assessment and associated plans to help ensure clear roles and responsibilities.

There is currently no mechanism for internal carbon pricing to support organisational decision making. Potential approaches will be considered during this Green Plan.



3. Risk Management: The processes used by the organisation to identify, assess and manage climate-related risks

The Green Plan Oversight Group (GPOG) is responsible for identifying and managing programme-level risks, with the live risk register formally reviewed during quarterly meetings, in line with the process for other organisational risks. The NHS GM Climate Change Adaptation Plan includes a review of the GMCA Climate Change Risk Assessment, which has been developed from the UK Government Risk Assessment to be specific for Greater Manchester.

A risk encompassing adaptation is currently within the Population Health Committee (PHC) risk register, which has delegated authority from the Integrated Care Board. Management of these risks is led by the Sustainability Team, with the PHC informed via quarterly updates and an annual Green Plan progress report to Board. Climate change awareness and training is being rolled out to key staff groups to ensure climate risks are considered within relevant functions, and in the planning, delivery and redesign of care.

4. Metrics and Targets: The metrics and targets used to assess and manage climate-related risks and opportunities

Whilst disclosure of scope 1, scope 2 and scope 3 carbon emissions is not yet mandatory for NHS bodies,

it is considered best practice. Carbon Footprint, as defined within Delivering a Net Zero NHS is reported in the annual report, noting that this currently only includes trust data and inhalers carbon footprint from Primary Care. There is a commitment to continually improve metrics and targets.

Figure 16 The TCFD framework



Taskforce on Nature-related Financial Disclosures (TNFD)

TNFD was launched in 2021 and builds on the TCFD but focuses on nature-related financial disclosures. The framework enables companies to assess, disclose and manage nature-related risks and impacts. There is potential for this approach to be required for the NHS in future, or voluntarily adopted.

Governance, risk, and progress reporting

Governance:

To ensure delivery of this Green Plan, it is essential to establish clear lines of governance and accountability. Central coordinating resource is limited, and action and decisions will be required in different parts of the system. This requires genuine system-wide ownership and collaboration. In addition to NHS GM governance, there are strong connections to regional and national Greener NHS governance, and links to TCFD requirements.

NHS GM governance for the Green Plan consists of four key groups:

GM ICP Board 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 is nominated and appointed by the ICP.

NHS GM Integrated Care Board is responsible for the strategic planning of NHS GM’s statutory functions and the delivery of nationally agreed NHS priorities including those outlined in “Greener NHS - Delivering a Net Zero NHS” and subsequent updates.

GM Population Health Committee acts with delegated authority on behalf of the ICB and supports implementation of population health management approaches including delivery of the Green Plan.

GM NHS Green Plan Oversight Group (GPOG) supports the strategic delivery of the NHS GM Green Plan and oversees wider system progress and performance. The group is co-chaired by senior leads. Membership includes representation from primary and secondary care, Public Health, Health Innovation Network, Deputy Place Based Leads, and city-region partners including GMCA and TfGM.

Regular performance updates and key decisions will be communicated with existing groups, such as the Trust Provider Collaborative (TPC). Task and finish groups and sub-groups will be established as needed to progress delivery of focus area priorities. We are integrated into the governance structure for delivery of the GMCA 5 Year Environment Plan and members of the NW Net Zero Board which oversees delivery in the region and reports to NHSE national teams.

To maximise efficiency and reduce administrative burdens we will implement streamlined reporting processes, use automated data collection tools, and adopt standardised templates. Additionally, we will be mindful to avoid creating an overburdened system of meetings by leveraging existing groups and structures wherever possible. We will encourage our localities and partners, such as smaller providers, to produce individual mini-Green Plans aligned with this overall plan and will provide templates to enable this. A simplified governance structure is shown in figure 17 (page 31).

Sub-groups

Sub-groups to support the operational delivery of the Green Plan include:

Operational Sustainability Leads Group includes trust leads, representation from LA climate leads and workstream specialists such as TfGM, GMCA and Natural England. The group is a forum for sharing good practice and ensuring a system-wide approach to delivery.

Sustainable Procurement Forum focuses on sustainable procurement within secondary care, bringing Trust procurement leads together to connect, share learning, and develop best practice in reducing both costs and environmental impact.

GM Pharmacy Sustainability Group focuses on the role of pharmacy within climate action and sustainability. Comprises of secondary care pharmacists supported by some Trust sustainability leads, and reports into the GM Provider Chief Pharmacists Collaborative.

Greener Inhalers Steering Group focuses on raising awareness amongst clinicians about the environmental impacts of certain types of inhalers and promoting the inclusion of lower-carbon inhalers as part of optimal asthma care. This group reports into the GM Respiratory Steering Group.

Please note that the above-named groups are indicative and not intended to fully represent the broad spectrum of contributions from across the healthcare system and beyond. Each LA also has a climate forum, and these are typically attended by Trust sustainability leads, with the NHS GM team representing the sector at pan-GM meetings.



This structure is indicative and will be updated iteratively as the programme develops.

Operational Delivery

Delivery of Green Plan activity is led by a range of groups and teams, for example:

- Sustainability & Social Value Procurement Forum
- GM Pharmacy Sustainability Group
- NHS GM Sustainability Team
- Trust Sustainability Teams/Manager leading system-wide programmes/activities
- Thematic groups/boards
- Operational Sustainability Leads Group

ICB Decision and Approval

Formal decision making and approval is governed through the following structure:



Strategic System Groups

Receive regular or ad-hoc updates on progress and performance and inform decision making. For example:

- Trust Provider Collaboratives
- Primary Care Board
- Public Health Leadership Network
- Directors of Estates

Inform and Engage

A wide range of partners and stakeholders are informed and engaged with the overall Green Plan programme, or for specific areas of focus. For example:

- Integrated Care Partnership (ICP)
- Locality Teams
- Deputy Place Based Leads
- NW Net Zero Board and NW Greener NHS Senior Responsible Officer
- Regional Greener NHS Team
- GMCA 5 Year Environment Plan Team
- Local Authority Climate Leads
- TfGM Leads
- Alternative Provider Collaborative

Risk:

Effective and transparent risk management is key to ensure successful delivery of the Green Plan. The programme will maintain a risk register and mitigation plan which will be reported to the NHS GM Green Plan Oversight Group and links to the TCFD risk management requirements. High-level system-wide risks are listed in the table in figure 18.

Figure 18 Green Plan risks and mitigations

Risk	Mitigation
Failure to adequately prepare for the impacts of climate change.	Senior leadership training developed and delivered at NHS GM and Trust level.
Inadequate resource and budget to deliver actions.	Working with partners to secure external funding and prioritising the highest impact interventions.
Lack of sufficient accountability for delivery of actions.	Programme delivery risk raised within the Population Health Committee risk register.
Insufficient uniform data capture & measurement to accurately monitor and evaluate performance.	National and local programme performance dashboards, embedding an approach which continually improves metrics.
Limited influence over some stakeholders (e.g. primary care).	Ongoing awareness and education to raise profile of the programme. Use of national levers to drive action.
Lack of skilled workforce availability and limited capacity to deliver actions.	Close partnership working with GMCA and TfGM, and cross-GM working encouraged, e.g. one Trust leading a specific project or programme on behalf of all.

Progress reporting:

To ensure effective performance tracking of the delivery of the Green Plan, we will utilise both qualitative and quantitative progress reporting. Requirements for ICBs are outlined in the GAM.

The NHS GM annual report will include a comprehensive sustainability disclosure that complies with the mandated requirements. As our delivery programme evolves, and subject to adequate internal resources, we will aim to enhance this through publication of case studies to highlight progress and initiatives.

Although not currently a mandatory requirement, we will also include an analysis of our Carbon Footprint within the report, complemented by reporting on non-carbon related metrics. Each of the actions set out in this Green Plan has suggested metrics and KPIs, however, these will be subject to rationalisation and continuous improvement, acknowledging that some of the measurement will be imperfect.

It should be noted that reporting at system level presents additional complexities, due to data lags and the reliance on all organisations within the system providing accurate and timely data and delivering against their own plans.



Finance

Delivering this Green Plan and achieving a net zero NHS presents significant financial challenges, particularly with the substantial funds required for decarbonisation of the NHS estate. Investment is required at system-level, primary and secondary care provider levels and across Voluntary, Community, Faith and Social Enterprise (VCFSE) partners encompassing pay and non-pay costs, to ensure successful co-ordination and delivery of the Green Plan.

The NHS will need to leverage existing funding streams and explore innovative financing arrangements for infrastructure upgrades and influence national and city-region teams to support the funding pipeline and ensure it is fit for purpose.

Both ‘push’ and ‘pull’ mechanisms are used within the NHS to fund and incentivise delivery, and the capital prioritisation process includes net zero requirements. National teams must work with the Department of Health and Social Care (DHSC) to address restrictions on capital spending, imposed by the Capital Departmental Expenditure Limit (CDEL) regime.

The healthcare system in GM faces a significant financial deficit, exacerbated by the legacies of the pandemic, industrial action, increasing demand and rising costs. Despite these challenges, investing in sustainability can lead to long-term financial benefits and opportunities including delivery of wider social value and health benefits.

For example:

- Investing in energy efficient and climate resilient buildings will reduce operating and insurance costs.
- Medicines optimisation avoids costs and carbon emissions.

