BOB Buckinghamshire, Oxfordshire and Berkshire West Integrated Care System

FINAL DRAFT

Buckinghamshire, Oxfordshire and Berkshire West ICS Green Plan: Our Strategy towards Net Zero

Dated: 23 March 2022



CONTENTS

1. FOREWORD

We, as an Integrated Care System, are committed to deliver against the UK Government ambition to reduce our carbon footprint and deliver our NHS Green Plan; which provides us a focus on reducing our carbon footprint and delivering our health and care services more sustainably. This is an important part of our journey towards delivering the Greener NHS ambition of being the first healthcare system in the world to be net carbon zero. We recognise that our sustainability journey will change our ways of working, which will allow us to continue to make a positive impact environmentally, socially, and financially. In doing so, we will ensure the ICS is fit for the future and supports the long-term well-being of our staff, service users and the wider communities we serve.

As an ICS, made up of a number of different organisations, we deliver a range of services, which harness our ability to innovate and leverage the latest research and technology, to drive sustainability and individual and organisational behaviour change, across Buckinghamshire, Oxfordshire and Berkshire West. The Green Plan is part of the process of anchoring sustainability as key pillar in everything we do. We can mention to have sustainability as a key pillar when we develop our multi-year system strategy during 2022/23.

We have already begun our green journey and are proud to have achieved the following:

- All NHS provider organisations have developed individual Green Plans that are backed by the Trust boards and have been signed-off by the boards
- The development of our provider estates strategies, which has seen us, rationalise and consolidate our use of buildings.
- The uptake in digital tools such as Microsoft Office 365, which has enabled us to adopt highly agile ways of working across all teams and services. As well as telephone and video consultations in primary care, secondary care, mental health and community services which avoided thousands of miles of car journeys (trusts might be able to quantify)
- The removal of single use plastic cutlery and cups across all our sites.
- The roll out of carbon literacy training amongst senior level staff.
- The increase in recycling bins amongst many of our sites.

These initiatives not only have reduced our carbon footprint but also prompted behaviour changes which is important in moving forward in our delivery of a net zero health service”

One final note, while this document follows NHS guidance and the focus is on NHS organisations, we see this Green Plan as a starting point of a multi-year journey. Our ICS Green Plan provides us with a platform for our wider engagement with local authorities, voluntary and social enterprise sector and our residents. Only together, we can tackle the issue of climate change.

James Kent

Chief Executive

2. INTRODUCTION

2.a The Greener NHS National Programme

In October 2020, the Greener NHS National Programme published its new strategy, Delivering a Net Zero National Health Service**. This report highlighted that left unabated climate change will disrupt care, with poor environmental health contributing to major diseases, including cardiac problems, asthma and cancer. The report set out trajectories and actions for the entire NHS to reach net zero carbon emissions by 2040 for the emissions it controls directly, and 2045 for those it can influence (such as the supply chain).**

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

Given the pivotal role that Integrated Care Systems (ICSs) play, this has been expanded to include the expectation that each ICS develops its own Green Plan, developed from the strategies of its member organisations.

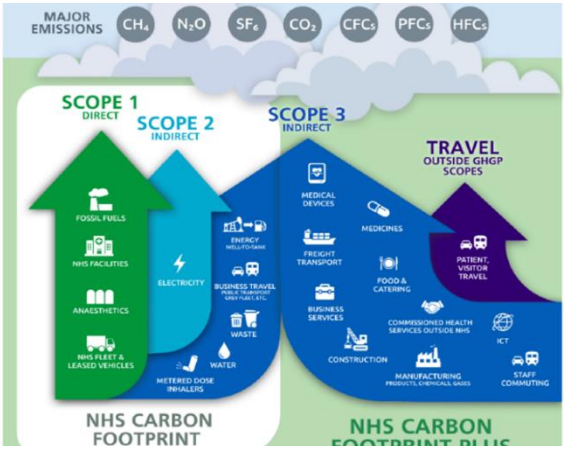


Figure 1: Illustrates the NHS reporting against scopes and three nationally

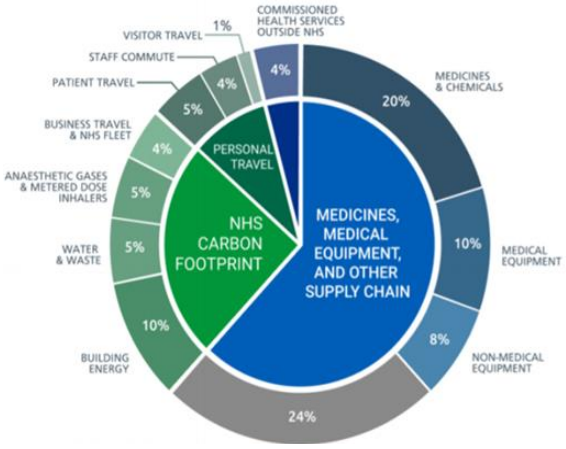


Figure 2: Sources of carbon emissions by proportion of NHS Carbon Footprint Plus (emissions from patient and visitor travel and medicines)

Our 'Green Plan' will align itself with the NHS Long-Term Plan. As part of the NHS, we must play its part in reducing the environmental impact and carbon footprint of its operation. This inaugural Green Plan is a high level, strategic document that should be viewed as a 'living' document. As the ICS develops, and work programmes become clearer, the areas of focus of this Green Plan will be developed, and sustainability will be seen as business as usual.

In England, the NHS is estimated to account for 5.4% of the country's greenhouse gas emissions. The health and social care system reduced its carbon footprint by an estimated 62% between 1990-2020, however, drastic action is now required.

Figures 2 and 3 in the Plan illustrate the key areas of focus that the NHS must deliver on in order to reduce its carbon footprint. Our approach to this is set in this Green Plan, presenting a targeted approach to meeting the Greener NHS targets of being a net carbon zero health care service by 2045.

Our Green Plan has been written in alignment with NHS England's 'How to produce a Green Plan' guidance. Case studies demonstrating the great projects that are already underway have been included.

This plan will be reviewed on a 12-month basis to ensure that intended actions are being carried out and it remains relevant. This plan has been written and intended for a system wide audience.

Buckinghamshire, Oxfordshire and Berkshire West Integrated Care System

In the heart of the Thames Valley is our Integrated Care System (ICS). Our ICS is a partnership that brings together providers and commissioners of NHS services across a geographical area with local authorities and other local partners to collectively plan health and care services to meet the needs of their population. Our areas covers three counties and is coterminous with the local authority boundaries of Buckinghamshire, Oxfordshire, Reading, West Berkshire and Wokingham. Part of our ICS are

- 175 general practices
- 6 NHS trusts providing hospital care, including community care, mental health and ambulance services
- 5 local authorities, which provide social care and plan and buy services from care agencies, care homes and voluntary services:

Our geography covers a population of nearly 1.8 million. While overall in good health and socio-economic condition, alongside affluence we have pockets of severe deprivation.

