NHS
Manchester University
NHS Foundation Trust

Annual Sustainability Report *2022-2023*

HEALTHIER
PLANET
HEALTHIER
PEOPLE

MFT Sustainability Team V 1.0

Contents

Foreword

The NHS has continued to face unprecedented pressures in 2022/23, and at MFT sustainability is considered part of the solution to this complex landscape. System wide issues have culminated in waiting lists challenges, industrial action, and in summer 2022 the UK experienced the joint warmest summer on record impacting our physical and mental health. These challenges are why we are focused on addressing sustainability, to make our processes more efficient and innovative, to improve public health and avoid unnecessary costs. The NHS carbon footprint is approximately 4% of England's total carbon emissions, and at MFT our annual direct carbon footprint equates to that of a town of 7,800 people. The stories outlined in this annual report demonstrate that through delivering sustainable services we can contribute to making people healthier, reducing demand for services and making our care less resource intensive.

The breadth of MFT initiatives which are supporting sustainability is growing each year and a common theme amongst all of these is collaboration. This includes suppliers and partners, between clinical and non-clinical teams, across divisions and hospitals, and of course patients. Projects such as decommissioning carbon intensive nitrous oxide manifolds, piloting digital inhaler sensors to improve patient outcomes, and re-using returned walking aids are all impressive developments that can only be done with support from across the organisation. By working together we can make a difference.

I hope the headlines and stories of the 2022/23 MFT Annual Sustainability Report provide inspiration to colleagues at MFT, across Greater Manchester, and the wider healthcare system. For the MFT workforce of over 28,000 people spread across ten hospitals and two community organisations, please use this report as the springboard to scale up and replicate these ideas wherever possible. Be proud of the positive changes you are making to the environment; your support is addressing the climate emergency, saving money and supporting better patient outcomes.

Kathy Cowell OBE DL, MFT Group Chairman,
Board Net Zero Lead

The Green Plan

MFT's sustainability strategy 'The Green Plan' introduces our priorities across 10 key areas of focus to meet two important overarching ambitions for carbon reductions:

1. To achieve a net zero MFT Carbon Footprint by 2038 (those things we can directly control)
2. To achieve a net zero MFT Carbon Footprint Plus by 2045 (those things we can directly control and indirectly influence).

This annual report outlines the progress and achievements in each of these 10 areas of focus as well as an update on our transition to net zero carbon. For more information on why these areas have been selected and how our carbon budget has been calculated, view the **The Green Plan**.

Introduction

The MFT Green Plan was board approved in January 2022, and as such this is the first time a full year of activity has been reported to review the progress of the associated objectives and targets. In September 2022 MFT launched a new electronic patient record system called 'HIVE', a major change programme delivered throughout 2022/23. Despite this backdrop, this year has seen MFT's sustainability programme and staff network continue to flourish, the highlights of which are captured in this Annual Sustainability Report.

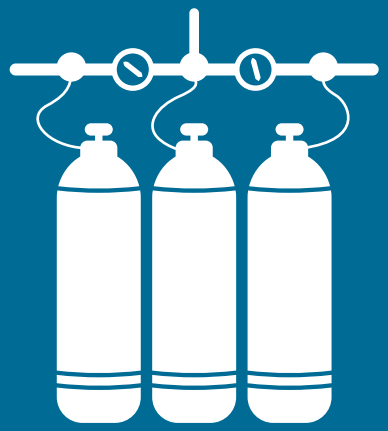
Overall, we have achieved 5% annual carbon reductions for our direct emissions, equating to 10% since our baseline year (2019/20). Following a year of increased emissions in 2021/22, this is a positive sign that we are now balancing the heightened demand for our services alongside innovations to reduce carbon. However, reductions are not yet being delivered at the scale needed to meet our carbon budget. A detailed analysis of our 2022/23 carbon emissions can be found at the end of the performance report.

The sustainability network at MFT has been developing in a number of ways. There are now a variety of local working groups specifically focused on sustainability opportunities within particular work areas, divisions or disciplines (e.g. Greener Allied Health Professionals group, Sustainable Procurement Group). These are creating new spaces for staff at all levels to engage in the sustainability agenda, making positive changes unique to their expertise. More generally, we are also seeing more clinically experienced staff leading sustainability as a formal part of their role, including within the group Sustainability Team. This is helping to build more connections across clinical service units, and embedding sustainability within quality improvement and transformation projects, as well as priority work areas such as health inequality and research and innovation.

We are excited to report the progress achieved this year through case studies within the performance report, and a detailed list of Green Plan objectives and supporting projects in the appendices.

Our Impact

Wythenshawe Hospital N_2O manifold decommissioned



due to save 2,098 tCO_2e annually.

24 departments completing a Green Impact project,

making a sustainable improvement to the way they work.

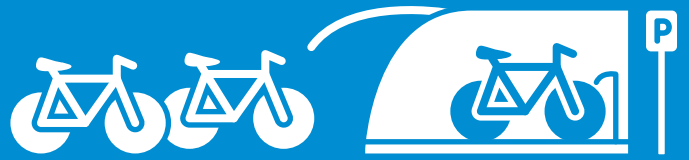
60,000 sustainable actions

recorded by staff through the Green Rewards programme.

18% of walking aids

returned and redistributed within pilot period, saving 15 tCO_2e.

44 new secure bike spaces



to support staff active travel.

1,711 tonnes

of waste recycled.

Association of Anaesthetists award

for the innovative Greener Operation research.

65kg of honey

extracted by MFT's Bee Project.

15,408,152 sheets of paper

and 154 tCO_2e avoided following the launch of HIVE.

15% reduction

in single use non-sterile gloves, saving 168 tCO_2e.

184% increase in onsite renewable energy generation,

through installation of new solar panels.

200,000 patients

signed up to MyMFT app to receive digital correspondence.

Performance Report

The following section provides a summary of key developments and case studies from 2022/23, as well as expectations for the MFT sustainability programme in 2023/24 across the ten areas of focus.

Sustainable Models of Care

Adapting care pathways to improve patient outcomes whilst reducing resource use and carbon emissions.

2022/23 Overview

In August 2022, the 'Gloves Off' campaign was launched by nursing leads to reduce the 78 million non-sterile gloves we use annually. Where patients are not infectious, clean hands are just as effective as non-sterile gloves, and can also help to reduce skin issues for staff. Through a targeted awareness campaign in 2022/23, glove use has reduced by 15% and saved over 11 million gloves, equivalent to 40 tonnes of single use plastic avoided.

The multi-disciplinary Diabetes team at MRI have adopted the 'Getting it Right First Time' (GIRFT) model to improve patient outcomes. Tailoring the care provided in and around the time of surgery for the specific needs of patients with diabetes has reduced complications from 40% to 18% and reduced the average post-surgery patient stay by 4.29 days. From October 2022, MFT has also hosted a national GIRFT clinical fellow to identify further efficiencies within high volume, low complexity procedures across the organisation.

Looking Ahead to 2023/24

Hospital at Home provides clinical expertise and care to people in their own homes. This can improve patient satisfaction, prevent hospital admission and support discharge from our sites. The Hospital at Home pathway will be expanded across MFT during 2023/24, with the carbon benefits of reduced patient travel and broader efficiencies captured through a regional Greener NHS pilot.

Ward managers and team leaders will be attending a series of MFT Improving Quality Programme (IQP) masterclasses. These will incorporate sustainability and help them prepare for new climate change requirements within the Care Quality Commission (CQC) assessment framework in 2023/24. Specifically within RMCH, the Quality Team will be embedding sustainability within all their Quality Improvement work throughout the year.

Virtual wards, known as Hospital at Home (H@H) at MFT, is a programme that allows patients to receive care in the comfort of their own home as an alternative to hospital in-patient care. Using a community-based care model, patients are monitored at home using specialist technology, with a team of clinicians reviewing remotely and engaging with patients either virtually, or through home visits.

At MFT this approach has been used across numerous services including respiratory, frailty, emergency departments, and heart failure. MRI currently has the most established H@H programme, with Royal Manchester Childrens Hospital, North Manchester General Hospital and Wythenshawe Hospital also adopting this care pathway. Currently, MFT has 100 beds available in virtual wards, with an aim to increase this to 320 in 2023 to support efforts to reduce pressure on winter admissions. It is anticipated that this will result in around 9,000 fewer admissions and 75,000 fewer bed days per year across MFT services, avoiding an estimated 2,842 tCO_2e.

For many patients, receiving treatment at home can provide a much more comfortable environment which benefits recovery and satisfaction, meaning our clinical teams can care for more patients and use less resources.

"The virtual ward allowed us to care for our baby at home which made us feel very comfortable… The team checked on us regularly so her progress was monitored just like it would have been in hospital… We can't think of anything that the team could have done better."