- Reducing clinical, non-clinical and food waste reduces operating costs.
- Creating green jobs, such as retrofitting housing to be energy efficient boosts the local economy, avoids future health-related costs from poor housing conditions and provides direct health benefits for employees in stable employment.
- Electrifying the vehicle fleet reduces the total cost of ownership. Smart vehicle charging during off-peak times can avoid costly grid upgrades and eliminating tail-pipe emissions of nitrogen oxides will improve local air quality.

Chris Stark, the previous Chief Executive of the Climate Change Committee (CCC) and Head of the Government’s new Mission Control Centre for clean energy said "The overall cost of implementing net zero is low and offset by increases in Gross Domestic Product (GDP), jobs, and disposable incomes. This means that the key challenge is not financial, but in how the cost of net zero transitions are spread fairly so that people are not exposed to costs they can’t afford."



Funding Opportunities:

There are examples of funding available to healthcare organisations to deliver commitments outlined within Green Plans. Since 2020, the NHS has been awarded over £1 billion from the Government’s [Public Sector Decarbonisation Scheme \(PSDS\)](#) out of a total of £2.9 billion. Of this, £32.6 million was secured by GM trusts. However, during the PSDS funding round Phase 3c in November 2023, over £1.3 billion worth of applications was received. As announced in the June 2025 Spending Review, no further rounds of PSDS funding applications are planned.

NHSE has also provided NEEF (National Energy Efficiency Funding), with GM trusts securing £5.4 million in early 2025 for LED lighting, building management systems and solar generation. Additionally, Greener NHS has provided ad-hoc small funding pots, such as funding to support the decommissioning of nitrous oxide manifolds in September 2024.

To ensure the sector is well-positioned for future opportunities, it will be key to maintain a high-level pipeline of costed projects, both estates and non-estate related. This requires commitment from the providers to invest the time and costs needed to achieve this, supported by NHS GM. There are also many opportunities within this Green Plan that don’t require substantial capital investment but do require an investment of time.



Communications and engagement

To fully embed the Green Plan and its principles into NHS GM working, we will adopt a comprehensive approach to communications and engagement by developing a rolling sustainability communications plan.

We know that the Green Plan is more likely to be read by healthcare colleagues and system partners than our patients, so to ensure the focus of our outward-facing communications remains on patient health we will be centring the sustainability communications plan on the [5 ways to wellbeing](#).

Our Approach:

We will collaborate with staff, patients, partners (including LAs, GMCA, and TfGM) and local communities to share and amplify communications that are inclusive, accessible, and aligned with relevant national and local campaigns. Our focus will be on empowering both individuals and organisations to drive meaningful change and sharing simple messages about available support. This will be informed by behavioural insights and organisational experience about how best to engage specific groups.

An Equality Impact Assessment was undertaken during the development of this Green Plan to assess the impact on people from protected characteristic groups or at known disadvantage. This identified several actions relating to communications and engagement, which will minimise any adverse impacts. These actions will be delivered alongside those contained within this plan.

Engagement approach

An extensive stakeholder engagement and consultation exercise was undertaken in six phases between August 2024 and May 2025, to enable the genuine co-production of this Green Plan. The following consultation phases were undertaken in sequential order.

- Draft actions (limited circulation),
- First draft (limited circulation),
- Second draft (limited circulation),
- Third draft with questionnaire (broad circulation) and presentations to key groups,
- Penultimate draft (limited circulation),
- Circulation of final draft to governance and oversight groups prior to submitting plan for formal approval.

This process involved key partners and stakeholder groups within NHS GM, GMCA, TfGM, Primary Care, and Trusts including formal Trust Provider Collaboratives. The members of these groups include strategic leaders, operational staff, clinicians, and subject matter experts who provided insight and guidance across the focus areas of the Green Plan.

Over 47 groups were engaged, and more than 20 interactive briefings were undertaken with stakeholder groups. Questionnaires, briefings, and the materiality workshop enabled individuals, teams and organisations to provide in-depth input and feedback.

Over 325 individual points of feedback were received and considered throughout the process. Each point was considered, and either a change was made to the plan, or the reason for not making the change was recorded. Some feedback was highly detailed and has not been included in the Green Plan as it exceeded what could be included within this high-level document, but has been incorporated into the internally facing delivery programme.



Communications Channels:

Campaign messaging and key information will be disseminated through established communication channels, including:

- NHS GM website, bulletins, and social media,
- Trust and Primary Care Provider Collaboratives,
- Other primary and secondary care websites, bulletins, and social media, including sharing messages for wider dissemination,
- Reports and targeted updates to key stakeholder groups,
- Press releases,
- Regular, internal-facing sustainability updates,
- Events and conferences.

Messaging will be integrated with other public health and institutional messages, and will be adapted to specific stakeholder groups, with the goal of creating a common understanding of sustainability challenges and opportunities to make changes.

Sharing Best Practice:

We will proactively identify, create, and share curated news, updates and best practice case studies across primary, community, mental health, and secondary care.

Case studies from GM healthcare organisations will be proactively collated and shared with regional and national teams and relevant publications. These case studies will be peer-reviewed, clearly highlight challenges, celebrate successes and achievements, and include robust carbon data and other relevant metrics.

We will promote the work of the NHS in GM to healthcare partners at relevant events and conferences and submit to relevant calls for evidence.



Next steps

The NHS GM Green Plan is a dynamic, multi-year document, that will undergo a formal annual review. This process ensures that it remains aligned with any significant organisational or national strategy changes, whilst retaining its integrity. Throughout each year, any necessary updates or changes will be captured in a log and addressed during the review process, with the updated Green Plan re-issued as a new version.

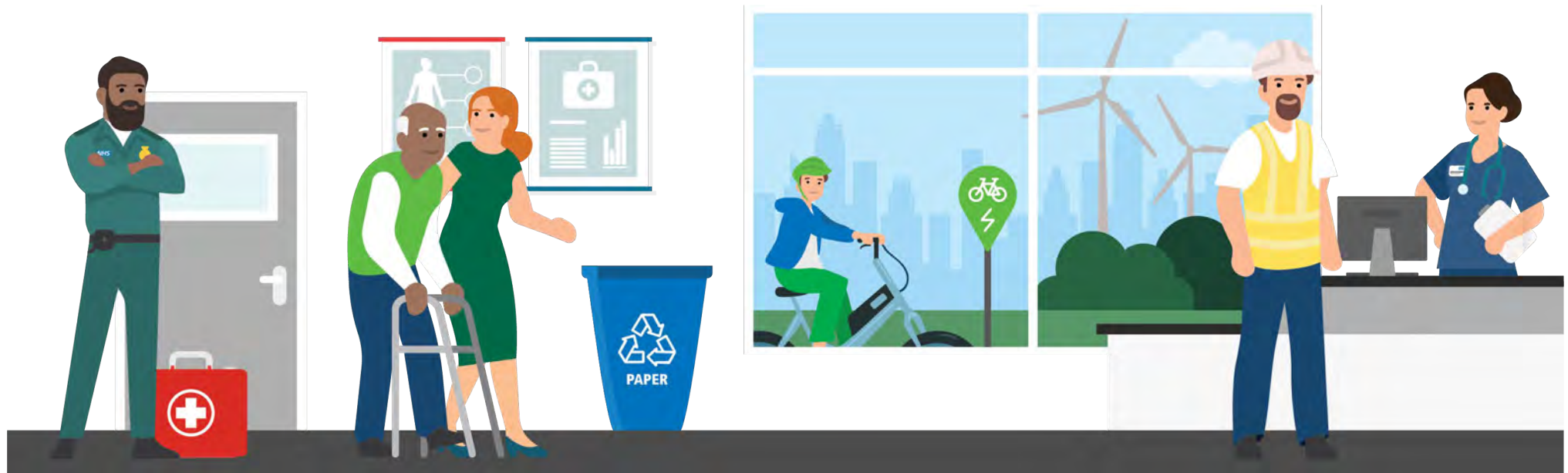
Most of the actions outlined within this Green Plan are intentionally high-level, designed to be incrementally built on year-on-year. The Green Plan will be underpinned by a detailed, internally facing work programme, with performance formally reported through the ICB. Prioritisation of activity under each of the ten focus areas within the Green Plan will be informed by a dynamic materiality assessment, as contained in Appendix D.

A robust project management approach, including the use of Project Initiation Documents will be implemented to describe the detailed sub-actions, milestones and outcomes that sit beneath the high-level actions in this Green Plan detailed in Appendix A.

At system level, the complexity of delivery increases, relying on the collaboration and commitment of all organisations within the healthcare system. Each organisation must deliver against its own priorities and decarbonisation targets, ensuring alignment with shared objectives. This interconnected approach is essential for achieving system-wide goals, as the system only succeeds if all organisations play their part.

This Green Plan is also set against a backdrop of significant financial and performance challenges, and the NHS Reform process. However, as highlighted in the 2024 Lord Darzi report, “there is no trade-off between climate responsibilities and reduced waiting lists”. Climate change and health are deeply interconnected, as the World Health Organisation (WHO) states ‘reducing emissions of greenhouse gases through better transport, food, and energy use choices can result in very large gains for health’.

To embed Green Plan principles across the organisation, they must be integrated into business cases and business-as-usual to ensure this is an organisation-wide agenda. Whilst there is a small central sustainability function to help guide the agenda, provide technical expertise, measurement, reporting and coordination, priorities must be embedded into and owned by individual functions and technical experts as part of their day-to-day operations.