Our ICS consists of two core components. Firstly, the Integrated Care Board (ICB), which will be a statutory NHS organisation from 1 July 2022 and cover most current CCG functions plus additional responsibilities. Secondly, the Integrated Care Partnership, which is a statutory committee which has representation of all sectors from health and social care and has responsibility for the overall system-wide Integrated Care Strategy.

This new structure means that there will be a much greater emphasis on collaborative working to manage resources, performance, and delivery to change the way health and care is delivered for the better.

Figure 3: Map of BOB

3. BACKGROUND

Health and social care organisations across Buckinghamshire, Oxfordshire and Berkshire West are committed to improving the health and wellbeing of the 1.8m people living in the area.

Our Integrated Care Partnership ('ICP' or 'Partnership') will be established as a joint committee by the Integrated Care Board and local authorities. It will include a broad set of representatives that will play a critical role on our journey towards better health and care outcomes for the people of Buckinghamshire, Oxfordshire and Berkshire West. The ICP will provide a forum for NHS leaders and local authorities to come together, as equal partners, with important stakeholders from across the system and the community.

The Partnership will be responsible for the production of an evidence-based, data-driven integrated care strategy, setting out how we can deliver and improve health and care outcomes for our population through partnership working between the NHS (both our ICS and NHS England) and our local authorities. The strategy will cover health and social care (both children's and adult's social care) and address the wider determinants of health and wellbeing. It will be a bottom-up endeavour based on assessments of the needs of local populations and will draw heavily on place- and neighbourhood-level engagement.

This joined-up, inclusive partnership working is central to ensuring that all parts of our ICS target collective action and resources at the areas which will contribute most to improving outcomes and addressing inequalities as we recover from the pandemic.

Our vision is to achieve the 'triple aim' set out in Next Steps on The NHS Five Year Forward View published in March 2017 and close the **health and wellbeing**, **care and quality** and **financial gaps** by:

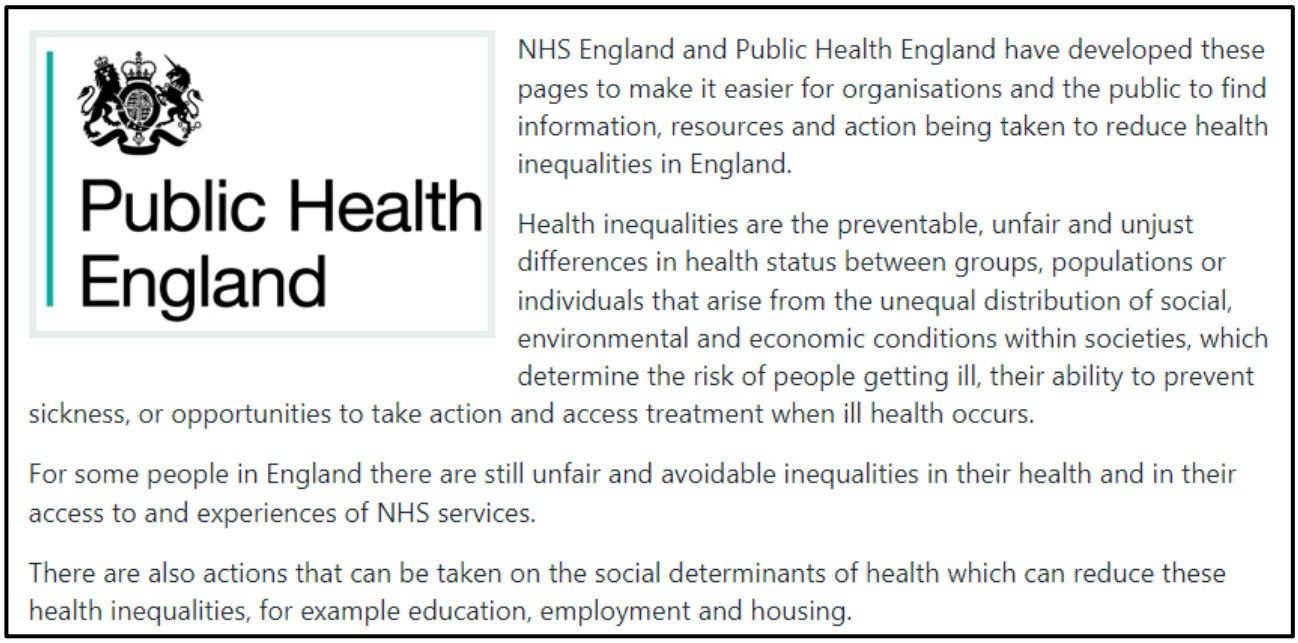
- Working together across the ICS – including Trusts, primary care and other partner organisations, as well as with partners beyond the ICS, to commission and provide health and care services
- Supporting further development of the Integrated Care Systems in Buckinghamshire and Berkshire West.
- Using the learning from the first two shadow ICSs in Buckinghamshire and Berkshire West to develop the Oxfordshire health and care system.

The priorities for the ICS to deliver on, on a national perspective, are:

- Improve outcomes in population health and healthcare
- Tackle inequalities in outcomes, experience and access
- Enhance productivity and value for money
- Help the NHS support broader social and economic development

During FY22/23, we will develop our own system Integrated Care Strategy, which defines our priorities and objectives over the next five years under the umbrella of the national priorities set out above.

We are committed to reducing health inequalities



[1]

Whilst this document refers mainly to environmental elements of sustainability, it is important to also align to the social and economic elements. As the ICS and ICB is being moulded and developed, and the focus changes from competition, to co-operation, reducing health inequalities will be an integral element of all the work that is carried out. Work is already taking place across our geography to deliver on these areas, with an 18 month roadmap in place focusing on prevention and health inequalities planning, and this ICS Green Plan will align completely with them.

Social value and anchor institutions are a big part of the way that the NHS views the wider remit of sustainability. Social Value, which requires organisations to consider the economic, environmental and social impacts of decisions and activities that are taken and which is regulated through the Social Value Act 2012 and Policy Procurement Note (PPN) 06/20, requiring suppliers to explicitly demonstrate the social value of all tenders, which will become a requirement within the NHS through national NHSE/I guidance, and expected to be in place from 1st April 2022.

Anchor institutions are large organisations, based in a local area, unlikely to leave and are viewed as an integral part of the local community. The NHS absolutely fulfils this definition and organisations and ICSs can become anchors, using their own local definitions, with a focus on supporting the local community through opportunity, purchase and employment.