Parent of patient at RMCH

Hospital based care is the most carbon intensive of all healthcare environments, therefore the widescale adoption of enhanced community based care through H@H is helping us to deal with increasing demand for our services through low carbon models of care.

Digital Transformation

Using digital technologies to deliver and manage healthcare to drive down the carbon intensity of care.

2022/23 Overview

The implementation of the electronic patient record system HIVE has enabled new paper-lite processes across MFT. During 2022/23 we saved 15,408,152 sheets of paper through new ways of working which avoid printing, this has achieved carbon savings of 154 tCO_2e.

A new online patient portal, MyMFT, was launched alongside HIVE to give patients greater control and transparency over their care. 200,000 people signed up during 2022/23, enabling them to view and book appointments, track medical information and results, and attend virtual consultations. The app is not only reducing reliance on paper communications, but also aims to reduce the rate of patient non-attendances.

Secure Chat was also rolled out across MFT, enabling staff to communicate more efficiently with their colleagues, allowing them to ask questions, send reminders and much more. As of April 2023, Secure Chat recorded 19,000 active users, 330,000 separate conversations and over 2 million messages sent between our staff to provide more effective patient care.

Looking Ahead to 2023/24

Recording the full benefits of HIVE and the related patient and staff tools remains an ongoing process for MFT. It is anticipated that over the next year we will begin to see improvements across clinical quality, patient and staff experience, operational effectiveness, and research and innovation, which will gradually impact on many aspects of our carbon footprint.

To support and upskill staff, MFT Organisational Development will launch the Digital Leaders Campaign and digital literacy training into Phase 3. During 2023/24, this will: introduce key digital leadership behaviours; enable service design through technology and innovation; focus on digital transformation of our workforce and operations; increase responsiveness to the changing digital world; and embed an 'innovation culture' at MFT.

Good inhaler technique and adherence means better health outcomes for patients, resulting in fewer costly and carbon intensive emergency interventions. In 2022/23 a study to explore digital solutions to this clinical issue were trialled within MFT Respiratory Services.

Prescription records are typically used by clinicians to monitor inhaler adherence, but in many cases this does not reflect true usage. To remedy this, MFT and Portsmouth Hospitals University Trust took part in an innovative digital inhalers pilot to monitor usage patterns more effectively through technology. Patients with severe asthma were given electronic medication monitors (EMMs) linked to a mobile app (together called the Propeller Health system) which tracked inhaler use for patients and clinicians and provided automatic feedback, helpful tips, and prompts for taking medications.

Of the 99 patients involved, most continued to use the system after 6 months, and 61% were achieving good adherence. Results also evidenced that improved adherence to the preventer inhalers led to a reduced use of emergency inhalers, helping patients to maintain their condition more effectively. Emergency reliever inhalers are up to 25 times more carbon intensive than preventer inhalers, therefore there are carbon benefits both through avoided admissions, and better asthma control. Furthermore, the cutting-edge use of technology for home monitoring has enabled clinicians to personalise patient care and make more informed decisions for ongoing treatment.

"The digital inhaler monitors have given us a real insight into the patient inhaler use at home. This has enabled us to monitor adherence to preventer inhalers and support the patient with self-management of their asthma. This has led to improvements in adherence, improved asthma control and a reduction in use of their reliever inhaler which will have a positive environmental impact."

Lynn Elsey, Severe Asthma Pharmacist at Wythenshawe Hospital

Following this trial, MFT are adopting this technology for 50 patients within our care.

Supply Chain & Procurement

Engaging with suppliers to find ways to reduce the carbon impact of the production and transportation of goods and services used. Also avoiding wastage and unnecessary purchases.

2022/23 Overview

Through the MFT Procurement Partners Programme we have developed a more strategic relationship with our biggest suppliers. This has provided a more formalised space for MFT procurement leaders to explicitly discuss net zero targets and how we will work with our suppliers on this agenda. The MFT Sustainable Procurement Working Group has been established this year to connect and educate procurement colleagues across our services, embedding low carbon processes through product reuse or repair, low plastic items and avoiding wastage.

£55 million of tenders included at least a 10% social value weighting in their scoring framework in 2022/23. This has allowed us to incentivise low carbon innovation from our potential suppliers, as they include how they will add value to the economy, communities, society and the environment through delivering services to MFT.

An AHP working group established a Trust-wide scheme for walking aid return and reuse. This has encouraged patients to return walking aids to nominated drop-off sites, where they can be refurbished and redistributed.

Looking Ahead to 2023/24

All MFT procurement colleagues will undertake NHS England sustainable procurement training to ensure we are consistently applying low carbon purchasing opportunities within day to day working. We will also develop a Sustainable Procurement Policy to formalise these principles to ensure procurement processes and decision making are supporting net zero carbon targets.

From April 2023, national legislation requires all suppliers with contracts over £5 million to publish a carbon reduction plan. Whilst this will apply to a small number of contracts, this equates to an approximate annual spend of £20 million, representing significant purchasing power to influence positive change. Greater transparency from our suppliers will help us to work more collaboratively with them to reduce negative environmental impacts.

In 2022, a Walking Aid working group was established at MFT to develop a system for the safe return and reuse of walking aids across the Trust. The group, consisting of Physiotherapists and Rehabilitation Assistants, have embedded an approach to encourage patients to return mobility aids once they are no longer in use.

Walking sticks, frames, and crutches are devices that can be safely refurbished and redistributed, offering a range of benefits for the Trust. This includes financial savings through less aids being purchased, carbon savings though less aids being manufactured, transported and disposed of, and supply chain resilience as we are less reliant on newly purchased aids.

Staff have rolled out new safety procedures and monitoring systems to record return rates, with patients now prompted to return devices at the point of allocation. QR codes linked to a postcode locator tool have also been attached to devices, allowing patients to scan their walking aid to find the nearest MFT drop-off location. These efforts have led to a return rate of 18% in the first trial period, with carbon savings of 15 tCO_2e.

"The new systems and processes the Walking Aid working group have developed has been an exciting opportunity to make our physiotherapy services more sustainable. This is helping to raise awareness of sustainable healthcare among our patients as well as the wider Allied Health Professions community at MFT."

Jennifer Heneghan, Physiotherapist at NMGH

Medicines

Moving to lower carbon options for high-impact areas such as anaesthesia and inhalers and tackling medicinal wastage including overprescribing.

2022/23 Overview

In November 2022 a multi-disciplinary team at Wythenshawe Hospital facilitated the switch to mobile cannisters of nitrous oxide, allowing the inefficient nitrous oxide manifold to be decommissioned. Building on this momentum, project teams at Trafford General Hospital, Oxford Road Campus (ORC) and North Manchester General Hospital (NMGH) have been established and have started preparation to decommission their own manifolds during 2023.

Respiratory Pharmacists have formalised a sustainable quality improvement project to improve patient inhaler technique and raise staff awareness of the carbon impact of inhalers. Baseline audits have been completed, evidencing the need for improvement, which will continue to take place in 2023/24.

In conjunction with SageTech Medical, MFT anaesthetists led a pilot to capture and store obsolete desflurane, a volatile anaesthetic gas with high global warming potential which will be totally decommissioned across the NHS by early 2024. The pioneering pilot was the first of its kind in the UK.

Looking Ahead to 2023/24

The remaining MFT nitrous oxide manifolds are expected to be decommissioned by the end of 2023, building on the collective learning of staff from Pharmacy, Anaesthesia, Estates and Sustainability in the initial pilot project. Total carbon savings are predicted to be around 3,787 tCO_2e, a reduction of 83% from baseline year nitrous oxide emissions.

MFT will take an active role in the GM Sustainable Pharmacy working group to address medicine wastage, including effective prescribing of medication, and in particular, timely switches from IV to oral antibiotics. Pharmacists at MFT are launching a project to educate prescribers of this switch as a priority of antimicrobial stewardship. This will promote more effective use of medicine, prevent the spread of antimicrobial infection, and reduce carbon from avoided clinical consumables.

Desflurane is a volatile anaesthetic used for surgery which has the highest global warming potential (GWP) of all inhaled anaesthetic gases. NHS England, with the support of the Royal College of Anaesthetists and the Association of Anaesthetists, will decommission desflurane in England by early 2024. There are other clinically appropriate and safe alternatives to desflurane that can be used in surgery, and have a much lower GWP.

Desflurane is stored in vaporisers, and the commitment to decommissioning has the potential for expired desflurane to be released directly into the atmosphere in order for empty vaporisers to be returned to the drug manufacturers. This would be the case for Trusts across the country, adding unnecessarily to the NHS carbon footprint.