Appendices

Appendix A: Action Plan for 2025-28

Appendix B: Legislative and policy drivers

Appendix C: The role of system partners in Green Plan delivery

Appendix D: Dynamic materiality assessment

Appendix E: Abbreviations

Appendix F: Glossary

Appendix G: References

Appendix H: Data tables



Appendix A: Action Plan for 2025-28

The Action Plan expands on the 34 actions outlined within the Green Plan across all 10 focus areas with further details, responsibilities, timeline, and linked focus areas for each action, and metrics and co-benefits for each focus area. These actions are underpinned by a detailed, internally facing work programme with sub-activities prioritised using the materiality matrix (Appendix D). Whilst actions have been grouped into 10 focus areas, many actions have strong links between multiple focus areas. Where metrics are listed, these are indicative and will be subject to rationalisation and continuous improvement throughout the duration of the Green Plan.

Key:

Actions are defined as either:

- **Enabler** actions which NHS GM & partners will take to support the achievement of Green Plan goals,
- **Incremental** actions which are actions which NHS GM & partners will take which will increase in scope year-on-year to lead to direct carbon footprint reductions.



Workforce, engagement, and system leadership actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Advocate for a delivery model that integrates Green Plan requirements into broader strategic priorities and associated plans. (enabler)	Mainstreaming Green Plan actions and principles into broader strategies and plans will help ensure that environmental sustainability is embedded and not seen as solely the responsibility of the Sustainability Team.	• NHS GM	2028	• All
Support operational delivery of Green Plans across the wider healthcare system by promoting hybrid roles, clinical fellowships, public health registrar placements, apprenticeships, and clinical speciality leads. (enabler)	This will include proactively identifying and sharing opportunities as they arise, for example, Clinical Sustainability Fellowships, as well as learning from and replicating successful examples of roles and delivery models from other systems and organisations. We will also support sustainable healthcare career paths into the NHS, through working with regional and national colleagues and teams.	• NHS GM • NHS trusts	2028	• All
Act as a facilitator and system convener to support the delivery of trust Green Plans. (enabler)	This will require bringing together and supporting trusts in the delivery of shared goals, with a focus on enabling sustainable change. Sharing knowledge and experience across different organisations and facilitating joint working will help lead to new ideas and approaches. This will involve considering the nationally mandated requirements contained within the NHS Standard Contract and operational planning guidance. Where appropriate, we will develop standard templates and/or guidance, to support a 'do-once' approach.	• Sustainability Team, NHS GM	2028	• All
Ensure that environmental sustainability considerations are incorporated into the impact assessment process and share learning across wider system partners. (enabler)	A Sustainability Impact Assessment ensures that environmental considerations are considered alongside the economic and social impacts of policies, programmes, strategies and business cases. There are examples across the NHS and wider public sector that can be adapted and incorporated. This will evidence that due regard has been given to legal climate change duties and local priorities in exercising functions.	• NHS GM	2026	• All

Action	Further detail	Responsibility	Timeline	Linked focus areas
Promote role-specific sustainability training to enable the workforce at all levels to support the delivery of Green Plans. (enabler)	There are numerous national, regional and local training offers covering topics such as sustainability principles, leadership, climate change adaptation, sustainable procurement, energy and waste management, and clinical and non-clinical specialties. Training opportunities will be highlighted through the various communication channels as well as relevant groups and forums.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • NHS trusts 	2028	<ul style="list-style-type: none"> • All
Deliver a collaborative sustainability communications approach, aligned with GM-wide and national NHS priorities. (enabler)	A rolling sustainability communications plan will be maintained, which will feature a range of both internal and external campaigns to empower staff and communities to make sustainable changes at work and at home, informed by insights from partner organisations. Examples could include the carbon footprint impact of digital healthcare delivery, active travel, public transport, nature, air pollution, and the benefits of a planetary health diet. Our focus will be on amplifying existing campaigns and resources.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Communications Team. NHS GM • NHS trusts • Primary Care 	2028	<ul style="list-style-type: none"> • All

Metrics:

- Number of examples of where Green Plan requirements are integrated into broader strategic priorities and plans,
- Number of trusts that meet contracting requirements,
- Sustainability Impact Assessment approach in place and completed,
- Number of NHS GM-facilitated sustainability training hours,
- Communications plan development and engagement with specific activities and campaigns.

Co-benefits:

- Increased levels of staff development and retention.



Net zero clinical transformation actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Embed environmental sustainability principles and requirements within strategic commissioning. (incremental)	As a devolved healthcare system, embedding environmental sustainability into pan-GM and locality-commissioned services is a significant opportunity. This will be implemented in a progressive manner, aligned with staffing capacity, planned care pathway reviews, and commissioned services reviews.	<ul style="list-style-type: none"> • Commissioning teams, NHS GM 	2028	<ul style="list-style-type: none"> • All
Embed environmental sustainability considerations into clinical strategies and care pathway review processes. (incremental)	The development and refresh of clinical strategies and care pathways to encompass environmental sustainability will require extensive engagement, training, and monitoring of the effectiveness of this approach, to ensure that high standards of patient care are maintained. This will be implemented in a progressive manner, aligned with staffing capacity and opportunities.	<ul style="list-style-type: none"> • Commissioning teams, NHS GM • Strategic Clinical Networks 	2028	<ul style="list-style-type: none"> • All
Support the delivery of the GMCA ECO4 Flex programme for energy efficient housing retrofit. (enabler)	Housing is one of the most significant social determinants of health and wellbeing. Through close working with GMCA and system partners, we can support eligible patients to access home energy efficiency improvement funding to deliver co-benefits to health and finances, alongside reduced carbon emissions.	<ul style="list-style-type: none"> • NHS GM 	2027	<ul style="list-style-type: none"> • Workforce, engagement, and system leadership

Metrics:

- Number of commissioned services with environmental sustainability embedded,
- Number of care pathways with specific reference to environmental sustainability considerations,
- Number of patient households with installations completed following NHS referral into the ECO4 Flex scheme.

Co-benefits:

- Improved health outcomes,
- Improved mental wellbeing,
- Reduction in exacerbations of cold and damp-related health conditions,
- Increased levels of staff development and retention.



Climate change adaptation actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Deliver a health-focused Climate Change Adaptation Plan, based on the GMCA Climate Change Risk Assessment. (incremental)	NHS GM's Climate Change Adaptation Plan builds on the GM Climate Change Risk Assessment and outlines shared priorities to tackle climate risks, prioritising those risks where the health system is best placed to lead or contribute to the identified actions.	<ul style="list-style-type: none"> • NHS GM • NHS trusts • Primary Care 	2028	<ul style="list-style-type: none"> • Nature for health • Estates and facilities • Workforce, engagement, and system leadership
Support Trusts to develop and deliver climate change adaptation action plans. (incremental)	Trust Climate Change Adaptation Action Plans will be informed by the GMCA and NHSE Climate Change Risk Assessments and will focus on prioritising interventions for their estate and services that enhance patient care, address health inequalities and boost resilience. Trusts may choose to adopt the system-wide plan, with the addition of specific actions that are unique to their organisation or develop their own plans.	<ul style="list-style-type: none"> • Sustainability Team, NHS GM 	2027	<ul style="list-style-type: none"> • Nature for health • Estates and facilities • Workforce, engagement, and system leadership
Promote climate change adaptation training and awareness sessions for staff and ensure effective dissemination of weather health alerts and relevant messaging. (incremental)	Ensuring key staff improve their understanding of climate change adaptation will help priorities and address the associated risks and ensure necessary actions are taken to adapt. Adaptation strategies need to be aligned with reducing carbon emissions, for example, through implementing nature-based cooling solutions where appropriate instead of air conditioning.	<ul style="list-style-type: none"> • Sustainability Team, NHS GM 	2028	<ul style="list-style-type: none"> • Nature for health • Estates and facilities • Workforce, engagement, and system leadership

Metrics:

- Number/percentage of actions of GM climate change adaptation plan completed,
- Number of Trusts with climate change adaptation action plans,
- Number of trust-reported overheating incidents triggering risk assessment threshold,
- Number of NHS GM-facilitated adaptation training hours.

Co-benefits:

- Improved health outcomes,
- Improved mental wellbeing,
- Reduced health impacts from weather events.



Digital transformation, research, and innovation actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Embed Greener Digital Guidance into digital strategy and processes. (incremental)	As the NHS increasingly embraces digital services, it is important to consider its environmental impact and ensure staff working in this area integrate principles into their work. Digital teams should ensure that solutions minimise any negative environmental impacts and maximise positives ones in line with the Digital Maturity Assessment.	• Digital leadership team, NHS GM	2027	• Net zero clinical transformation
Incorporate environmental sustainability considerations into the strategic commissioning of virtual and digital healthcare services. (enabler)	Digital and virtual care will support the delivery of both the Green Plan and the GM Health and Care Digital Transformation Strategy. This work will encompass virtual GP consultations, outpatient appointments and virtual wards and will be aligned with the national approach and opportunities. Digital and virtual care can reduce associated patient and staff travel and estate requirements.	• Digital leadership team, NHS GM	2027	• Travel, transport and air quality
Identify, support, and promote the collective sustainable healthcare benefits of digital transformation and innovation. (enabler)	Research and innovation will help advance the healthcare system towards delivery of net zero targets through collaboration with the academic sector, Health Innovation Manchester, and other innovation accelerators. This action will help identify, support and promote key opportunities to transform care to be more environmentally sustainable and expedite the climate and energy transition. Opportunities will be prioritised in line with the Green Plan principles.	• Sustainability team, NHS GM	2028	• Workforce, engagement, and system leadership

Metrics:

- NHSE Greener Digital Guidance embedded into NHS GM digital strategy,
- Number of innovation opportunities supported/shared by NHS GM.