This work aligns with the net zero agenda and the supplier roadmap, bringing together the social, environmental and economic elements of all that we do.

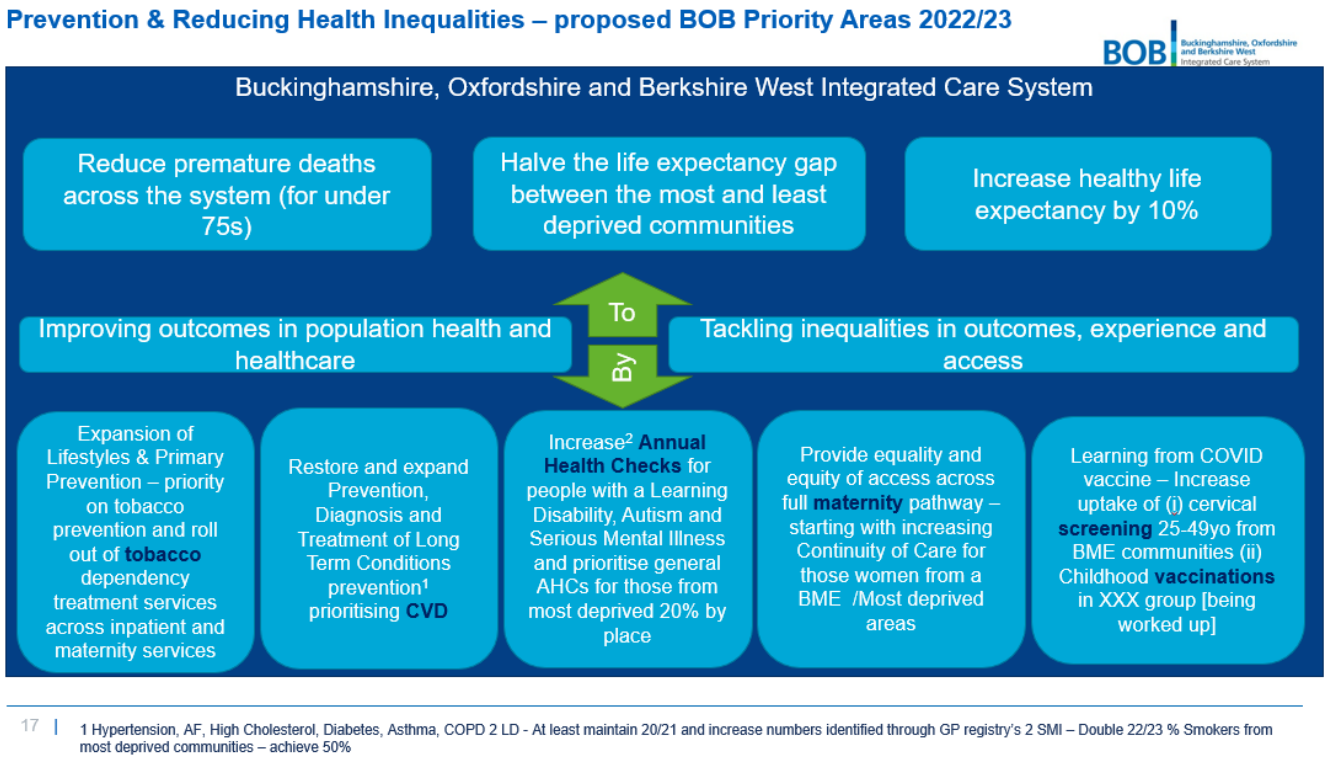
More information on health inequalities can be found here in NHS England's Core Plus 5 document.

[1] Please note, whilst Public Health England no longer exists, these principles are being taken forwards by NHSE/I

A recent report from Good Things Foundation identifies a link between health inequalities and digital exclusion - when people do not have the access, skills or confidence to use the internet or fully benefit from technology in everyday life, resulting in their exclusion to health, education and treatments. The report highlights that digital exclusion impacts people's health via three main ways:

- Access to healthcare: for example, being locked out of using digital health tools and services
- Shaping people's chances of a healthy life via economy and employment, education and learning, and social participation and community life.
- Digital exclusion for equalities in a data-driven health system. Certain groups will have very low digital and data footprints.

Prevention and Reducing Health Inequalities priority areas, 2022-23



Taken from the BOB Prevention and Health Inequalities Planning roadmap, the above highlights the planned areas of focus for prevention and reducing health inequalities across the footprint. Health inequalities impact on every area of life, from an individual's ability to travel, access digital services, consume medicine and plan for future changes. The links to sustainability here are clear and as the ICS develops, these will become interlinked as a part of the planning processes taking place.

Voluntary, community, and social enterprise (VCSE) sector

The VCSE sector is an integral part of the ICS, bringing together community and voluntary organisations to share innovative approaches for empowering people to manage their health and to work towards their personal goals, to make decisions about their care, support, and treatment they receive, as well as to engage with and shape health and care support.

4. REGIONAL PRIORITIES

We are committed to achieving net carbon zero through all of its activities. Each NHS region has adopted specific Greener NHS Programme priorities. The South East region has adopted the five below priority areas and we will focus on delivering these in the work that we do.

Medicines	The ICS plan describes primary care's work to shift towards dry-powder inhalers where clinically appropriate, participate in or run an "inhaler disposal scheme". The ICS supports sharing of learning within the system in reducing the use of desflurane, and other emissions relating to anaesthetic gases.
Travel & Transport	The ICS is working with the Local Authority in support of the development & implementation of ultra-low emissions or clean air zones, support for active travel (e.g. cycling routes), as well as local installation of charging infrastructure.
Digital	The ICS is working to ensure digital technology is embedded wherever possible, enabling more flexible ways of working and accessing healthcare services with suppliers to encourage sustainable procurement practices.
Estates and Facilities	The ICS plan describes plans for primary care services to transition towards purchasing renewable energy.
Procurement and Supply Chain	The ICS is working with suppliers to encourage sustainable procurement practices. This may involve ICS-level communication of the new NHSE/I supply chain roadmap and sharing of resources & learning within the ICS on driving sustainable procurement.