Funded by the MFT Sustainability Team microgrant scheme, anaesthetic colleagues worked with SageTech Medical in a UK first to use volatile capture technology to safely empty 32 desflurane vaporisers at MFT. The extracted material will be stored or incinerated in a way which prevents release into the atmosphere, saving 13 tCO_2e. Results have been published in the journal Anaesthesia, and it is hoped this pilot will influence national and international strategy on responsible desflurane decommissioning.

"The success of the trial at MFT is already influencing the way other Trusts are decommissioning desflurane – the North West School of Anaesthesia has committed to funding this process across every Trust in the North West. There are over 130 acute Trusts in England alone, so the collective carbon emissions this process could save is not insignificant!"

Dr Saarth Shiralkar, Anaesthetics Registrar at MFT

Food & Nutrition

Ensuring the meals served in hospital are nutritionally balanced and low carbon to improve patient experience and recovery rates, alongside tackling food waste.

2022/23 Overview

In December 2022, a 4-week NHS England food waste pilot was conducted across two wards at Wythenshawe Hospital in association with the Waste and Resources Action Programme (WRAP). Audits of lunch and dinner meals identified around 5 tonnes of food waste annually, with potential to save £5,000 and 7 tCO_2e. Between 60% and 80% of this food waste came from unserved meals, with the remainder coming from plate waste. To build on these findings and improve our approach to food waste, the pilot is now being expanded to a further 20 wards.

As part of their continuous improvement programme, our PFI provider Sodexo introduced a trial 'flexible dining' initiative for patients instead of bulk meal preparation. This allowed patients to choose when and what type of menu they wanted to eat, leading to a reduction in plate waste and an increase in patient satisfaction. End results revealed 78% of patients on the 'flexible' model consumed all or most of their meal, compared to 26% on the standard model.

Looking Ahead to 2023/24

A series of MFT working groups will carry out the recommendations of the national standards for healthcare food and drink, with representation from MFT Facilities, Sustainability, Dietetics, Nursing and Procurement. The food waste monitoring pilots will be scaled up to cover more inpatient areas, including monitoring equipment for every ward at Wythenshawe Hospital, led by the Quality & Patient Experience Team and funded by an MFT Sustainability microgrant.

National legislation will come into place in October 2023 as single use plastic catering items are banned from use in England. MFT will work with regional and national representatives across procurement, facilities and waste management networks to plan for suitable replacement products.

When patients are provided with meals that align with their dietary needs, cultural background and preferences, they are more likely to adhere to their prescribed diet and experience a greater sense of comfort during their hospital stay. This can lead to better patient outcomes and a smoother recovery process, as well as improved psychological and emotional well-being.

Between September and November 2022, an innovative patient food initiative 'flexible dining' was trialled on ward F2 at Wythenshawe Hospital and thanks to its success, it has continued to date. The objective was to offer patients an enhanced level of flexibility when ordering lunch and dinner, allowing them to decide whether they would prefer a lighter or more substantial meal, and when they wanted to eat it. To help facilitate the project, the Patient Service Assistant role was adapted to that of 'Ward Host' for a more bespoke meal service.

Within weeks, there was a huge rise in patient satisfaction, with 95% of patients agreeing that flexible eating significantly enhanced their hospital experience. Additionally, 100% of clinical teams involved in the project would recommend the 'flexible eating' model in other hospitals or wards.

"Overall, the 'flexible eating' trial has been a real success. Providing patients with the opportunity to eat what they want, when they want has really had a positive impact on the patient experience. Patients have fed back that they have felt less worried about missing a meal, have eaten more… and have felt more in control of their diet during their stay in Hospital."

Tim Holtam, Sodexo Business Director, Wythenshawe Hospital

The pilot saw a significant reduction in plate based food waste and overproduction food waste dropped to zero as meals were produced to order. The lessons from this pilot will be encompassed within the MFT food waste working group to improve the patient experience and reduce the cost and carbon of patient meal services across the Trust.

Estates & Facilities

Implementing low carbon processes and technologies for heating, electricity, water, and waste to avoid unnecessary uses of resources.

2022/23 Overview

Energy remains the largest part of the MFT Carbon Footprint, with natural gas responsible for 55% of our direct carbon emissions. The £7.5 million of low carbon energy investments initiated in 2021/22 were completed this year, including lighting upgrades, air and ground source heat pumps, and solar panels. The carbon and cost savings of these projects will be fully realised in 2023/24 with estimated savings of nearly 2 million kWh of electricity and over 3 million kWh of gas, resulting in 1,300 tCO_2e saved annually.

Improved digital systems are now implemented to rapidly detect water leaks across our buildings. This is supporting proactive water management to reduce costs, eliminate wastage and enable more efficient and targeted building maintenance.

A number of flagship campaigns (e.g. 'Gloves Off' and walking aid recycling) have sought to avoid waste generation, which is the most sustainable solution to waste management and provides inspiration for other targeted initiatives. Whilst overall waste has increased this year, more recycling is taking place and we are generating less waste per patient contact.

Looking Ahead to 2023/24

The NHS Net Zero Building Standard was released in February 2023, providing technical guidance for NHS buildings to be sustainable, resilient and energy efficient. We will now utilise this tool to ensure net zero carbon principles are informing all maintenance, refurbishments and new build projects, adopting the mantra of 'every kWh counts'. The MFT Energy Team will also be investigating innovative 'power purchasing agreement' models to fund the expansion of our renewable energy supply through on or off-site solar panel arrays.

Waste management developments will include new systems for managing and redistributing redundant furniture and other bulky waste items to promote more circular consumption. Continued focus will be given to improve overall waste segregation of clinical and non-clinical waste to support lower carbon waste management processes.

Building upon the success of the £7.5 million of low carbon funding obtained through the Public Sector Decarbonisation Scheme (PSDS), further investments have been secured in 2022/23 through PSDS in collaboration with the Greater Manchester Combined Authority (GMCA). In what is becoming an increasingly competitive landscape to access funding, we're working flexibly with our partners to secure income in creative ways to make our buildings low carbon and more resilient.

This has enabled significant improvements to the Woodsend Clinic community site based in Urmston. This has resulted in the complete removal of gas, which has been replaced by electricity powered heating for water and radiators, as well as the installation of solar panels to generate on-site renewable power. Similar transformation is also planned for the Old School of Physiotherapy Annex based within ORC. This will see heating sources upgraded to lower carbon electricity, in addition to more energy efficient LED lights and improved double glazing to reduce demand for energy. Whilst complex bids for our larger sites are being developed, it is important that we continue to access funding to improve the whole estate, systematically making each of our buildings lower carbon and more self-sufficient.

"The size, scale and variety of the MFT estate means our transition to net zero will be wide-ranging. The low carbon energy projects implemented this year has helped to demonstrate proof of concept, taking a whole building approach and familiarising our Estates colleagues with the most effective application of different technologies. This includes making sure we consider 'fabric first', ensuring our buildings are effectively insulated so that the low carbon energy we generate is not being lost through poor building fabric."

Mark Foden, Group Head of Energy & Transport at MFT

Travel & Transport

Avoiding unnecessary travel and shifting to lower carbon modes of transport for the movement of people and goods.

2022/23 Overview

MFT has continued to develop a package of benefits to support staff with active travel. We became the first Trust in the North West to offer free onsite e-bike loans for staff through the Making Cycling E-asier project, ccomplementing the existing off-site rental offer. 51 staff accessed the scheme this year, particularly supporting staff on low incomes to experience the benefits of e-cycling who otherwise may not have previously considered investing in an e-bike. Additionally, 208 staff have accessed free onsite bike maintenance sessions, 69 staff have purchased discounted bike locks through MFT cashiers, and 44 new secure cycle spaces have been installed through funding from Transport for Greater Manchester and NHS Charities Together.

Vehicle upgrades across the MFT fleet mean we now have a total of 28 electric or hybrid vehicles in use (25% of the fleet), as well as three e-cargo bikes. We also amended the MFT vehicle staff salary sacrifice offer, restricting vehicle choices to zero and ultra-low emissions vehicles.

Looking Ahead to 2023/24

Work to improve the travel infrastructure at North Manchester General Hospital will culminate in the opening of a state-of-the-art cycle hub in autumn 2023, providing around 100 new bike spaces, with high quality changing, shower, and bike maintenance facilities. This will be complemented by 30 new EV charging spaces for public use, the first step in expanding our charging capacity across our estate in partnership with private sector partners.

A staff travel survey will be conducted in the summer of 2023, collecting information about staff travel patterns – vital to calculating our carbon footprint, and to improving travel plans for each site.

An accessibility assessment will also be conducted to better understand the connectivity between local sustainable transport infrastructure and our hospital sites to facilitate greater use of staff and patient public transport.