Co-benefits:

- Improved health outcomes,
- Healthcare service delivery cost savings,
- Improved reputation.



Travel, transport, and air quality actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Develop and implement a healthy travel strategy to support interventions and modal shifts across the healthcare sector. (incremental)	The NHS GM Healthy Travel Strategy will provide a high-level overview of the current position and a prioritised action plan to deliver against NHSE and GM travel priorities, aligned with the requirement for NHS organisations to have a healthy travel strategy in place by 2026. The strategy will support the sustainable travel hierarchy with a modal shift towards increased active travel and public transport use by staff, patients and visitors. As part of this, minimum bi-annual staff travel surveys will be conducted with close collaboration with TfGM on the use of resulting data to inform insight-driven initiatives. Care closer to home is a priority for the NHS to deliver a 'left shift' and will mean shorter journeys for patients.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Estates team, NHS GM • People & Culture directorate, NHS GM • Travel and transport teams, NHS trusts 	2026	<ul style="list-style-type: none"> • Workforce, engagement, and system leadership • Net zero clinical transformation
Work with partners to increase active travel accessibility and connectivity to healthcare sites. (incremental)	This will involve working with TfGM, local authorities, public health and system partners to increase physical activity and promote health benefits of active travel (walking, wheeling, cycling). It will also involve supporting TfGM priorities (e.g. Vision Zero) to improve safety and decrease the risk of road traffic accidents in relation to active travel journeys and working with partners to enhance access routes. We will work with our healthcare providers to help improve active travel infrastructure for staff, including support and signposting to funding sources.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Estates team, NHS GM • NHS trusts • Primary Care 	2028	<ul style="list-style-type: none"> • Workforce, engagement, and system leadership • Estates and facilities
Work with partners to drive increased public transport use for healthcare journeys. (incremental)	With bus franchising now fully rolled out across GM, and commuter rail expected to be joining the network in 2028, we are well placed to maximise the benefits of an integrated London-style public transport system (bus, Metrolink, rail) for NHS business travel, staff commuting, and patient and visitor journeys. This will include promoting and participating in bus network reviews to ensure provision is continually improved, adopting innovative multi-modal journey planning tools, travel incentives and promoting safety initiatives. Communications will be reviewed to use more persuasive language and clinical service redesign will include consideration of transport accessibility.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Estates team, NHS GM • People & Culture directorate, NHS GM 	2028	<ul style="list-style-type: none"> • Workforce, engagement, and system leadership
Align NHS activities with the Greater Manchester 5 Year Environment Plan air quality improvement principles. (incremental)	This will include supporting fleet electrification and other interventions to reduce air pollution and save lives and participating in and promoting GM public awareness campaigns that support adopting behaviours that contribute to improving both indoor and outdoor air quality.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Environment team, GMCA • Air pollution team, TfGM 	2028	<ul style="list-style-type: none"> • Workforce, engagement, and system leadership • Estates and facilities • Net zero clinical transformation

Metrics:

- ICS Healthy Travel Strategy in place.
- Number of actions within the IC Healthy Travel Strategy delivered.
- Modal split by organisation (Bi-annual staff travel surveys reported by NHS GM and trusts through Modeshift STARS Healthcare platform).
- Reduction in annual fleet & business travel emissions by trusts & NHS GM.
- Percentage of Trust fleet that is zero emission and ULEV.

Co-benefits

- Improved health outcomes
- Improvement in air quality
- Improved reputation
- Increased levels of staff satisfaction and retention



Estates and facilities actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Develop and maintain a high-level pipeline and roadmap for estates decarbonisation across the NHS estate, including high level oversight of Heat Decarbonisation Plans (HDP's) development and delivery. (incremental)	Building a picture of maturity and support needs across the wider NHS Estate will require collaboration with trusts, primary care and key partners including GMCA, NHSE and innovation accelerators. This will support the move away from fossil fuels. A process will be established to support progress, identify barriers, and ensure alignment with Local Area Energy Plans (LAEP) priorities and heat networks. Net Zero will be a key factor in the prioritised capital pipeline for GM Estate. This work will continue throughout and beyond the duration of this Green Plan.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Estates team, NHS GM • Trust Directors of Estates • NHS trusts 	2028	<ul style="list-style-type: none"> • Digital transformation, research and innovation
Collaborate with GMCA, regional and national partners to develop, signpost to and access financing mechanisms for NHS estates decarbonisation. (enabler)	This will involve working closely with partners to support applications to the national and devolved funding for low carbon buildings retrofit, as well as identifying alternative sources of finance and influencing national teams to unlock barriers to accessing capital funding. Within primary care, this will require signposting to sources of funding such as the Boiler Upgrade Scheme. A funding/capital strategy is being developed by the NHS GM Estates team.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Estates team, NHS GM • Trust Directors of Estates 	2028	
Facilitate best practice across NHS estates in energy, water, and waste performance. (incremental)	We will proactively monitor and benchmark energy, water, and waste performance and share best practice with Trusts and Primary Care Estates and Energy Leads. Delivery of low carbon interventions, including waste reduction, recycling and segregation, will be led at organisational level. This will support the sector towards reaching net zero, as well as drive financial efficiencies.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Estates team, NHS GM • Trust Directors of Finance 	2028	
Ensure that sustainability is integral to the transformation of the NHS estate, as detailed in the GM Estates Infrastructure Strategy. (incremental)	Both new build and refurbishment of existing estate will need to focus on reducing embedded and operational carbon emissions if NHS GM is going to meet its obligations, alongside maximising the wider benefits of the Estate as an asset. Some NHS buildings are listed, presenting additional challenges to reaching net zero.	<ul style="list-style-type: none"> • Estates team, NHS GM 	2028	

Metrics:

- Costed and maintained GM-wide high-level estates decarbonisation pipeline and roadmap.
- Funding secured in £ through all financing routes.
- Percentage of LED lighting coverage within trusts.
- Kilowatt hours of on-site renewable generation at trusts.
- Kilowatt hours of energy used at trust sites against 2019/20 benchmark.
- Tonnes of waste and disposal route makeup at trusts against 2019/20 benchmark.

Co-benefits

- Reduced health impacts from weather events
- Cost savings - Healthcare estates
- Compliance with statutory obligat



Medicines actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Support providers to implement the high quality, lower carbon respiratory care approach. (incremental)	This action will focus on optimising respiratory care across the entire pathway, programme of work will include: 1. Optimal use of inhalers. 2. The new GM inhaler guidance preferred regime focuses on Maintenance and Reliever Therapy (MART). In this pathway short acting beta-agonists (e.g. salbutamol) are not intended to be used. 3. Target for only 25% of non-salbutamol inhalers to be high emission inhalers, and to reduce the mean life-cycle carbon intensity of salbutamol inhalers to 13.4 kg CO ₂ e per inhaler. 4. Ambition to appropriately dispose of inhalers via community pharmacies across Greater Manchester.	<ul style="list-style-type: none"> • Medicines optimisation team, NHS GM • Trust respiratory teams • Sustainability team, NHS GM • Primary Care providers 	2028	<ul style="list-style-type: none"> • Net zero clinical transformation
Support acute trusts to deliver against national priorities to reduce the carbon footprint of anaesthesia, wasted nitrous oxide, and gas and air. (incremental)	Whilst significant progress has been made in reducing emissions from volatile anaesthesia and nitrous oxide, there is still more to do. This work will be clinician-led within trusts, utilising national guidance, toolkits, and playbooks to guide activity, ensuring patient-centred shared decision making.	<ul style="list-style-type: none"> • NHS trusts Sustainability team, NHS GM • Medicines optimisation team, NHS GM • 	2028	<ul style="list-style-type: none"> • Net zero clinical transformation • Estates and facilities
Support pharmacy and medicines optimisation teams to reduce the carbon footprint of the service. (incremental)	There is a significant opportunity for pharmacy and medicines optimisation teams to respond to the climate crisis, alongside improving financial performance. This will include incorporating environmental considerations into prescribing guidelines, promoting safe, effective low carbon medicines prescribing, delivering evidence-based interventions, and supporting medicines waste reduction and overprescribing projects. Pharmacy teams will be supported to use the Royal Pharmaceutical Society Greener Pharmacy Toolkit.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • Medicines optimisation team, NHS GM • Primary Care 	2028	<ul style="list-style-type: none"> • Net zero clinical transformation

Metrics:

- Average emissions from supplied inhalers.
- Emissions from anaesthetic gases.
- Emissions from nitrous oxide and mixed nitrous oxide and oxygen.
- Royal Pharmaceutical Society Greener Pharmacy toolkit uptake and achievement.