Delivering a Net Zero NHS

- The primary focus of the Regional Greener NHS team will be to ensure the delivery of a Net Zero NHS.
- During 2021/22, trusts and ICSs developed board-approved Green Plans, aligned with the ambitions set out in *Delivering a Net Zero NHS.* During the 2022/23 financial year, regional teams are asked to support the delivery of these plans, and ensure plans are aligned with the ambitions set out in *Delivering a Net Zero NHS* where not already the case.
- Each region will define five regional priorities for carbon reduction for the financial year 2022/23.
- Four of these priority areas are in line with key national workstreams (medicines, travel and transport, supply chain & procurement, and estates & facilities), with the fifth priority being a continuation of our regional workstream focused on Digital ways of working/models of care. The specific activities are outlined below and contain revised targets on the 2022/22 targets:

1. **Medicines:**
    - Reducing the proportion of desflurane used in surgery to less than 5% of overall volatile anaesthetic gases volume in all trusts in line with the proposed 2022/23 NHS Standard Contract;
    - Reducing the emissions associated with the use of nitrous oxide, in line with the 2022/2023 Standard Contract. [specific targets tbd]
    - Reducing the carbon impact of inhalers, in line with the commitment of a 50% reduction by 2028 and a 13% reduction in 2022/23 on a 2019/20 baseline, by:
        - supporting the achievement of the four inhaler indicators as part of the investment and impact fund (IIF), ensuring that national resources accessible on FutureNHS are promoted, respiratory best practice are followed and change in inhalers are undertaken in consultation with patients, with appropriate inhaler technique training.
        - Decreasing the proportion of metered dose inhalers prescribed to 25% of all non-salbutamol inhalers prescribed, leading to a mean life-cycle carbon intensity of all salbutamol inhalers prescribed to 13.4kg CO2e by March 2024.

2. **Travel and transport:**
    - Ensuring that the region's fleet is made up of at least 90% Low Emission Vehicles (LEV) by March 2023. This should include a target of 10% Ultra-Low Emissions (ULEV) and Zero Emission Vehicles (ZEV) by March 2023, ensuring that all vehicles (under 3.5 tonne) purchased or leased are ULEVs and ZEVs.
    - Ensuring that only ULEVs or ZEVs are available to staff through car salary sacrifice schemes.
    - Ensuring all ICSs have a salary sacrifice cycle-to-work scheme in place for staff; as well as facilities available to encourage staff and visitors to cycle-to-work where appropriate.

3. **Supply Chain and Procurement (supporting regional procurement teams):**
    - Supporting implementation of the NHS Net Zero Supplier roadmap, including through:
        - Supporting implementation by trusts and ICSs of the requirement for all NHS tenders to place a minimum 10% weighting on net zero and social value from April 22
        - Gaining assurance from procurement teams that NHS suppliers requiring a carbon reduction plan to qualify for NHS contracts from April 2023 (contract over £5M annually) have been identified, and are prepared for this new requirement
    - Reducing reliance on office paper in line with a 50% reduction use by 2025 compared to baseline and ensuring ICSs and constituent NHS organisations only purchase 100% recycled content paper for all office-based functions and all non-office-based functions by 2025.
    - To have walking aid refurbishment schemes implemented in all trusts by end of April 2024

4. **Estates and Facilities (supporting regional estates teams):**
    - All electricity purchased by NHS trusts is REGO-certified as soon as practically possible.
    - Supporting the LTP ambition to phase out coal and oil fuel as primary heat source in NHS Secondary Care sites.
    - Supporting the implementation of the Net Zero Hospital Buildings Standards (due to be published in Q1 22/23).
    - Support regional estates teams to monitor implementation of projects receiving funding through the Public Sector Decarbonisation Scheme.

5. **Digital Ways of Working/Models of Care**
    - Build from our 2021/2022 target to articulate the case for sustaining the digital transformation of activity triggered during the pandemic response in 2020.
    - Continue to measure and map changes to digital models of care to identify carbon savings and aid decision making for service delivery transition.
    - Align the sustainability agenda with the Digital Transformation targets including Virtual Wards/Virtual Care, Electronic Patient Records, PIFU and outpatient virtual care, electronic teleconference and primary care.
    - Exploit geospatial analysis to further aid digital transformation and travel habits via technology innovations.

Regions may be asked during the year to support the delivery of new, strategic pieces of work requiring regional coordination, e.g. the pathfinder programme for Zero Emission Electric Vehicles.

5. PROVIDER TRUST PRIORITIES

	Royal Berkshire NHS Foundation Trust	Berkshire Healthcare NHS Foundation Trust	Oxford University Hospitals NHS	Oxford Health NHS Foundation Trust	South Central Ambulance Service NHS Foundation Trust	Buckinghamshire Healthcare NHS Trust
Estate carbon footprint e.g. improve insulation and room layout. Install LED's						
Energy usage (gas & electricity). e.g. increase use of renewably sourced power						
Transport (patients) e.g. increase number of virtual and telephone patient consultations						
Transport (fleet & staff) e.g. introduce flexible working for staff; replace fleet vehicles with low/ultra low emission vehicles						
Recycling e.g. eliminate use of single use plastics						
Waste e.g. work with suppliers to reduce packaging. Provide recycling bins/signage						
Food & nutrition e.g. increase use of local suppliers						
Estates biodiversity e.g. have green spaces available to workforce and patients						
Supply chain e.g. include sustainability criteria in procurement, tender evaluations						
Training & communications e.g. engage staff and encourage involvement throughout the organisation						
New build & refurb sustainability e.g. Meet BREEAM standards						

Benchmarking e.g. compare and share with other organisations						
Medicines e.g. reduce and recycle medical devices						
Digitally enabled hybrid working e.g. home working; digital consultations						

The table above highlights which areas of focus have been included in each Trust's Green Plan. As can be seen there are a lot of cross over priorities in the different Trust Plans and some areas that should be focused on as the individual Trust Green Plans are grown and developed.

This is an opportunity to scale up best practices across organisations and ensure consistency and implementation of sustainability initiatives at pace across our geography.

6. LOCAL AUTHORITY PRIORITIES

Local authorities are a crucial partner in our ICS and it's important, therefore, to ensure we understand their priorities and commitments to the environment and social value so that there can be one joined up approach across our geography. The table below shows the areas of focus for each Council in delivering their individual commitments to the green agenda and all the information was found through discussion with Council representatives and through information publicly available and blank boxes highlight areas where no information could be found for the specific area of focus. As time progresses, it is joint working groups will be set up to ensure there is one approach to delivering net carbon zero as climate change is not something that only affects individual areas. It affects us all, so we must all work together to tackle this global problem.

	Buckinghamshire Council	Oxfordshire County Council	Reading Borough Council	Wokingham Borough Council	West Berkshire Council
Total Carbon Footprint Reduction					
Buildings and Estate					
Improve insulation and general energy efficiency					
New developments and retrofits to be low carbon or carbon neutral					
Introduce LED lighting throughout council buildings & social housing.					
Urban greening					
Power					
Use more power from renewable sources e.g. solar farms					
Increase installation of energy efficient LED street lighting					
Introduce low-carbon heat networks					
Transport					
Improve infrastructure e.g. EV charging points					
Invest in walking and cycling infrastructure					
Organise public transport in a low-carbon way					

Council fleet to be low or ultra-low emission					
Waste					
Increase public and council staff engagement (reduce-reuse-recycle)					
Increase recycling rates – set targets					
Remove single use plastic usage from council activities					

7. ORGANISATIONAL VISION & ICS PRIORITIES

7.a. Our Green Vision

To achieve net zero healthcare within Buckinghamshire, Oxfordshire, and Berkshire West

ICS in line with the Greener NHS programme we are ensuring sustainability principles are included as a part of the ICB and ICP formation. These have already been proposed and now need to be agreed and developed with the Board as a part of the strategic development. want to develop greener health and social care systems which strive to deliver high quality services and improve the health and wellbeing of the population.