The new Making Cycling E-asier e-bike hire scheme at MFT has been widening opportunities for staff to trial more active forms of commuting. Delivered by Cycling UK and funded by the Department for Transport, we are providing hires at zero cost to staff, providing assistance during the cost-of-living crisis for healthier, low carbon travel.

An e-bike hub was established on site at Wythenshawe Hospital in December 2022, giving staff the opportunity to hire an e-bike for one-month. Part of a national programme across four city areas, the MFT project has been the first healthcare based pilot specifically designed to incentivise e-bike use for healthcare workers.

The programme offers all the equipment needed to cycle the e-bikes safely and securely as well as complementary skills and confidence sessions led by trained Cycling UK staff. 51 MFT staff have made use of the service to date helping them to trial a power assisted cycle commute, with the salary sacrifice 'cycle to work' scheme available at the end of the hire, enabling staff to purchase an e-bike and accessories at a discounted rate.

"Having previously done a frontline job, I now sit at my desk for nearly nine hours a day so it's been a shock to my system not being as active and I've struggled with my back, but cycling has been really good for this. I'll have a moment listening to the birds, or smelling fresh cut grass and I realise just how enjoyable a cycle commute is. My message to people thinking about riding an e-bike would be don't be intimidated. Give it a go, if I can do it, anyone can."

Fiona Slade, Audit and Governance Midwife at MFT, and participant in Making Cycling E-asier scheme

The Making Cycling E-asier pilot will be running until November 2023. Within this period there are planned developments to expand the existing hub to staff based at Oxford Road Campus, as well as members of the local community.

Climate Change Adaptation

Making sure our buildings and services are prepared for the impacts of extreme heat or flooding events.

2022/23 Overview

The Trust participated in an NHS England Climate Change Risk Assessment pilot this year, to review the impacts of climate change more holistically and better prepare our sites for extreme weather-related events. With input from a variety of Trust disciplines (Sustainability, Estates, and the Emergency Preparedness, Resilience, and Response team), and through active participation in an emerging city region adaptation working group, we are now better placed to take a more coordinated approach as we experience more extreme weather events like the heatwave of summer 2022.

The Manchester Medical Microbiology Partnership (MMMP), is a collaboration between MFT and the UK Health Security Agency, providing important testing capacity and expert insights during incidents of infectious disease, including during extreme weather events. Research shows us that increased heatwaves and floods are creating environments for infectious diseases to thrive. To inform and educate our staff on this issue, our Microbiology Sustainability Lead from the Partnership proactively shared expertise on the topic of 'Climate Change and its Implications for Infectious Disease Epidemiology' in our March staff sustainability webinar.

Looking Ahead to 2023/24

To embed the learning of 2022/23, the Trust's Climate Change Adaptation Plan will be updated to further develop our approach for preparing and responding to extreme weather events. This will encompass improvements to building infrastructure and increasing the number of water points across sites to keep staff and visitors hydrated during episodes of extreme heat. Business Continuity Plans will also be assessed to provide more targeted support for service leads to enhance existing local plans to make our clinical services more resilient.

MFT will continue to be an active participant in climate change adaptation networks. The agenda is growing in importance (in comparison to historic focus on action to reduce emissions), so we will continue to gather evidence and insights from across the UK and Europe to improve our approach.

In July 2022 the Met Office issued red and amber extreme heat warnings and the UK Health Security Agency issued a level 4 heat-health alert as temperatures reached 37.2°C in Greater Manchester during an unprecedented extreme heatwave. Nationally, summer temperatures are now 0.9°C higher than pre 1990 post-industrial averages, and long-term projections for Manchester and Trafford anticipate by 2070 this could rise to up to 4.2°C.

Our buildings and infrastructure were designed prior to the type and frequency of heatwaves we're now regularly experiencing, and therefore, the summer 2022 heatwave has provided important insights for adaptation measures. These events put increasing electrical demands onto our cooling and ventilation systems, evidencing the need for more efficient and effective insulation within future buildings.

Analysis shows that summer 2022 consisted of five heatwave episodes lasting between three and 16 days. Data shows that over this period the North West population experienced 386 excess deaths in comparison to regular summers. This is 231 more than the previous summer in which only 2 heatwave episodes were recorded, evidencing that prolonged periods of high temperatures are particularly detrimental to our health. These findings are supporting more targeted work around health inequalities at MFT, helping deprived communities or individuals with protected characteristics to be able to access health services more effectively, including during extreme weather events.

Green Spaces & Biodiversity

Utilising our onsite green spaces to benefit people and the environment.

2022/23 Overview

Enthusiasm from staff to improve their workplace gardens and courtyards has continued to grow with three green space related projects progressing through the Green Impact programme (MFT's sustainability accreditation scheme). These projects also secured a sustainability microgrant, accessing internal funding to improve sustainable water sources, provide tools and equipment for a staff growing club, and add plants and seating to make spaces more accessible and improve biodiversity.

All MFT Estates teams and PFI partners participated in the national 'No Mow May' campaign, refraining from mowing for the month of May to encourage the growth of wildflowers and enhance the biodiversity of our sites. At Oxford Road Campus this has been supported even further through our rooftop beehives managed by staff volunteers. Our four hives generated an impressive 65 kg of honey this season which was sold on site to raise funds to maintain the project.

Looking Ahead to 2023/24

A whole estate biodiversity assessment will be completed in summer 2023. This will provide important intelligence on the current ecological value of our green spaces, prioritising where improvements can be made for maximum effect. This will support both our estates teams in planning and managing these spaces, but also local clinical teams as we seek to make these more suitable for social prescribing where patients can utilise gardens as part of their care.

Our green spaces will be used to extend social value to the community. We will be working alongside local businesses to facilitate corporate volunteer opportunities within our estate, increasing overall gardening volunteer hours to improve our gardens for patients, staff and the local community.

Buccleuch Lodge is an inpatient facility within the Withington Community Hospital site that offers specialist and older persons assessment and rehabilitation. With the continued help of volunteers and fundraising, the previously overgrown garden has gradually been transformed into a therapeutic space for patients, staff, and visitors. Incorporating new flower beds, a gazebo, a pond, and a protected area for ducks to nest, these improvements are supporting both the natural environment and the wellbeing of its users.

Having accessible and creative green space as part of the facilities at Buccleuch Lodge is a huge asset that would not have been possible without the contribution of community volunteers. Their time and ingenuity have helped to repurpose raised beds into an allotment, growing a successful crop of onions, courgettes, tomatoes and beetroots.

"We reused donated materials such as wood and pebbles within the garden, and repurposed broken equipment like walking frames and moving aids to build structures in the allotment. We previously won an RHS Gold award for our efforts, and last year were proud to have received an RHS Outstanding award."

Fiona Carroll, Unit Manager at Buccleuch Lodge

This accolade has given them further inspiration to keep developing their space, and next year will be focused on making maintenance of the garden a regular community and patient interaction project, encouraging communication and connection through gardening activities.

Workforce, Networks & System Leadership

Engaging the workforce so that our workforce has the skills and awareness to take action on the sustainability agenda including staff learning and development, and undergraduate and postgraduate teaching.

2022/23 Overview

MFT has continued to provide sustainability expertise to support system level net zero work, making sustainable healthcare a reality across GM, not just within MFT. Internally, we have made significant strides as the senior Climate Emergency Response Board has become established providing director level sustainability leadership.

Our sustainability accreditation programme, Green Impact, relaunched in November 2022 for its tenth year. 24 teams have participated, supported by new sustainability microgrants totalling £18,000, investing in staff-led improvement projects across the Trust. Green Rewards, MFT's online platform to incentivise sustainable behaviours, recorded over 60,000 actions completed by 492 staff throughout 2022/23, including an energy focused campaign to provide targeted advice and support during the energy crisis.

In addition to two sustainability eLearning modules available to all staff, 14 staff participated in specialist sustainability training from the Centre for Sustainable Healthcare, and the Research and Innovation Division led a national carbon literacy pilot.

Looking Ahead to 2023/24

We will continue to expand and support the network of discipline and department specific 'Sustainability Leads' who are coordinating low carbon initiatives and waste reduction opportunities. This will include three key service areas (Infection, Prevention and Control, Pharmacy, and Theatres) where targeted efficiency and productivity interventions can reduce unnecessary resource use, cut carbon and improve patient outcomes.

Our staff engagement will continue to expand via the successful monthly MFT sustainability webinar series in addition to new sustainability communications materials making the agenda more visible and clearer for staff to take low carbon action. This will culminate in a Sustainability Conference to celebrate, inspire and nurture the MFT sustainability community, particularly among patient facing teams.

The Research and Innovation Division play a key role in supporting sustainability, liaising across a network of local and individual MFT research initiatives, as well as externally with funders and research collaborators. With support from the MFT Sustainability Team and R&I leadership, Eve Koutidou, Estates & Facilities Officer and R&I Sustainability Lead, and Cathy Spence, Clinical Trials Manager and Deputy Sustainability Lead, have undertaken specialist sustainability training from the Centre for Sustainable Healthcare to facilitate their sustainability responsibilities.