Co-benefits

- Reduced respiratory-related admissions
- Cost savings - Healthcare service delivery
- Improved patient outcomes



Supply chain and procurement actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Establish a continual improvement process to assess and contract manage supplier Carbon Reduction Plans (CRPs) and commitment to net zero proportionate to contract value. (incremental)	This will ensure regard for the new contract management approach required by the Procurement Act 2023. Requirements will mirror PPN 06/21 'Taking Account of Carbon Reduction Plans' and the NHSE Sustainable Supplier Roadmap, with a focus on larger contract values.	<ul style="list-style-type: none"> • Procurement team, NHS GM • GM Procurement Leads 	2027	
Proportionally incorporate the Evergreen Sustainable Supplier Assessment into all new supplier procurements. (incremental)	This will align with national Sustainable Supplier Roadmap milestones and thresholds, helping to raise supplier awareness of sustainability requirements and promoting a culture of continuous improvement. Supplier awareness sessions are available from the NHS England Sustainable Procurement team.	<ul style="list-style-type: none"> • Procurement team, NHS GM • GM Procurement Leads 	2027	<ul style="list-style-type: none"> • Workforce, engagement, and system leadership
Support the Integrated Care System to ensure environmental sustainability metrics are captured and reviewed within dashboards for measuring social value. (enabler)	The approach will align with PPN 06/21 'Taking Account of Carbon Reduction Plans', PPN 06/20 'Taking Account of Social Value', PPN 02/23 'Tackling Modern Slavery in Government Supply Chains', and national policy.	<ul style="list-style-type: none"> • Sustainability team, NHS GM • GM Anchors Network • GM trust Procurement Leads 	2027	
Integrate circular economy and value-based procurement principles into procurement policy. (incremental)	This requires minimising waste and maximising resource efficiency, through exploring opportunities for service models & care pathways to incorporate the reuse and repair of goods. Capturing carbon savings from pilot projects and disseminating outcomes will aid scaling up. As it develops, the use of the NHSE Net Zero Product Savings Calculator will help support this area of work.	<ul style="list-style-type: none"> • GM Procurement Leads • Trust Sustainability Leads 	2027	<ul style="list-style-type: none"> • Net zero clinical transformation

Metrics:

- Number of Evergreen Assessments completed by GM suppliers & level achieved
- Development of a standard set of Green KPIs
- Number of sustainable procurement pilot projects undertaken by GM trusts
- Take-up of sustainable procurement pilots across GM trusts

Co-benefits:

- Cost savings - Healthcare estates
- Cost Savings - Healthcare service delivery
- Improved reputation
- Compliance with statutory obligations



Low carbon food actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Advocate for city-region food policies, interventions and behaviour change programmes that deliver both health and environmental benefits. (incremental)	This action requires collaborating with stakeholders across Greater Manchester to integrate health considerations into the city-region food strategy. This will support local food production, increase access to nutritious meals, and empower communities to: - reduce edible food waste - eat culturally appropriate balanced diets.	<ul style="list-style-type: none"> NHS GM 	2028	<ul style="list-style-type: none"> Nature for health Net zero clinical transformation
Support Trusts to integrate sustainable food principles into key food and drink procurement opportunities. (incremental)	Prioritise seasonal food, reduce edible food waste, increase the availability of plant-based meals, and promote healthier, lower-carbon meal options. Stakeholder collaboration is key with this, including NHS trusts, GMCA, and the sustainable food taskforce.	<ul style="list-style-type: none"> GM Catering Managers 	2028	<ul style="list-style-type: none"> Estates and facilities Supply chain and procurement

Metrics:

- GM trust food waste tonnage, broken down into sub-categories
- Healthier, lower carbon meal options promoted in hospitals for staff and in patients as formally reported to Greener NHS

Co-benefits:

- Cost savings - Healthcare estates
- Improved Mental Wellbeing
- Improved reputation



Nature for health actions

Action	Further detail	Responsibility	Timeline	Linked focus areas
Collaborate with key partners to enhance green spaces across the NHS estate. (incremental)	This will involve identifying potential spaces for improvement, and sharing information on local, regional and national tools and opportunities to advance this agenda or secure suitable funding and working with experts such as Natural England. We will collate and share best practice on designing high-quality green space for nature and people and enabling nature-based healthcare such as green social prescribing by sharing resources with allied health services professionals and community-based teams.	<ul style="list-style-type: none"> NHS GM Estates team NHS GM Person Centred Community Approaches team Trust Estates and Facilities teams 	2028	<ul style="list-style-type: none"> Net zero clinical transformation Estates and facilities Climate change adaptation
Support delivery of the GMCA Local Nature Recovery Strategy across the NHS estate. (enabler)	We will proactively collaborate with key partners to identify and deliver the priorities and actions contained within GM's Local Nature Recovery Strategy, with the support of NHS landowners, whilst capitalising on mandatory Biodiversity Net Gain (BNG) opportunities.	<ul style="list-style-type: none"> NHS GM Estates team Trust Estates and Facilities teams Sustainability team, NHS GM 	2028	<ul style="list-style-type: none"> Estates and facilities Climate change adaptation

Metrics:

- Green Space and Biodiversity improvement included in NHS GM Estate Strategy and planning
- Case studies of greenspace improvements and interventions

Co-benefits:

- Cost savings - Healthcare estates
- Improved Mental Wellbeing

Appendix B: Legislative and policy drivers

The main legislative and policy drivers for sustainable healthcare and net zero are listed below with links.

NHS legislative and policy drivers:

[10 Year Health Plan for England: fit for the future](#)

A 10-year plan to ensure that the NHS is fit for the future, incorporating 3 radical shifts: hospital to community, analogue to digital, and sickness to prevention.

[Delivering a Net Zero NHS](#)

Statutory guidance setting 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.

[NHS Constitution](#)

Sets out the principles, values, and statutory rights and responsibilities for patients, public and staff in the NHS in England.

[CQC Single Assessment Framework](#)

The framework used to assess health and care services, which includes requirements around environmental sustainability in leadership and climate change adaptation measures.

[NHS Net Zero Travel and Transport Strategy](#)

Describes the interventions and modelling underpinning the commitments that the NHS will have fully decarbonised its fleet by 2035, with its ambulances following in 2040, walking through each of the major components of the NHS fleet and outlining the benefits to patients and staff.

[NHS Net Zero Supplier Roadmap](#)

A roadmap to help suppliers align with the NHS net zero ambition between 2021 and 2030. This approach builds on UK Government procurement policies PPN 06/20 and PPN 06/21.

[NHS Net Zero Building 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.

[Estates Net Zero Carbon Delivery Plan \(Future NHS link\)](#)

Addresses the aspects of the net zero strategy pertinent to estates and facilities activities, setting out a four-step investment approach to decarbonising NHS sites.

[Fourth 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.

[NHS 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.

[The NHS Provider Licence](#)

Forms part of the oversight arrangements for the NHS and sets out annual conditions that NHS-funded providers must meet, including having regard to guidance on tackling climate change and delivering net zero emissions. Updated annually.

[What Good Looks Like Framework](#)

Builds on established good practice to digitise, connect and transform services safely and securely.

[National Standards for Healthcare Food and Drink](#)

Describes the methods by which NHS organisations must ensure the quality and sustainability of their food and drink provision for patients, staff and visitors, and how they should be applied and monitored, as well as recommending future improvement aspirations and actions.

[Digital Maturity Assessment](#)

Helps NHS providers and integrated care systems across England to understand their level of digital maturity by identifying key strengths and gaps in the provision of digital services.

[NHS Operational Planning and Contracting Guidance](#)

Sets out annual 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. Updated annually.

[NHS Standard Contract](#)

Mandated by NHS England for use by commissioners for all annual contracts for healthcare services other than commissioning. The 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. Updated annually.

Greater Manchester legislative and policy drivers:

[10 Year Growth and Prevention Plan](#) (not yet published)

The overarching strategic development plan for GM, which sets out the 10 growth locations and includes sustainability considerations.

[GM Integrated Care Partnership Strategy](#)

Sets out how the NHS in Greater Manchester will work together to improve the health of the city-region's people through the GM ICP.

[NHS GM Sustainability Plan](#) (no link - live document)

5-year plan outlining key actions for the future to reduce costs through efficiency, maximise resources and support preventative healthcare through detecting illness early and tackling health inequalities.

[GMCA 5 Year Environment Plan](#)

Framework for all decision makers to take the next actions required to progress towards GMCA's long-term environmental vision and ensure everyone in Greater Manchester has a healthy, low carbon, nature-rich environment in which to live-well, prosper and grow.

[GM Places for Everyone Plan](#)

Joint plan of 9 GM districts for jobs, new homes, and sustainable growth covering the period from 2022-2039.

[Local Nature Recovery Strategy](#)

Sets out GMCA's vision for a greener Greater Manchester, where space for nature to flourish is grown and enhanced, more people can access and enjoy the natural environment, and the many benefits nature brings are increased for everyone.

[TfGM Local Transport Plan](#)

5-year programme of interventions, infrastructure projects and regulatory powers to secure, plan for and deliver the long-term ambitions in the 2040 Transport Strategy.

[Build Back Fairer in Greater Manchester: Health Equity and Dignified Lives](#)

Institute of Health Equity report containing recommendations on how to reduce health inequities and build back fairer from the COVID-19 pandemic for future generations.

[Fairer Health for All Framework](#)

GM ICP response to the 'Build Back Fairer' report and recommendations. A system-wide commitment and framework for reducing health inequalities and tackling inequalities across the wider social determinants of health.

[GM Primary Care Blueprint](#)

5-year plan for primary care across the GM city-region and the changes that will be made to keep it sustainable for the future.