In order for the NHS to reach net zero carbon emissions by 2040 for the emissions it controls directly, and 2045 for those it can influence, we are aiming to achieve the following:

Reduce Carbon Emissions

- Reduce gas and electricity usage
- Move towards 100% green electricity across the ICS

Decrease Pollution

- Reduce clinical, administrative and food waste
- Eradicate single use plastics
- Implement active travel schemes

Improve Health and Wellbeing

- Invest in green site enhancement and green spaces
- Support more active travel through initiatives like cycle-to-work
- Prioritise proactive healthcare and education around physical health and exercise. Invest in staff health and wellbeing (sustainable staffing)

Increase Financial Efficiency

- A reduction in gas and electricity consumption – saving money as well as power
- A reduction in waste will lead to cost savings e.g. a more effective supply chain

Boost Reputation

- Maintain our high reputation with our partner organisations by sharing information and promoting action
- Support and encourage staff green groups by creating a culture that enables compassion and inclusivity to thrive.

We are committed to delivering on the NHS priorities and will work to define our own specific priorities as we progress with our strategic planning.

8. AREAS OF FOCUS

8.a. Workforce and System Leadership

Our People

The Greener NHS staff campaign - Healthier Planet, Healthier People - has been developed to empower all of us to come together to build a more sustainable NHS, with an ambition to become the world's first net-zero health service by 2040.

As part of the Green Plan, we recognise that the workforce is key to ensuring our organisation is sustainable, and every person within the organisation has a part to play. We will do this by engaging with our staff and partners to define and deliver initiatives and broader sustainability goals.

We will also support the Greener NHS staff campaign, Healthier Planet, Healthier People to help employees in discovering how to become greener and how to improve health now and in the future. The campaign encourages all staff to join in and create a greener, sustainable health service in a way that is meaningful to them. With more than 1.3 million NHS staff, small actions from all of us will add up to make a big difference.

Figure 4: Advertisement from NHS 'Healthier People, Healthier Planet' Campaign

8.a.i Leadership

We have identified Amanda Lyons, Interim Director Strategic Delivery & Partnerships BOB ICS as the net zero Board level lead with responsibility for ensuring the organisation develops a green plan and for leading its implementation.

By introducing an executive level lead, it ensures that the plan is adopted at the highest level, which will create a trickle-down affect amongst the workforce. This will also increase the support amongst the wider leadership team and ensure the final action plan is taken seriously.

As part of establishing the governance, we will identify a lead for each of the areas of focus, who will lead on that area.

8.a.ii Green Champions

Case Study: South Central Ambulance Service

Establishing a sustainability culture within the trust.

Initially a team of 20 eco-champions will be recruited. Then, an additional 20 eco-champions per year will be recruited over the next 5 years. Two long-term campaigns will be organised plus an additional campaign every year. A communications strategy will be established including regular newsletters.

Digital consultation events will be held, discussing on radical ideas (e.g., reduction of blue light usage; right first-time ambulances; reduction of multiple responses; ban on returning to base for lunch breaks etc) with staff groups.

Case Study: Oxfordshire

In Oxfordshire primary healthcare professionals have come together to share sustainability ideas.

Greener Practice Oxfordshire

Greener Practice Oxfordshire is a new group bringing together liked-minded people from the area with the aim of supporting each other and our practices to make local healthcare more sustainable, improve the lives of our patients and communities, and be advocates for planetary health.

You don't have to have lots of environmental experience - we welcome all healthcare professionals to join, share ideas, information and resources, so that together we can learn and start driving change.

Currently we have a WhatsApp group and will look to have regular virtual meetings. If you are interested in joining us please email greenerpracticeoxford@gmail.com

8.a.iii Training

Our ability to deliver on this ambitious Green Plan will be dependent upon all parts of the ICS pulling together as one team. **It will be the actions of our thousands of staff members that will make the plan real.** We will be supporting staff by setting expectations in staff inductions, including sustainability in staff contracts and delivering training. There will be additional support for specific roles such as our eco/green champions to help further embed sustainability as the business-as-usual approach for everything we do. In addition, we will invest in sustainability programs to pull upon learning from outside of the organisation to inspire and offer new ways of working.

Ideas for training and workforce engagement:

Participate in national sustainability campaigns (Sustainability Day, Climate Change Week, Green Office Week, Energy Saving Week)
Delivery of training to staff via online platforms whenever possible
Set up a visual green message on home/lock screens
Explore and share external expert knowledge sharing for energy and waste reduction
Encourage staff to provide suggestions and ideas on how sustainability can be improved across all the ICS organisations
Ensure that sustainability is included in staff induction
Regularly share development and implementation of health and wellbeing initiatives for staff. Liaise with regional Greener team over training and comms

Case Study: Berkshire Healthcare NHS Foundation Trust

Berkshire Healthcare have a made a robust commitment towards training and engaging the workforce.

Net Zero'n'Green

NHS Berkshire Healthcare NHS Foundation Trust

What we will do

- Develop and support a network of net Zero'n'Green heroes.
- Invest and maintain high quality internet/intranet information and guidance for all staff, patients, public and other stakeholders to access.
- Actively engage and use social media and sustainability activities.
- Increase in training to all staff - make it mandatory and include at Trust induction.

Case Study: South Central Ambulance Service

Across this geography, our NHS Trusts have implemented policies to support flexible, hybrid and remote working supported with, for example, online resources, agile working spaces, and flexible booking for meeting rooms. We expect this to lead to fewer people commuting and less office energy being used, therefore by reducing the need to travel flexible work environments can benefit the wider environment and contributing positively to our green plan

8.b. Sustainable Models of Care

The NHS Long Term Plan (LTP) set out a commitment to deliver care in new ways for the 21st century. This must also include a focus on reducing carbon emissions and will involve using environmental impact as an additional factor in care design. Other principles that improve quality of care and patient experience can also help to decarbonise care pathways:

- Optimising the location of care
- Earlier and quicker detection, diagnosis and treatment
- Embedding the best clinical practice
- Treating for the long-term
- Digital technology
- Social prescribing

Carbon savings will mainly come from reduced presentations in A&E, primary care and outpatients, reduced staff and patient mileage, reduced bed days, fewer pharmaceuticals prescribed, and less intensive procedures. A net zero framework will be developed to help consider and evaluate carbon reductions associated with new models of care.