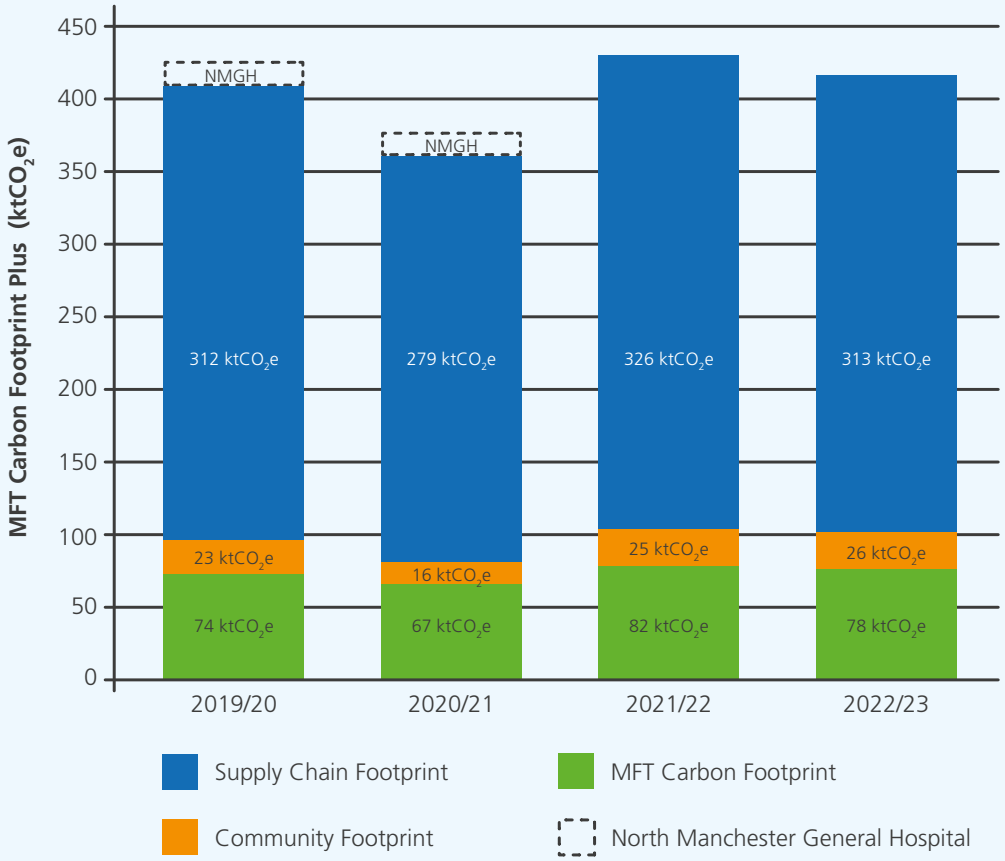
In 2022, Greener NHS and the Carbon Literacy Project selected MFT to pilot their new Carbon Literacy Toolkit, designed to educate NHS staff about net zero policy and targets, and to encourage low carbon actions across the NHS. Cathy and Eve successfully delivered their first carbon literacy 'peer to peer' training session to colleagues within R&I, covering climate science and policy, health and equity, how to communicate this information to others, and crucially planning action to make change.

"I'm glad I was recommended to participate in the Carbon Literacy for NHS pilot. As the session progressed, it became apparent that Trust staff have a huge role to play in the reduction of the NHS carbon footprint. I am personally looking forward to setting my own challenges and making a difference in my workspace environment. Eve and Cathy did a brilliant job presenting and I'm sure they'll go on from strength to strength as the project grows."

Rich Gilbert, Events Manager at the Nowgen Centre

Carbon Footprint 2022/23

Figure 1: MFT Carbon Footprint Plus



In 2022/23, carbon emissions have decreased: both the Carbon Footprint (those emissions we directly control) and the Carbon Footprint Plus (those emissions we indirectly influence as well as those we directly control).

- The Carbon Footprint reduced by 5%, mainly from the decarbonisation of the national grid and reduced consumption of natural gas
- The Carbon Footprint Plus reduced by 4%, due to decreased spending within the supply chain

Supply chain emissions remain by far the largest part of our Carbon Footprint Plus. Mirroring previous years, changes in spend have a significant impact on the overall emissions of the Trust. Therefore, the fall in annual expenditure has resulted in the single biggest overall carbon reduction of all actions this year (12,937 tCO_2e).

Energy continues to be responsible for 81% of our direct emissions. Overall natural gas consumption fell, and electricity marginally increased. However, this was complimented by national decarbonisation of the electricity supply making each unit of electricity less carbon intensive for the user. As a result, total energy emissions are 3,568 tCO_2e less than in 2021/22.

Outside of energy, medical gas use (nitrous oxide and Entonox) is the largest direct emitter. Nitrous oxide use also fell slightly in 2022/23, helping to reduce the Carbon Footprint further.

1. The 2022/23 Carbon Footprint, Carbon Footprint Plus, remaining Carbon Budget, and projected 2023/24 emissions have been updated compared to those reported in the MFT 2022/23 Annual Report.
   This is because of access to more complete energy data, anaesthetic and medical gas data, and fleet data and the release of more accurate carbon factors for future projections.
   In addition, the footprints to baseline year 2019/20 have been updated to include inhalers, refrigerant gas leaks, more accurate medical gas use at NMGH, and more accurate carbon factors for medical gases and clinical waste.
2. Staff Commuting and Patient & Visitor travel emissions (the community footprint) are modelled using the Health Outcomes of Travel Tool, based on generalised assumptions and carbon factors last updated in 2019.
   As a result, the confidence in accuracy of emissions is comparatively low to other areas of the Carbon Footprint Plus. This method is the best available to us at time of calculation.

Carbon Footprint 2022/23

Figure 2: MFT Carbon Footprint Plus Composition 2022/23

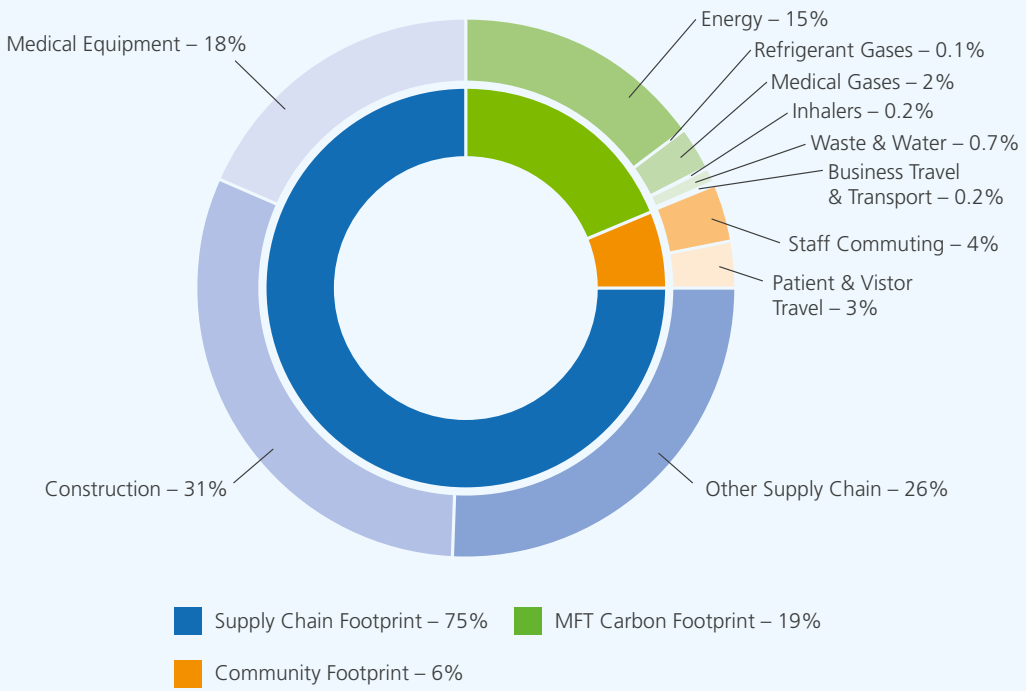
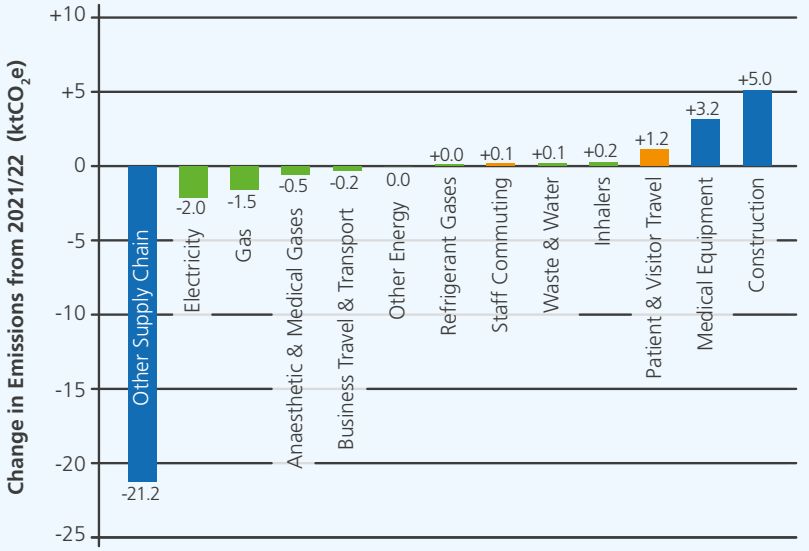