[GM Estates Infrastructure Strategy](#) (no link - live document)

NHS GM 10-year system-wide infrastructure strategy that aligns to its clinical vision, delivers the NHS Long Term Plan and sets out how the local estate will be used, including considering sustainability and mandatory net zero carbon targets.

[GM Health and Care Digital Transformation Strategy](#)

Sets out how the NHS in GM will use digital, data and technology to transform our health and care system, and improve outcomes for everyone in GM.

UK government legislative and policy drivers:

[A Green Future: 25 Year Environment Plan](#)

Sets out the UK government action to help the natural world regain and retain good health.

[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 set of statutory environmental principles, a new environmental watchdog and provisions relating to waste, air, water and biodiversity.

[Health and Care Act 2022](#)

Places legal duties on NHS England, and all trusts, foundation trusts, and integrated care boards to contribute towards statutory emissions and environmental targets.

[Greening government: ICT and digital services strategy 2020 to 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.

[Procurement Act 2023](#)

Sets out a new public procurement regime to drive growth, opportunities for small businesses, and exclude suppliers that fail to deliver.

[Procurement Policy Note 02/23 - Tackling Modern Slavery in Government Supply Chains](#)

Sets out how to take account of modern slavery identification and prevention within supply chains in the procurement of central government and NHS contracts.

[Procurement Policy Note 06/20 - taking account of social value in the award of central government contracts](#)

Sets out how to take account of social value in the award of central government and NHS contracts by using the Social Value Model.

[Procurement Policy Note 06/21 - Taking account of Carbon Reduction Plans in the procurement of major government contracts](#)

Sets out how to take account of Carbon Reduction Plans in the procurement of major central government and NHS contracts.

[Biodiversity Net Gain](#)

Mandatory for new developments from 2024. Guidance sets out requirements to ensure that developments have a measurably positive impact on biodiversity, compared to pre-development levels.

[Civil Contingencies Act 2004](#)

Legislative framework for those responsible for preparing and responding to emergencies.

International government legislative and policy drivers:

[The Paris Agreement 2015](#)

A legally binding international treaty on climate change, adopted in 2015.

[The Glasgow Climate Pact 2021](#)

An agreement reached at COP26, the 2021 United Nations Climate Change Conference.

[Sixth Intergovernmental Panel on Climate Change Assessment Report 2023](#)

Synthesis report that assess the scientific knowledge on climate change and its impacts and risks to inform policymakers across the reporting period 2015-2023.

[United Nations Sustainable Development Goals](#)

A call for action for all countries to promote prosperity while protecting the planet. Includes 17 goals to transform the world.

Appendix C: The role of system partners in Green Plan delivery

Function	Role of NHS GM	Role of Place-based partnerships	Role of trusts	Role of Primary Care
ICS Green Plan	Lead and coordinate development across partners/key stakeholders.	Support delivery.	Support delivery.	Support delivery.
Trust Green Plan	Ensure current Trust Green Plans in place and support 'do-once' actions.	Oversight of Trust Green Plans.	Maintain and deliver Green Plan.	Consider developing a mini Green Plan.
Reporting performance and progress	Report performance to ICB and ICP, through annual report and to NHSE NW.	Oversee provider performance.	Report performance to Board, via NHSE quarterly data return, annual report and contracting process with NHS GM.	Support local incentive schemes/priorities.
Delivering Green Plan activities	Coordinate and deliver 'do-once' activities.	Identify opportunities to deliver and support activities within overall programme of work.	Deliver a programme of work across the full range of Green Plan focus areas.	Deliver mini Green Plan and relevant local/PCN activity.
Collaboration with NHSE, GMCA and TfGM	Lead strategic relationships with national/regional and pan-GM partners including joint programmes of work and attendance at relevant forums.	Support relevant activity within each place.	Participate via collaborative forums and specific opportunities.	Inform sector plans and activities.
Local Authority Climate Change Strategies/Forums	Engage via collaborative forums and support scale and spread of best practice.	Deliver and support place-based activity.	Participate in relevant LA forums and support place-based activities.	Inform organisation-level plans and activities.
Sustainability Communications	Amplify and support pan-GM communications and priority national campaigns.	Participate in and support specific events and campaigns.	Cascade system-led communications and deliver Trust sustainability comms plan.	Participate in and support specific events and campaigns.
Embedding Sustainability and Social Value into Procurement and Commissioning	Embed and contract manage in ICS led procurement and commissioning. Scale and spread best practice.	Embed and contract manage in place-led procurement and commissioning.	Embed and contract manage in Trust-led & system-wide procurement and commissioning.	Embed and contract manage in Primary Care-led procurement and commissioning.
Data and Intelligence	Ensure GM-wide data and intelligence approach in place and utilise data to drive delivery of priorities and oversee performance.	Oversee provider performance.	Report carbon footprint performance via annual reporting process and ensure robust data reporting in place. Utilise data to drive delivery of priorities.	Capture data from specific projects.
Funding Green Plan Delivery	Communicate funding opportunities, identify new funding and maintain oversight of Trust funding requirements for net zero.	Ensure net zero is a core requirement of any locally commissioned activity.	Apply for internal and external funding to support deliver of Green Plan and Heat Decarbonisation Plans.	Apply for relevant grants to support activity.
Sustainability Training	Lead and support pan-GM training opportunities.	Undertake training.	Ensure Trust training plans in place to support Green Plan delivery and cascade training opportunities to colleagues.	Undertake training.

Appendix D: Dynamic materiality assessment

What is a materiality assessment?

Materiality assessments are a key component of sustainability strategy and reporting. These assessments involve engaging with stakeholders to evaluate the Environmental, Social and Governance (ESG) Impacts, Risks and Opportunities (IRO's) associated with the sustainability topics (matters) relevant to NHS GM.

Why is a materiality assessment included within this Green Plan?

Each chapter and accompanying set of actions within this Green Plan is required to align with NHSE guidance. The exception to this is the addition of content on nature and air quality, which ensures that this plan also contributes to priorities set out within the GMCA 5 Year Environment Plan.

Given that the actions within the Green Plan are intentionally high-level, we conducted a Materiality Assessment to prioritise activities and sub-actions within the annual work programme that supports the implementation of the high-level actions within the Green Plan.

Our approach is in line with the European Sustainability Reporting Standard (ESRS) which introduces the concept of double materiality as shown in figure 19. This concept requires organisations to consider both the impact of their activities on people and environment (inside-out) as well as how external environmental and social issues create risks and opportunities for the organisation (outside-in).

How was the materiality assessment undertaken?

A materiality workshop was undertaken with key stakeholders to inform this analysis following the process defined in figure 20. Stakeholders covered a broad range of experiences and perspectives and included representation from city-region stakeholders such as GMCA and TfGM.

The summary output from this exercise is presented in figure 21 (page 51). The materiality assessment is dynamic and will be formally reviewed annually to reflect changes such as evolving trends, new regulations, global and local environmental issues and NHS context.