We will deliver the best quality of care while being mindful of its social, environmental, and financial impact and take a whole systems approach to the way it is delivered. Where outpatient attendances are clinically necessary, at least 25% of outpatient activity should be delivered remotely, resulting in direct and tangible carbon reductions. The environmental sustainability of care pathways will be improved, and better integrated healthcare services will improve efficiency.

We will need to:

- Work with partner organisations to support vulnerable patients upon discharge such as improving home energy efficiency.
- Work with all our component transformation teams to support the redesign of selected care pathways to drive out unnecessary stages and low value activities, driving out wastage and increasing productivity.
- Work with stakeholders to deliver solutions that reduce the number of hospital visits and consider the impact of different travel options when planning service changes.
- Recognise the importance of prevention of ill health and build preventative medicine into our long-term health strategy.
- Work with partners and stakeholders to identify and deliver solutions that reduce the number of hospital visits, such as the provision of treatment closer to home.
- Ensure the Green Plan is wholly consistent with the ICS Digital Strategy.

It will be measured by:

- Ratio of face-to-face appointments to overall patient activity including NHS 111 calls and converting this to actual number of journeys avoided and carbon saved.
- Feedback relating to the care environment (e.g. temperature, light, services using PLACE surveys).
- Recognition and awards for quality improvements in sustainable care.
- Reduction in hospital admissions and delayed discharges.
- CO2 and financial indicators.
- Creating straightforward digital access to NHS service and helping patients and their carers to manage their health.
- Engaging with digital platform 'Patient View' to reduce unnecessary car miles travelling to hospital, giving patients better access to their health information and reducing the need for physical appointments.

Case Study: Buckinghamshire Healthcare

This Trust have demonstrated that introducing more sustainable models of care is achievable through multiple channels.

The NHS Long Term Plan sets out a commitment to deliver a new service model for the 21st century. Implementing lower carbon models of care is essential if Buckinghamshire Healthcare NHS trust is to reach net zero emissions by 2040. The new models of care built around the patient must have due consideration to energy and carbon output to ensure that all opportunities for carbon reduction are implemented.
Implementing more sustainable models of care includes care closer to home and in community settings, empowering people to have more control over their health; digitally enabling primary and outpatient care; and increasing the focus on population health. Optimising the location of care ensures that patients interact with the service in the most efficient place, which may be closer to, or even in, their home to enhance patient experience.

SMART AIMS
Reduce the distance travelled per patient by 50%
Increase early diagnosis by 25% for all diseases
Reduce unnecessary interventions by 25%
Facilitate upstream prevention of illness by 20%
All patient records shared with primary care system
All interactions in line with Make Every Contact Count
Encouraging 50% increase in Happier, Healthier Lives
Encouraging 50% increase in Live Well, Stay Well principles

8.c. Digital Transformation

There is a major role that digital technologies play in meeting the NHS net zero targets. For example, during the Covid-19 pandemic, virtual appointments were introduced from June 2020 -2021, this action alone is estimated to have saved carbon equivalent to taking 40,000 cars off the road for a year.[2] The alignment between the NHS's green programme and digital programme are clear and strong.

[2] NHS Digital Blog (https://www.nhsx.nhs.uk/blogs/the-role-of-digital-technologies-in-meeting-nhs-net-zero-targets/)

Health and care services, like communities and economies across the globe, have fundamentally changed as a result of the challenging impacts of Covid-19. Despite this, we have seen unprecedented levels of innovation and ingenuity in health and care. Initiatives that would have previously taken years to implement have been established within days. Owing to the need for social distancing and the prioritisation of Covid-19 cases, the switch to working and delivering services remotely has been one of the most significant transformations. This has been the case for primary care, secondary care outpatient appointments and wider corporate services of NHSE/I SE and Health Education England (HEE SE) South East regions.

As well as direct impacts on patient and staff outcomes and wellbeing, this switch to remote working will also have started to influence wider socio-economic outcomes, which themselves have a material impact on population health. For the SE region we have seen:

- **91% of GP practices** in the South East region are now **live with online consultation** capability and **97% of Acute Trusts are live with video consultation** capability. Around **11,700 laptops/iPads/desktops have been deployed** across the region.
- In Primary Care, **attended appointments carried out virtually have increased from 16%** in 2019/20 **to 50%,** during the period of April to July 2020.
- For outpatient services, **appointments attended virtually have increased from 4%** in 2019/20 **to 47%** during the Covid-19 period.

For corporate services:

- **86% of NHSE/I SE staff agreed / strongly agreed** to the statement **"Home/remote working offers me increased flexibility".**
- **Desk capacity** across the NHSE/I SE estate has been **reduced from 658 to 118.**
- Across a 5-month period, NHSE/I SE and HEE SE have **saved over £400k in travel expenses.**
- The reduced requirement to travel for work across that 5-month period has meant **300k fewer miles were travelled for work** compared to the same period in 2019/20. This has **reduced emissions by over 80k Kg CO2.**

It must be recognised that changes cannot be adopted and sustained wholesale without considering the impact on services, staff, and most importantly, on patients. Rather than revert back to pre-Covid-19 ways of working, there is an opportunity to capitalise on this transformation and reap the benefits of continuing to work remotely going forward (where appropriate) so that it becomes the 'new normal' for the benefit of the population. This will be particularly important given the increased demand generated as a result of Covid-19 (unmet need and delayed care), as well as the risk of subsequent Covid-19 waves.

In terms of how we move forward, we see there are three high level options:

1. Pre-Covid-19

Revert to previous pre-Covid-19 working arrangements and methods of care delivery. This will bring with it the associated outcomes equivalent to 2019/20.