Figure 3: Carbon Footprint Plus Changes 2021/22 to 2022/23



Despite an overall reduction in emissions, not every part of the Carbon Footprint Plus has seen a drop. Within the supply chain footprint, considerably less was spent on business services and commissioned health services, which is mainly responsible for the large decrease in emissions from 'Other Supply Chain'. There were smaller spend increases on medical equipment and construction, however these elements of the supply chain are much more carbon intensive, so this has an enhanced effect on emissions.

Construction is now responsible for 31% of the Carbon Footprint Plus, and this is not likely to change in the medium term, with redevelopments planned at North Manchester General and Wythenshawe Hospitals. However, these redevelopments are essential to create a low carbon estate, and sustainability principles will be considered at all stages to reduce the real environmental impact.

Electricity consumption remained stable with a marginal 1% increase in use, whilst natural gas consumption fell by 3% compared to 2021/22. The national grid carbon intensity also fell, which generated overall carbon savings for electricity. Despite seeing more patients and employing more staff in 2022/23, the footprints from anaesthetic and medical gases, as well as business travel and transport, also reduced due to less use and travel mileage. However, this has had a knock on effect causing more emissions from staff commuting, patient and visitor travel.

Carbon Budget

Our carbon budget relates to those emissions we directly control (MFT Carbon Footprint). It sets a limit for the maximum emissions we can emit until we reach net zero carbon by 2038/39. The current interim budget spans from our baseline year in 2019/20 until the end of the current Green Plan in 2024/25.

With two years remaining in this carbon budget period, we are 27,963 tCO_2e behind target and have used 80% of the interim budget.

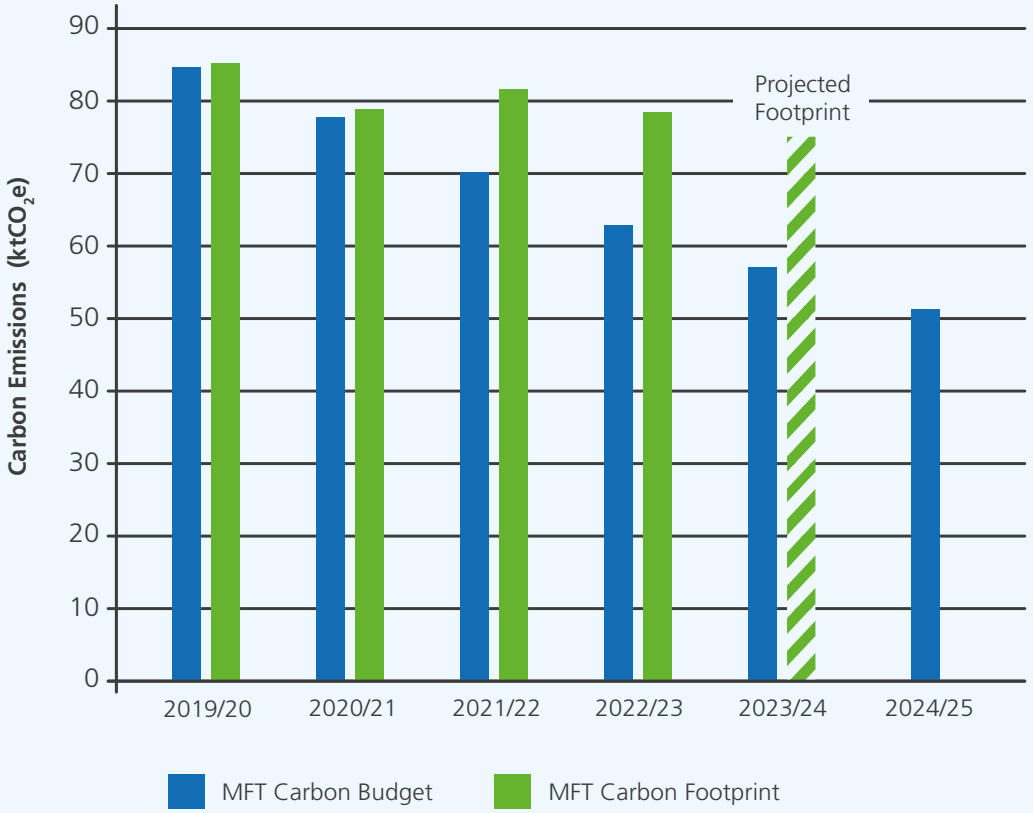
Next year we predict the MFT Carbon Footprint will reduce by approximately 3%, with the largest reductions due to multiple nitrous oxide manifolds being decommissioned, as well as a full year of savings from recent energy infrastructure investments. Although we have historically benefited from annual carbon reductions through the national grid, in 2023/24 the national electricity supply is predicted to become more carbon intensive. The effect of this will be to counteract electricity consumption savings made locally, putting adverse pressure on the MFT Carbon Footprint.

Next year's emissions will effectively use up our remaining interim carbon budget, leaving negligible amounts for the final year of this budget period. Our carbon reductions are still not at the pace needed to meet our 2038 net zero carbon target, nor our 'fair share' of emissions encompassed in our total carbon budget.

This context is not unique to MFT, as other organisations, and the Greater Manchester region as a whole, are not meeting their carbon budgets. Achieving these science-based targets is dependent on local decision making and behaviour change, but also limited by national infrastructure, innovation, and funding.

The carbon budget remains our ambition, but we do not currently have the pipeline of projects to meet it. As we approach 2024/25 and the end of the current Green Plan, we must consider a combination of two options: we must ramp up ways of reducing our carbon emissions and explore legitimate opportunities for offsetting our carbon impact.

Figure 4: MFT Carbon Footprint & Annual Carbon Budget



Conclusion

MFT has been taking proactive measures to reduce our carbon footprint; unfortunately these are not yet being delivered at the scale needed to meet our carbon budget. Our overarching ambition to be net zero by 2038 is still considered achievable, however, adherence to the carbon budget is much less likely, similar to other anchor institutions across Greater Manchester. Nationally and regionally, rapid decarbonisation has not taken place early enough. With the space between actual and target emissions growing each year it will be a huge challenge to close the gap, but we must remain focused to keep emissions as close as possible to our original budget. The effects of global climate change are now apparent locally through more frequent extreme events in Manchester and Trafford. By curbing our own emissions and influencing those of our suppliers we will be limiting these impacts, and by planning and investing in climate change adaptation at the same time, we will be well placed to support our staff and patients through increased heatwaves, droughts, and storms.

The breadth of initiatives now being captured within MFT sustainability reporting demonstrates that low carbon activity is becoming more widespread and not at the expense of other important priorities. Sustainability co-benefits can be observed from more targeted care to help the elective recovery, embedding digital solutions to improve patient outcomes, reusing aids to save money, and supporting staff wellbeing through active travel. Using the sustainability lens can be a powerful tool to address many of our organisational challenges, and this needs to be widely understood and utilised across the organisation.

MFT leadership for sustainability has undoubtedly been enhanced this year through the new 'Climate Emergency Response Board', more departmental sustainability leads, greater clinical representation and increased general engagement. We can only address the climate emergency through coordinated efforts at all levels. Sustainable and low carbon working is for everyone to consider and where there are barriers (internally or externally), we should be confident in challenging this to unlock a broad spectrum of benefits. Each staff member has a perspective on how sustainable improvements can be made. Action to make change should be encouraged through personal objectives, trainee and quality improvement projects, ward accreditations, and transformation initiatives. We have the means to make lasting sustainable change.