Figure 19 The concept of double materiality

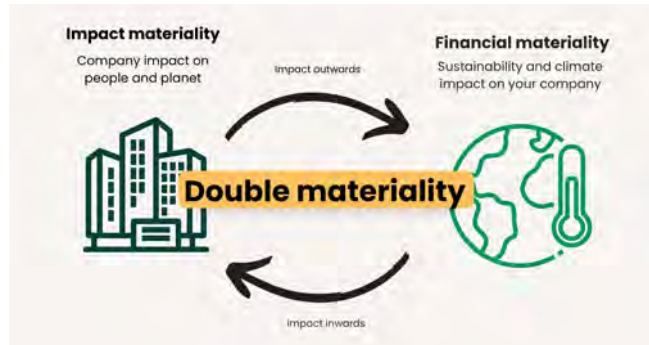


Figure 20 Double Materiality Assessment Process

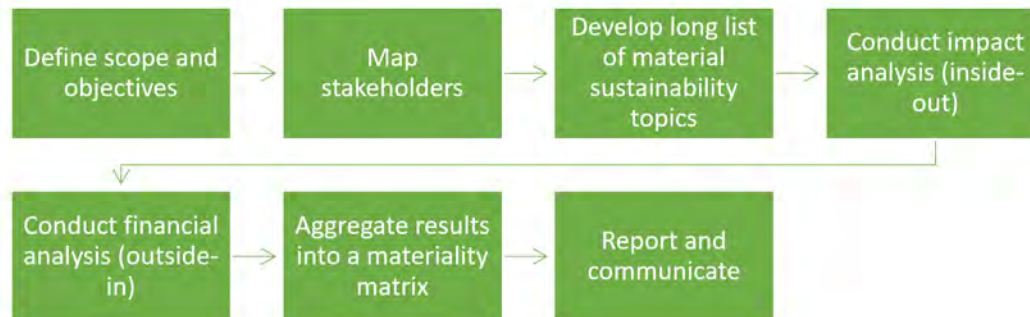
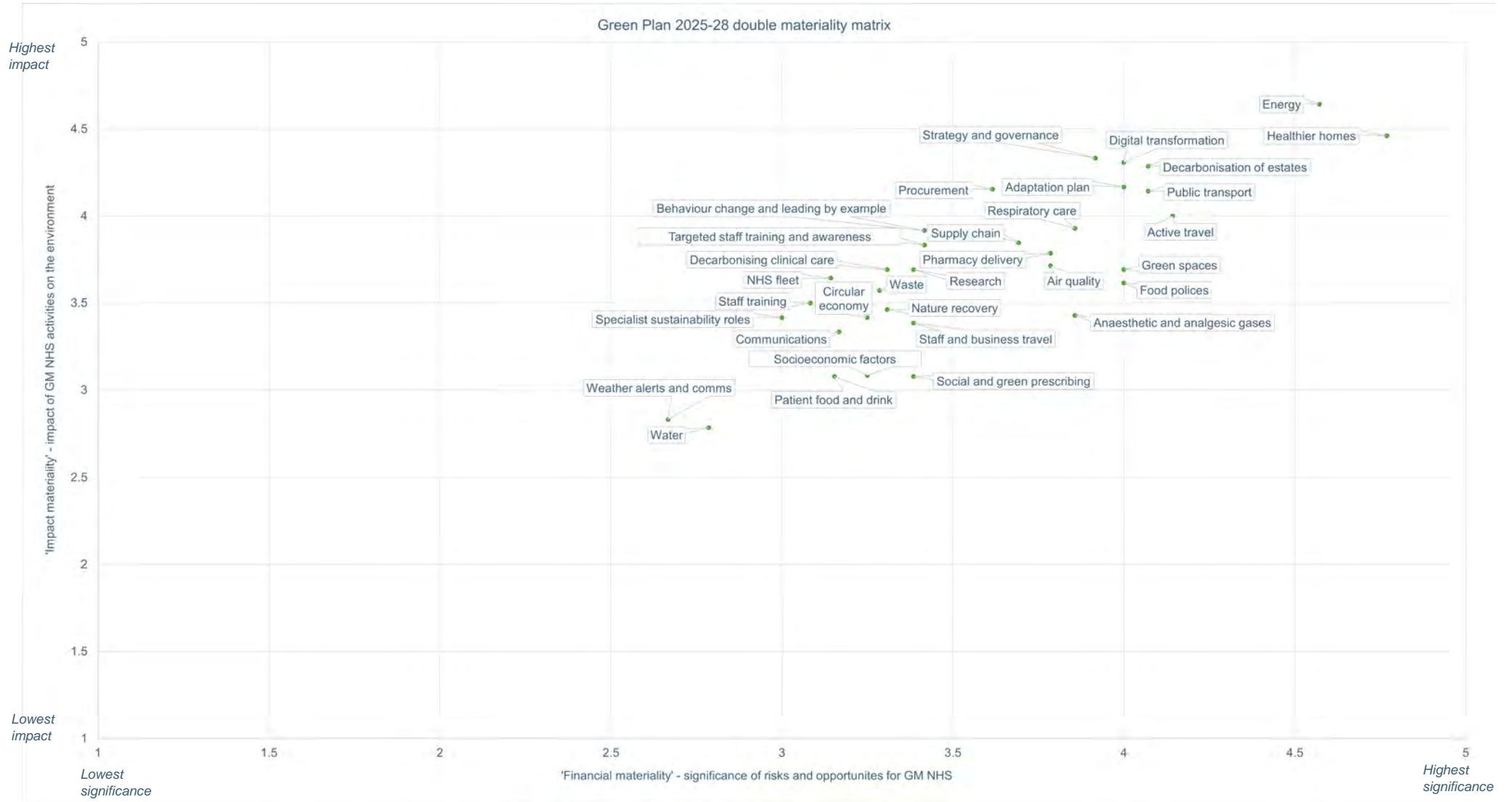


Figure 21 Green Plan 2025-28 double materiality assessment matrix



Appendix E: Abbreviations

AMR – Antimicrobial Resistance

BAF – Board Assurance Framework

BNG – Biodiversity Net Gain

CCC – Climate Change Committee

CCRA – Climate Change Risk Assessment

CDEL – Capital Departmental Expenditure Limit

CO₂ – Carbon Dioxide

COP16 – Conference of the Parties Convention of Biological Diversity

COPD – Chronic Obstructive Pulmonary Disease

CRP – Carbon Reduction Plan

DEC – Display Energy Certificate

DHSC – Department of Health and Social Care

DPI – Dry Powder Inhaler

ECO4 Flex – Energy Company Obligation Phase 4 Local Authority Flexible Eligibility scheme

EPC – Energy Performance Certificate

EPR – Electronic Patient Record

ERIC – Estates Return Information Collection

ESG – Environmental, Social and Governance

ESR – Employee Services Record

FSAN – Food Security Action Network

FSB – Financial Stability Board

FTE – Full Time Equivalent

GAM – Group Accounting Manual

GDP – Gross Domestic Product

GHG – Greenhouse Gas

GHGP – Greenhouse Gas Protocol

GIRFT – Getting It Right First Time

GM – Greater Manchester

GMCA – Greater Manchester Combined Authority

GMMMG – Greater Manchester Medicines Management Group

GMTH – Greater Manchester Training Hub

GP – General Practitioner

GPOG – Green Plan Oversight Group

GSP – Green Social Prescribing

HDP – Heat Decarbonisation Plan

ICB – Integrated Care Board

ICP – Integrated Care Partnership

ICS – Integrated Care System

ICT – Information and Communications Technology

kgCO₂e – Kilograms of carbon dioxide equivalent

KPI – Key Performance Indicator

kWh – Kilowatt hour

LA – Local Authority

LAEP – Local Area Energy Plan

LED – Light-emitting diode

LNRS – Local Nature Recovery Strategy

MART – Maintenance and Reliever Therapy

MECC – Making Every Contact Count

NEEF – National Estates Efficiency Funding

NHSE – NHS England

NHS GM – NHS Greater Manchester

NW – North West

PFI – Private Finance Initiative

PM2.5 – Particulate Matter with a diameter of 2.5 micrometres

pMDI – Pressurised Metered Dose Inhaler

PPN – Procurement Policy Note

PSDS – Public Sector Decarbonisation Scheme

SABA – Short-acting Beta Agonist

SIA – Sustainability Impact Assessment

Solar PV – Solar Photovoltaic

TCFD – Taskforce on Climate Related Financial Disclosures

tCO₂e – Tonnes of carbon dioxide equivalent

TfGM – Transport for Greater Manchester

TNFD – Taskforce on Nature-related Financial Disclosures

TOR – Terms of Reference

ULEV – Ultra Low Emission Vehicle

UN – United Nations

VCFSE – Voluntary, Community, Faith and Social Enterprise

WHO – World Health Organisation

WRAP – Waste Resources and Action Programme

ZEV – Zero Emissions Vehicle

Appendix F: Glossary

A

Anchor Organisation: 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. Also known as an anchor institution.

Air Pollution: The contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of air pollution. Pollutants of major public health concern include particulate matter PM2.5 and PM 10, carbon monoxide, ozone, nitrogen dioxide and sulphur dioxide.

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.

B

Bee Network: This is an integrated transport system comprising buses, trams, rail, cycling and walking routes, which is being rolled out by Transport for Greater Manchester (TfGM).

Biodiversity: 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 (BNG): An approach to development which seeks to enhance the biodiversity of an area.

Blue space: An outdoor environment which is accessible to people and prominently features water, either natural (i.e. rivers) or manmade (i.e. canals).

C

Carbon Budget: The maximum amount of carbon dioxide (CO₂) or carbon dioxide equivalent (CO₂e) that can be emitted over a defined period 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 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'.

Carbon Neutrality: The balance between emitting carbon and absorbing carbon emissions from carbon sinks.

Carbon Reduction Plan (CRP): A plan created by a supplier identifying their current carbon footprint and their plans to achieve net zero emissions.

Carbon Sinks: Anything that absorbs more carbon from the atmosphere than it releases; for example, plants, the ocean, and peatlands.

Care Pathway: A term used by the NHS to describe and 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](#).

Circular Economy: A model of production and consumption which maximises the useful life of resources through reuse, repair, refurbishment, sharing, leasing, and recycling.

City-region: A major urban conurbation covering an area larger than a single city. In the context of this Green Plan, the Greater Manchester area is referred to as a city-region.

Climate Action: An action, mechanism, policy instrument or activity that aims to reduce the severity of human-induced climate change and its impacts. Climate inaction is the absence of climate action.

Climate Change: 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 measure the GHGs emitted as a result of our activity – our carbon footprint. Climate change is also referred to as the climate crisis.

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 induced climate change and the dangers this causes.

Climate Justice: Principle linking human rights with development and climate action, requiring an intersectional approach to tackling climate change challenges. This principle acknowledges that the world's richest have contributed the most to causing climate change, while the world's poorest disproportionately experience the impacts of climate change.

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.

CoolSticks: A reusable alternative to ethyl chloride spray, used to test effectiveness of spinal block medical procedures.

Core, Flex and Tail: The categorisation of buildings in the NHS estate to ensure effective building use and return on investments. 'Core' buildings are fit-for-purpose and will remain in operation for at least the next 10 years and are suitable for long-term investments such as heat pumps. 'Flex' buildings can either be made fit-for-purpose with sufficient investment and improvement and become 'core' or be reviewed in the next 5 years as other services develop and become 'tail'. 'Tail' buildings are old and not fit-for-purpose and will likely be decommissioned or sold in the next 5 years as other services and buildings are developed.

D

Decarbonisation: The term used to describe the removal or reduction of carbon emissions from a process or service. For example, decarbonising a building may involve replacing a gas boiler with an electric heat pump powered with renewable energy.

Desflurane: Volatile anaesthetic drug used for general anaesthesia, with a global warming potential over 2,500 times higher than CO₂.