2. Peak Covid-19

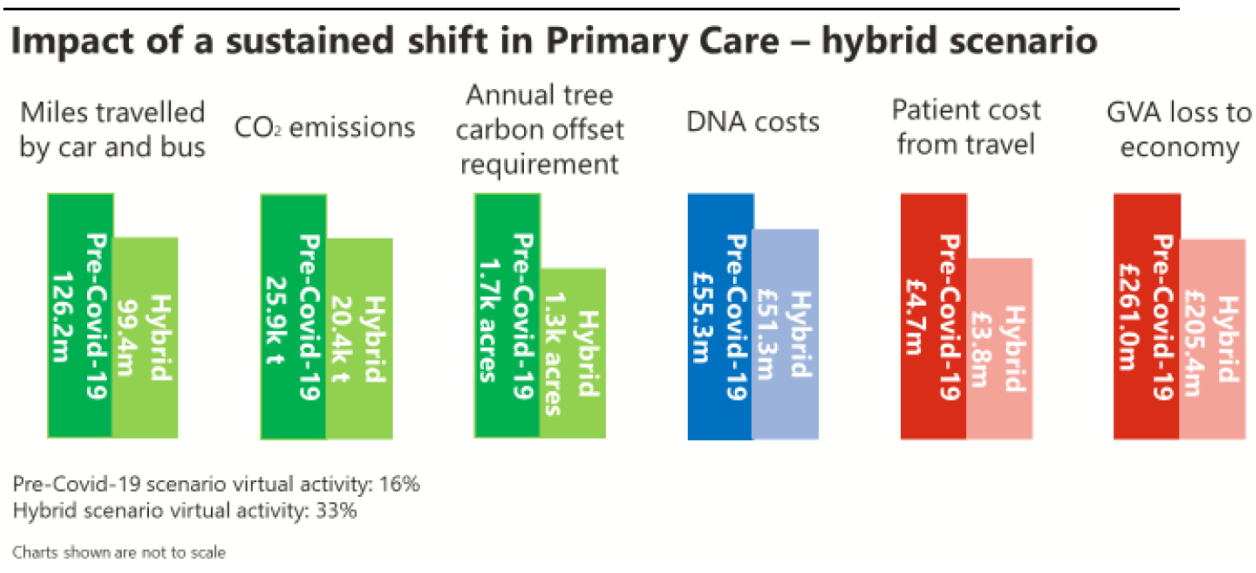
Continue with the working arrangements that developed in response to the peak Covid-19 period.

3. Hybrid

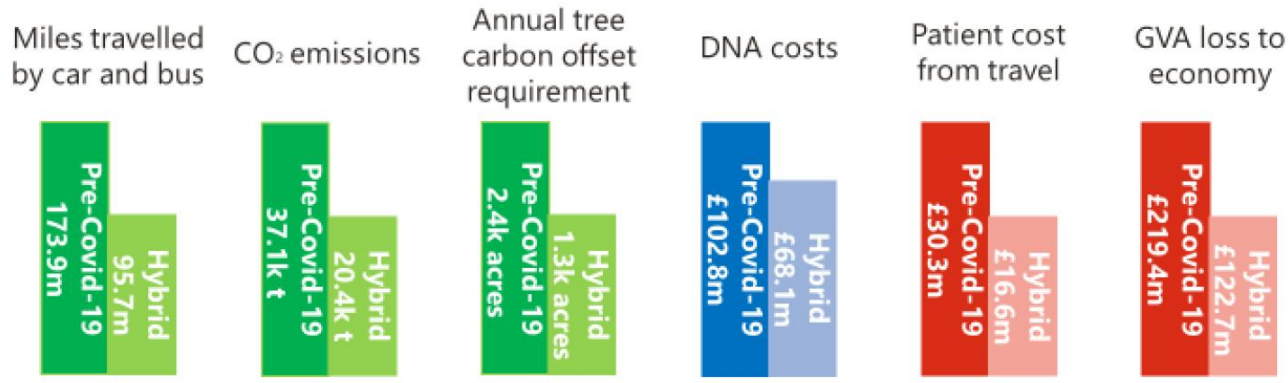
Look to develop a hybrid model that capitalises on the positive elements of the shift to digital technologies as a result of Covid-19 and continues in this manner, but also reverts some service delivery and corporate services back to face to face methods, where appropriate and required. This will need to include innovative space solutions so that hybrid working can also facilitate opportunities for new initiatives to be identified and developed.

These 3 options have been translated into a set of scenarios to analyse their potential impact. To take account of the downturn in activity in primary care and outpatient services during the Covid-19 period, the respective proportions of virtual consultation have been applied to 2019/20 activity levels for each of the three scenarios to ensure the calculated effects are comparable.

The following results summary (P20) highlights the potential opportunities offered by the hybrid scenario, compared to reverting back to pre-Covid-19 working arrangements.



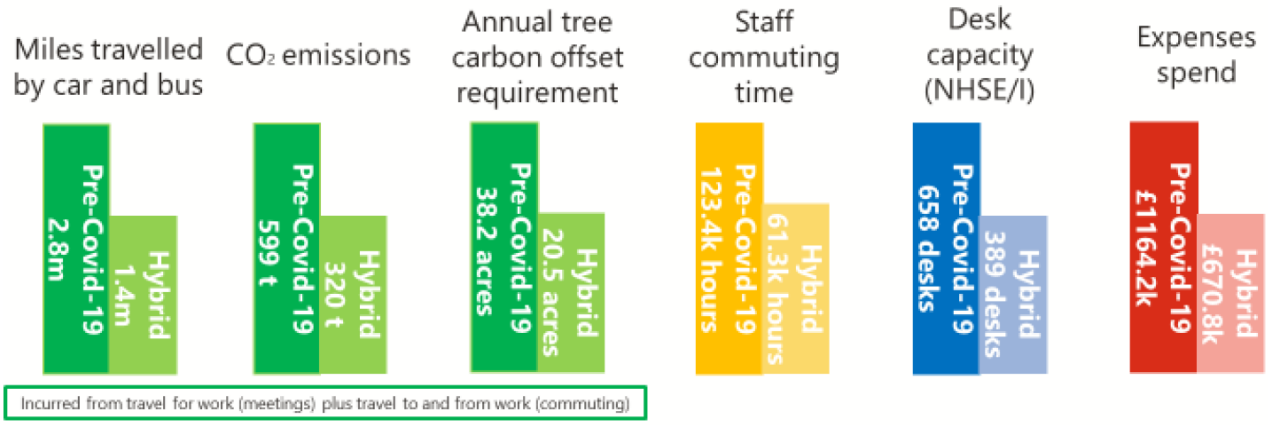
Impact of a sustained shift in Outpatient services – hybrid scenario



Pre-Covid-19 scenario virtual activity: 4%
Hybrid scenario virtual activity: First 25%, FUP: 60%

Charts shown are not to scale

Impact of a sustained shift in Corporate Services – hybrid scenario



Charts shown are not to scale

The coronavirus pandemic proved to be the catalyst for NHS organisations to achieve truly remarkable digital transformation at an unprecedented pace and scale. Our *Digital and Data Strategy* aspires to build on that progress by focussing on ways to further harness digital technology and systems to streamline service delivery and supporting functions, improve use of resources and reduce carbon emissions.

The Digital and Data Strategy for the health and social care system is set by NHSX, a joint unit bringing together teams from the Department of Health and Social Care and NHS England and NHS Improvement to drive the digital transformation of care and deliver the commitments within the NHS Long Term Plan.