Appendix A: Green Plan Target Progress at a Glance

If you would like further information about MFT's sustainability programme, engage with your local sustainability lead, division director or contact the MFT Sustainability Team for support (ECOteam@mft.nhs.uk)

Sustainable Models of Care – Overall Progress Rating: On Track

Headline Objectives	Pilot the redesign of at least 3 care pathways to reduce carbon. 2% of patients discharged to a PIFU pathway.
Supporting Objectives	Establish at least 3 'green working groups' for clinical services with a high environmental impact. Provide resources and training on Sustainable Quality Improvement (SusQI), to empower clinical leads to review and redesign care pathways to reduce carbon (in collaboration with system and regional partners). Continue to embrace the Getting It Right First Time (GIRFT) programme to avoid unnecessary procedures, admissions and bed days. Measure and promote the specific carbon benefits of key, out-of-care hospital models such as Community Macular Treatment Centres. Pilot innovative technologies that reduce the environmental impact of care and prevent ill-health.

Digital Transformation – Overall Progress Rating: Behind

Headline Objectives	Deliver 25% of all first outpatient appointments and 60% of all follow up appointments virtually. Embed circular economy considerations within the procurement and disposal of IT equipment, including the development of reporting metrics.
Supporting Objectives	Work with key suppliers to embed circular economy considerations within procurement of IT and other digital infrastructure, including purchasing durable devices that can be repaired and upgraded, and embracing technology as a service rather than a product. Collaborate with key partners to embrace digital innovations that have significant carbon benefits associated with them. Identify and measure the sustainability benefits of 'HIVE' which digitalises and streamlines patient records into a single system.

Progress Key:

Not Started | Behind | On Track | Complete

Supply Chain & Procurement – Overall Progress Rating: On Track

Headline Objectives	Apply a social value weighting of at least 10% to all new purchasing contracts and work collaboratively with partners and suppliers to drive down our carbon footprint plus.
Supporting Objectives	Develop a Sustainable Procurement Policy to support the transition to net zero carbon and more sustainable procurement models. This will embed circular economy principles, with suppliers expected to consider and take responsibility for all stages of the product lifecycle. Work collaboratively across the system to develop interventions for the top 10 most carbon intensive products and suppliers. Implement a programme of carbon literacy for procurement staff, achieving at least 50% of staff trained by 2024/25. Pilot new methods for reporting on supply chain carbon emissions to improve the accuracy of the MFT Carbon Footprint Plus. Increase the proportion of recycled paper purchased from 64% to 95% by 2024/25.

Medicines – Overall Progress Rating: On Track

Headline Objectives	Reduce the carbon footprint of medicines that have a high GWP at point of use (inhalers, medical gases, and volatile anaesthesia.)
Supporting Objectives	Appoint sustainable anaesthesia leads for MFT hospitals with allocated PA time for this agenda and ensure a collaborative working group operates across the whole Trust. Implement a programme to minimise wasted Nitrous Oxide and Entonox. Develop and implement a Trust-wide hierarchy for sustainable anaesthesia, maintaining desflurane usage at less than 5% of volatile halogenated agents (only used when clinically essential). Baseline carbon emissions from MFT prescribed inhalers and develop a programme of interventions to reduce the impact on our carbon footprint, including improving disposal of used inhalers. Develop a campaign to further reduce over or unnecessary prescribing and wastage of medicines. Require all anaesthetists to undertake mandatory training and regular CPD on the environmental impacts of anaesthesia.

Appendix A: Green Plan Target Progress at a Glance

Food & Nutrition – Overall Progress Rating: Behind

Headline Objectives	Reduce the carbon impact of food, minimise food waste and eliminate unnecessary single use plastics from catering.
Supporting Objectives	Undertake an in-depth food waste study across at least one MFT hospital, to identify and deliver priority interventions.
	Increase the number of low carbon, sustainable and healthy patient meal options on offer as part of the Better Hospital Food Programme, and require catering providers to report progress at least once annually.
	Work with ICS and PFI partners to take a more collaborative and robust approach to procurement of catering services with increased weighting on healthier, lower carbon and locally sourced supplies.
	Eliminate all unnecessary single use plastics from staff catering facilities and ensure this is a contractual requirement for any new outsourced provision.

Estates & Facilities – Overall Progress Rating: On Track

Headline Objectives	Reduce carbon emissions from the building estate by at least 30% by 2024/2025 and ensure major schemes are energy efficient and low or zero carbon.
	Implement innovative treatment technologies for waste and increase the recycling and reuse rate from 17% to 25%.
Supporting Objectives	Develop an Estates Decarbonisation Strategy, delivering ambitious energy and water reduction and efficiency schemes, destemming hospital sites and seeking funding opportunities.
	Develop a plan for innovative treatment and prevention of waste, including working with key suppliers and social enterprises to develop a circular economy approach
	Develop decarbonisation plans for all existing fossil-fuelled CHP schemes and not commit to any new schemes unless they have a decarbonisation plan that aligns with our carbon budget
	Ensure that major hospital redevelopments, refurbishments and life-cycled infrastructure is designed to be low and zero carbon in-use.
	Increase capacity of on-site renewable energy generation and only use certified renewable tariffs. Explore opportunities to work with partners to develop PPAs for off-site renewables.

Travel & Transport – Overall Progress Rating: On Track

Headline Objectives	Reduce the carbon emissions of travel and transport activities (business travel, fleet mileage, staff commuting and patient and visitor travel) by 25%.
	Achieve a "Good" rating for the Clean Air Hospital Framework.
Supporting Objectives	Deliver the MFT Healthy Travel Strategy and implement campus-specific travel plans.
	Reduce journeys through virtual outpatients' visits and the provision of care closer to home.
	Review business travel and implement an action plan to reduce its environmental impact.
	Actively seek funding to improve active travel infrastructure, whilst continuing to incentivise take-up through hire schemes and on-site cycle maintenance.
	Fully electrify the in-house transport fleet, and only offer ultra-low and zero emitting vehicles through staff salary sacrifice schemes, providing supporting charging infrastructure subject to funding and electrical capacity constraints.
	Work with key suppliers and partners to consolidate orders and deliveries to sites.
	Ensure that up-to-date information on active and sustainable travel is widely available to staff, patients and visitors.

Climate Change Adaptation – Overall Progress Rating: Behind

Headline Objectives	Ensure our organisation is preparing to deal with the impacts of climate change by delivering and embedding the Climate Change Adaptation Plan (CCAP) and associated action plan.
Supporting Objectives	Deliver, maintain and report progress against the Climate Change Adaptation Plan (CCAP) and associated action plan.
	Maintain and review climate change risks on the corporate risk register.
	Work with city-wide partners to deliver shared priorities on climate change adaptation and help ensure system-wide resilience.
	Ensure that major new buildings and hospital campus redevelopments are planned and designed to be resilient to climate change impacts including hotter drier summers, and an increasing frequency of extreme weather events.

Progress Key:

Not Started | Behind | On Track | Complete

Appendix A: Green Plan Target Progress at a Glance

Green Spaces & Biodiversity – Overall Progress Rating: Behind

Headline Objectives	Maximise the quality of on-site green spaces, identifying and delivering schemes that address one or more of the following priorities: improve local biodiversity, support staff wellbeing and/or patient recovery, combat climate change or provide opportunities for social prescribing.
Supporting Objectives	Develop a Greenspace and Biodiversity Plan, establishing associated metrics. Collaborate across estates, clinical teams and with local social enterprises to develop and seek funding for schemes. Build green measures into major hospital redevelopment programmes. Facilitate our staff beekeeping programme and assess the feasibility of expansion across other sites. Require service providers to undertake annual tree condition surveys to establish a programme of recommended works. Implement opportunities for wildflower planting, designated 'no-mow' zones to encourage wildlife, and expand hedgerow and tree cover.

Workforce, Networks & System Leadership – Overall Progress Rating: On Track

Headline Objectives	Continue to educate and engage the workforce to understand the net zero ambition of the NHS. At least 50% of staff with major influence or responsibility for carbon intensive areas to undertake training and/or CPD.
Supporting Objectives	Include a net zero carbon clause in all job descriptions and set appraisal objectives for those in key positions of leadership and influence. Provide role-appropriate staff and student sustainability training. Work with partners at all levels to develop a tailored programme of learning. Appoint undergraduate and postgraduate sustainable education leads to embed sustainability within MFT clinical trainee development. Run focused campaigns and behavioural change programmes to increase awareness and action on specific sustainability themes. Develop and maintain a net zero communications plan with key deliverables. Widely promote our work through events, social media and case studies. Enhance the package of 'green' staff benefits.