Digital Inclusion: The removal of barriers which prevent individuals from being able to benefit from digital services. These barriers may include access, skills, confidence, motivation, ease of use, and awareness.

Dry Powder Inhaler (DPI): A breath actuated inhaler used to control respiratory conditions such as asthma and COPD, which does not contain any propellant gases.

E

Electronic Patient Record (EPR): Brings together patient information from NHS and care services to enable record access by frontline health and care workers (i.e. in the Emergency Department).

Estates Return Information Collection (ERIC): An annual data collection which 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](#).

Evergreen Sustainable Supplier Assessment: A self-assessment tool for suppliers to engage with the NHS on their sustainability journey and understand how to align with the NHS net zero ambition.

F

First, do no harm: Derives from the Latin phrase '*Primum non nocere*', mistakenly believed to form part of the Hippocrates oath.

G

Getting it Right First Time (GIRFT): 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 because 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, medical gases, and fluorinated gases in some types of inhalers are also significant.

Green Space: An outdoor environment which is accessible to people and features nature, such as forests, gardens and parks.

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 umbrella team to support the core programmes of work which is part of NHSE. To find out more visit the [Greener NHS website](#).

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).

Healthier Greener Travel toolkit: A toolkit developed by NHS GM and TfGM to support primary care providers with shifting towards sustainable modes of transport. The toolkit contains a site assessment, travel surveys for staff and patients, and an action plan template.

Health Inequalities: Unfair and avoidable differences in health between different groups in society, defined socially, economically, demographically, and geographically.

Heat Decarbonisation Plan (HDP): A comprehensive, costed plan which details the site-specific steps to replace a building's fossil fuel-based heating with decarbonised heating such as heat pumps or district heat networks.

I

Innovation Accelerator: A program designed to rapidly scale innovative solutions for wider roll-out by providing resources such as mentorship, funding, and technical support.

Integrated Care Board (ICB): The statutory body responsible for planning and funding NHS services in a geographical area.

Integrated Care Partnership (ICP): The statutory committee that brings together broad system partners including LAs, VCFSE, and NHS to develop a health and care strategy for a geographical area.

Integrated Care System (ICS): 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.

Integrated Neighbourhood Teams: A multi-disciplinary team approach across health and social care that aims to deliver coordinated holistic care, catered to the individual, within a specific community or neighbourhood.

K

Kilowatt Hour (kWh): Unit of energy equal to one kilowatt of power sustained for one hour.

L

Lifecycle: A concept that considers the environmental, social, and economic impacts of a product or service through the entirety of its life, from extraction of raw materials to disposal. The term is also used in a PFI context in relation to asset management and maintenance.

Live Well: Greater Manchester's movement for community-led health and wellbeing. This includes health, skills, employment support and housing advice. Live Well centres and spaces will bring support services together embedded in local communities, providing wraparound care to tackle the root causes of poor health and inequality.

Local Area Energy Plan (LAEP): A plan created by an LA which sets out the changes required to decarbonise their borough's energy system.

M

Making Every Contact Count (MECC): An approach used by health and social care staff to use the opportunities which arise through routine patient interactions to have conversations about how the patient might make positive improvements to their health or wellbeing (i.e. smoking cessation advice) or talk about minimising the impacts of air pollution.

Modeshift STARS: A travel plan creation platform used to develop travel plans for large organisations, supporting shifts towards sustainable modes of transport.

Multimodal Transport: Use of multiple different modes, or methods, of transport as part of a single journey, such as cycling or walking to a tram stop. Also known as combined transport.

Multi-Year Prevention Plan: A prioritisation and shift towards a comprehensive, whole system approach to prevention, from addressing the root causes of ill health (social determinants), to mobilising approaches to tackle behavioural risk factors (primary prevention) to scaling up secondary prevention to allow early detection of risk and early diagnosis of illness.

N

Natural Capital: Stocks of natural assets which include geology, soil, water, air, and all living things. It is from natural capital that 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.

Nitrous Oxide: Anaesthetic gas used in hospitals and dental practices with a global warming potential over 310 times higher than CO₂. Can be mixed with oxygen, known as "gas and air" which is commonly used on maternity wards.

P

Pressurised Metered Dose Inhaler (pMDI): An inhaler used to control respiratory conditions such as asthma and COPD, which uses propellant gases which have a high global warming potential.

Primary Care: 'First point of contact' care provided to patients, consisting of general practitioners (GPs), dentists, optometrists, and community pharmacists. The focus of primary care is to address and treat common health problems, offer preventative care, and manage chronic disease conditions.

Private Finance Initiative (PFI): A method of funding major capital investments, where private firms are contracted to complete and manage public projects.

Push/Pull Financing: Mechanisms for financing which 'pull' innovators towards the desired outcome through policy requirements, and 'push' engagement through provision of support and specific tenders.

Proportionate Universalism: Approach which incorporates universal base requirements for quality of life, while providing additional resources to certain groups disadvantaged through the social determinants of health, to achieve health equity.

S

Scope: In the Greenhouse Gas Protocol (GHGP), carbon emissions are categorised by source into 3 scopes.

GHGP scope 1: Direct emissions from owned or directly controlled sources, on site

GHGP scope 2: Indirect emissions from the generation of purchased energy, mostly electricity

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

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.

Secondary Care: ‘Second point of contact’ care provided to patients typically through a referral from a primary care provider for specialist physical or mental care. Care is provided by NHS trusts either in hospitals or community settings. The focus of secondary care is to provide specialist investigation, diagnoses and treatment for specific problems.

Short-acting Beta Agonist (SABA): A type of medication which makes breathing easier and is used as short-term relief from sudden, unexpected attacks of breathlessness.

Social Determinants of Health: The conditions we are born in, grow up in, live in, work in, and age in all affect our health and wellbeing – such as income, housing, jobs, education, relationships, access to green space, and air quality. These conditions, or determinants, widen the preventable gaps between the worst and the best health outcomes. Also known as the wider determinants of 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: The positive impact an organisation has on society, beyond its financial bottom line, to deliver economic, social and environmental wellbeing.

Sustainability: Using resources in a way which can be sustained without depleting resources for future generations or causing harm. It has 3 pillars – environmental, financial, and social. This Green Plan focuses primarily on environmental sustainability; however, all actions must also be economically and socially sustainable.

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

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, and not travelling unnecessarily, as set out on the sustainable travel hierarchy (figure 14, page 22).

Trauma Informed Care: An approach to health and care interventions which is grounded in the understanding that trauma exposure can impact an individual’s neurological, biological, psychological and social development.

Tripartite Agreement: A collaboration to deliver positive change to housing across the city region. Includes supply of 75,000 new homes, improving housing quality and standards, home adaptations and improvements, and supporting homelessness, inclusion health and multiple disadvantages.

U

Ultra Low Emissions Vehicles (ULEV): Motorised vehicles which emit close to zero carbon dioxide (CO₂) during use. Currently defined as having emissions of less than 75g of CO₂ per km from the tailpipe.

V

Value-based Procurement: Approach which shifts the emphasis from a reduction in product costs to a reduction in total costs within the care pathway.

W

WorkWell Partnership vanguard: A Government funded programme to integrate work and health services in Greater Manchester, one of 15 pilots running nationally.

Z

Zero Emissions Vehicles (ZEV): Motorised vehicles which emit zero carbon dioxide (CO₂) during use.

Appendix G: References

Key references are listed below with hyperlinks where available.

A full list of references is available on request: nhsgm.sustainability@nhs.net.

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Appendix H: Data tables

Data included in the Our Carbon Footprint section of the Green Plan is listed here.

Data table for Figure 8 Contribution to GM NHS Carbon Footprint by source of emissions (2023-24 data)

Source of emissions	tCO ₂ e	Percentage
Gas	115,506	48.8%
Oil	1,193	0.5%
Hot water and steam	5,816	2.5%
Waste	3,710	1.6%
Water and sewerage	871	0.4%
Fleet	2,914	1.2%
Electricity	48,062	20.3%
Nitrous oxide	2,440	1.0%
Gas and air	10,292	4.4%
Anaesthetic gases	765	0.3%
Inhalers	45,007	19.0%
TOTAL	236,576	100%

Data source: National Greener NHS dashboard

Data table for Figure 9 NHS Carbon Footprint of GM NHS system

Financial Year	GM NHS Carbon Footprint (tCO ₂ e)
2019-20	261,854
2020-21	240,875
2021-22	248,802
2022-23	238,247
2023-24	236,576

Data source: National Greener NHS dashboard

Data table for Figure 10 GM NHS System Carbon Footprint Trajectory to Net Zero

Financial Year	GM NHS Carbon Footprint (tCO ₂ e)
2019-20	261,854
2020-21	240,875
2021-22	248,802
2022-23	238,247
2023-24	236,576
2031-32 target	123,071

Data source: National Greener NHS dashboard

To meet 2028-2032 target of 80% reduction from 1990 modelled carbon footprint, a reduction of 47% is required from 2019-20 carbon footprint.

The figures above have been provided by the Greener NHS team and represent the contribution from the GM NHS Integrated Care System to the NHS total Carbon Footprint for 2019/20 - 2023/24s for 2019/20. More information about the approach to carbon footprinting developed by the Greener NHS team can be found at [Health care's response to climate change: a carbon footprint assessment of the NHS in England - The Lancet Planetary Health](#).