Progress Key:

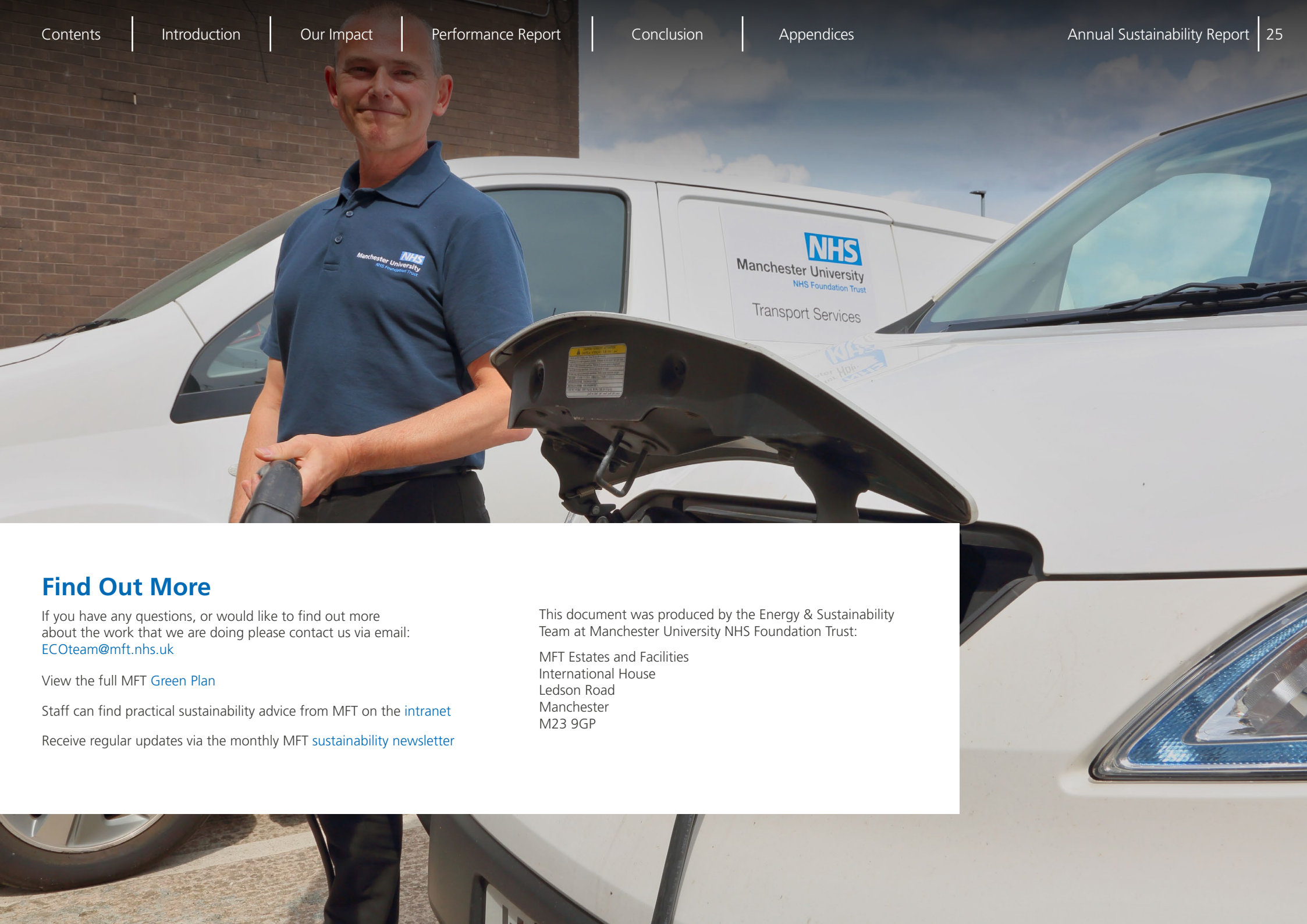
Not Started | Behind | On Track | Complete

Appendix B: KPI Dashboard

- **Carbon:** Savings across many components of the Carbon Footprint have led to a decrease in our direct emissions, while large spending cuts in relatively low carbon intensity categories of the supply chain have reduced the Carbon Footprint Plus. Employing more staff and seeing more patients in 2022/23 has increased the community footprint to its largest level since baseline year, but conversely the carbon footprint normalised on patient contacts is the lowest since baseline.
- **Buildings & Utilities:** Gas consumption fell as CHPs did not fulfil full energy demands during periods of servicing. Electricity consumption stayed stable, with the aid of increased renewable output from solar panels installed as part of energy infrastructure investment. Water consumption remained similar despite the rise in patient contacts, leading to a reduced normalised energy and water footprint. Refrigerant gas leaks were added to the carbon footprint, as the gases which are leaking into the atmosphere have high global warming potential.
- **Medicines & Anaesthesia:** Volatile anaesthetics use saw low fluctuations from last year, maintaining a large reduction since baseline from ceasing use of desflurane. A slight dip in nitrous oxide use led directly to the drop in the medical gases carbon footprint. Inhalers have been included in the Carbon Footprint, as they produce emissions at the point of use.
- **Waste:** Total tonnage has risen for the second year, but by a marginal 2%. Recycling & reuse in healthcare and non-healthcare waste is trending positively. Patient contacts rose by proportionately more than total waste, hence normalised waste per patient has decreased.
- **Travel:** Business travel mileage has reduced significantly, with fewer miles travelled by private car (the most common mode of business travel) and increases to the train travel mileage. Both staff commuting and patient & visitor travel have increased directly with the increase in staff employed and patient contacts, respectively.

Theme	KPI	Unit	2019/20*	2021/22	2022/23	Trend from Prev Year (22/23 vs 21/22)	Trend from Baseline (22/23 vs 19/20)
Carbon	MFT Carbon Footprint	tCO_2e	86,708	81,919	77,949	↓ -5%	↓ -10%
	Community Carbon Footprint	tCO_2e	25,790	24,880	26,152	↑ 5%	↑ 1%
	Supply Chain Carbon Footprint	tCO_2e	314,274	325,823	312,886	↓ -4%	– 0%
	MFT Carbon Footprint Plus	tCO_2e	426,772	432,622	416,987	↓ -4%	↓ -2%
	Normalised MFT Carbon Footprint	*Kg CO_2e / patient contact*	*32.02*	*35.81*	*31.04*	↓ *-13%*	↓ *-3%*
Building & Utilities	Natural Gas Consumption	kWh	180,188,024	207,186,726	200,812,337	↓ -3%	↑ 11%
	Electricity Consumption	kWh	95,032,414	73,424,990	74,048,073	↑ 1%	↓ -22%
	On-site Renewable Generation	kWh	99,799	130,913	371,153	↑ 184%	↑ 272%
	Water Consumption	m^3	800,124	751,959	763,464	↑ 2%	↓ -5%
	Refrigerant Gas Leaks	Kg	91.00	91.00	104.00	↑ 14%	↑ 14%
	Normalised Energy & Water Carbon Footprint	*Kg CO_2e / patient contact*	*25.30*	*29.22*	*25.20*	↓ *-14%*	– *0%*
Medicines & Anaesthesia	Volatile Anaesthetic Gases Carbon Footprint	tCO_2e	1,674	534	527	↓ -1%	↓ -68%
	Medical Gases Carbon Footprint	tCO_2e	10,704	10,052	9,569	↓ -5%	↓ -11%
	Inhaler Carbon Footprint	tCO_2e	727	584	741	↑ 27%	↑ 2%
Waste	Total Waste Tonnage	Tonnes	7,932	8,279	8,486	↑ 2%	↑ 7%
	Healthcare Waste	Tonnes	3,613	3,832	3,802	↓ -1%	↑ 5%
	Healthcare Reuse & Recycling	Tonnes	57	64	67	↑ 4%	↑ 18%
	Non-Healthcare Waste	Tonnes	2,972	2,681	2,907	↑ 8%	↓ -2%
	Non-healthcare Reuse & Recycling	Tonnes	1,290	1,702	1,711	↑ 1%	↑ 33%
	Normalised Total Waste	*Kg waste / patient contact*	*2.93*	*3.62*	*3.38*	↓ *-7%*	↑ *15%*
Travel	Total Fleet Mileage	km	697,041	1,279,677	1,211,697	↓ -5%	↑ 74%
	Total Business Travel Mileage	km	7,888,127	4,630,969	3,921,646	↓ -15%	↓ -50%
	Modelled Staff Commuting Mileage	km	146,295,961	154,981,965	159,938,822	↑ 3%	↑ 9%
	Modelled Patient & Visitor Travel Mileage	km	99,625,822	84,314,255	97,094,958	↑ 15%	↓ -3%

*figures include North Manchester General Hospital



Find Out More

If you have any questions, or would like to find out more about the work that we are doing please contact us via email: ECOteam@mft.nhs.uk

View the full MFT Green Plan

Staff can find practical sustainability advice from MFT on the intranet

Receive regular updates via the monthly MFT sustainability newsletter

This document was produced by the Energy & Sustainability Team at Manchester University NHS Foundation Trust:

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