NHSX systems serve up to 53 million citizens and 1.3 million NHS staff. They are designed for a wide cross section of use cases from complex technical risk evaluation models to highly-accessible patient-facing digital services. They carry huge load, operate to very high performance and reliability

and are cyber secure. Each ICS has developed their own Strategy based on the local needs and requirements and is also aligned to NHS X's What Good Looks Like (WGLL) framework.

The What Good Looks Like (WGLL) programme draws on local learning. It builds on established good practice to provide clear guidance for health and care leaders to digitise, connect and transform services safely and securely. This will improve the outcomes, experience, and safety of our citizens.

Our costed digital roadmaps (due for submission in June 2022) will outline in more detail how we intend to embed green plan in delivery of models of care and underpin digital transformation.

The ability to use digital technologies has allowed for the introduction of virtual wards. Virtual wards allow patients to get the care they need at home safely and conveniently, rather than being in hospital. Virtual wards are in place across the our footprint, an example of this being the COVID wards that were set up. People with other conditions can also be treated in a virtual ward, for example people living with frailty and people with acute respiratory infection.

The NHS is increasingly introducing virtual wards to support people at the place they call home, including care homes. In a virtual ward, support can include remote monitoring using apps, technology platforms, wearables and medical devices such as pulse oximeters. Support may also involve face-to-face care from multi-disciplinary teams based in the community, which is sometimes called Hospital at Home.

Further digital advances have enabled personalised care, which gives people more choice and control over their health experiences. This is enabled through digital appliances, which allow information to be stored digitally, through electronic patient records, rather than on paper. This is a step change in how people can access health and social care services and is an important part in empowering people, enabled through digital technology and means patients have to just explain their issue once, have it stored and referred to, rather than having to continually retell their issues to different health professionals.

Through using virtual wards and remote outpatient appointments is a fundamental way to reducing the backlog brought about by COVID. These are quicker and more patient focused, reducing the amount of time required for a medical appointment which is important for socio-economic reasons, as well as reducing the transport impacts to the climate. The technology is there – it has been for some time – the focus now needs to be on the culture and behaviour change needed to ensure these opportunities can be maximised and people can truly change the way they access services, seeing virtual appointments on a par with face-to-face[3].

Case Study: Royal Berkshire Foundation Trust

This trust has seen great success by using email instead of paper to communicate with patients. When shown in terms of trees protected, it is easier to understand.

[3] More information can be found in the SE Regions 'Case for Sustaining Digital Working' document, December 2020

8.d. Travel and Transport

Approximately 3.5% (9.5 billion miles) of all road travel in England relates to patients, visitors, staff and suppliers to the NHS, contributing around 14% of the system's total emissions. The travel and transport workstream of Greener NHS is implementing a range of interventions to reduce carbon emissions from travel relating to patients, visitors, staff and suppliers to the NHS.

This includes transitioning the NHS transport fleet to zero-emission vehicles, reducing unnecessary journeys and enabling healthier, active forms of travel such as cycling and walking. The NHS has committed to having a zero emission non-emergency patient transport fleet by 2035, one of the recommendations set out in the report of the Non-Emergency Patient Transport Review, published on 2 August 2021.

Sustainable travel plays a significant part in reducing traffic on the roads, promoting health and wellbeing through exercise, and improving local air quality and aligning with the preventative care and health inequalities initiatives. Therefore, it is important that the locations from which our NHS services operate are well-served by bus, rail, and other public transport links, have good and accessible pedestrian facilities and are reachable by safe cycle routes, have secure cycle storage and provide charging points for electric vehicles, which will require close working with local authorities.

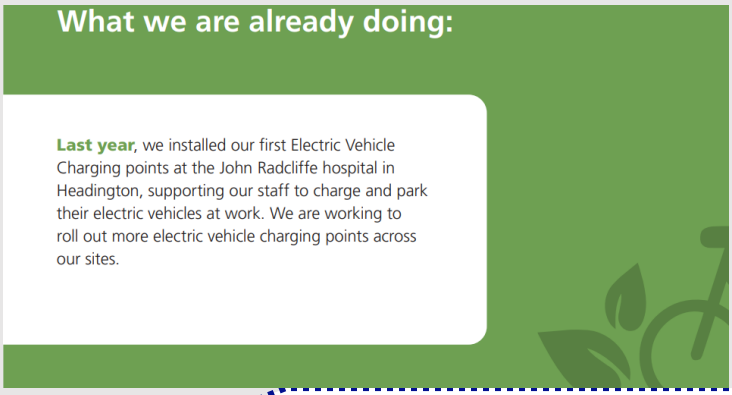
This plan summarises the commitments and outlines the journey ahead in helping staff, patients, and visitors to reach our sites and communities safely, sustainably and with the benefit of improved health and reduced cost both in monetary and in environmental terms.

As a whole, we will:

- Minimise the environmental and health impacts associated with the movement of goods and people through our activity.
- Increase use of sustainable and active modes of travel that deliver environmental and health benefits.
- Decarbonise the travel and transport relating to our operational activity.
- Introduce and implement a staff survey to identify travel habits
- Monitor the number of people engaging in the cycle to work scheme
- Set a target for reduction in cars visiting sites. Facilitating this by promotion of virtual appointments and remote consultations.
- Increase the number of EV charging points on site, through working together as an ICS, ensuring reduced contracts and costs.
- Work with local authorities to plan for more effective travel routes for employee and patient travel.
- Work across the ICS to provide mileage costs through collecting information from individual finance departments and ESR data to form an emissions baseline.

Case Study: Oxford University Hospitals

Installation of EV charging points is crucial across estate, making it easier to make the sustainable travel choice.



Case Study: Berkshire Healthcare

Berkshire Healthcare are committed to providing the necessary encouragement and facilities to decarbonise travel.

What we will do

- Measure and monitor all travel data from service delivery and commuting.
- Review and implement Trust wide Green Travel Plan – including site specific plans.
- Produce and implement Green Fleet Vehicle Strategy.
- Provide site specific information on all travel opportunities via intranet and website(s).
- Roll out electric vehicle charging network across all larger sites.
- Reclassify parking spaces to support alternatives to petrol / diesel powered vehicles. Actively develop and encourage active travel to get to and from Trust sites.
- Commit to all leased vehicles being ultra-low emissions vehicles (ULEVs) or zero emissions vehicles (ZEVs).

NHS Berkshire Healthcare NHS Foundation Trust

Net Zero'n'Green

8.d.i Car Pooling

Case Study: Oxford Health

A successful carpooling scheme has been introduced in Oxford. More information can be found here.

Oxford Health drive for change with new pool car initiative

The trust continues to make headway in reducing carbon emissions and supporting the NHS target to be net zero by 2040.

Oxford Health's drive to reduce carbon emissions and travel towards net zero by 2040 has stepped up a gear.

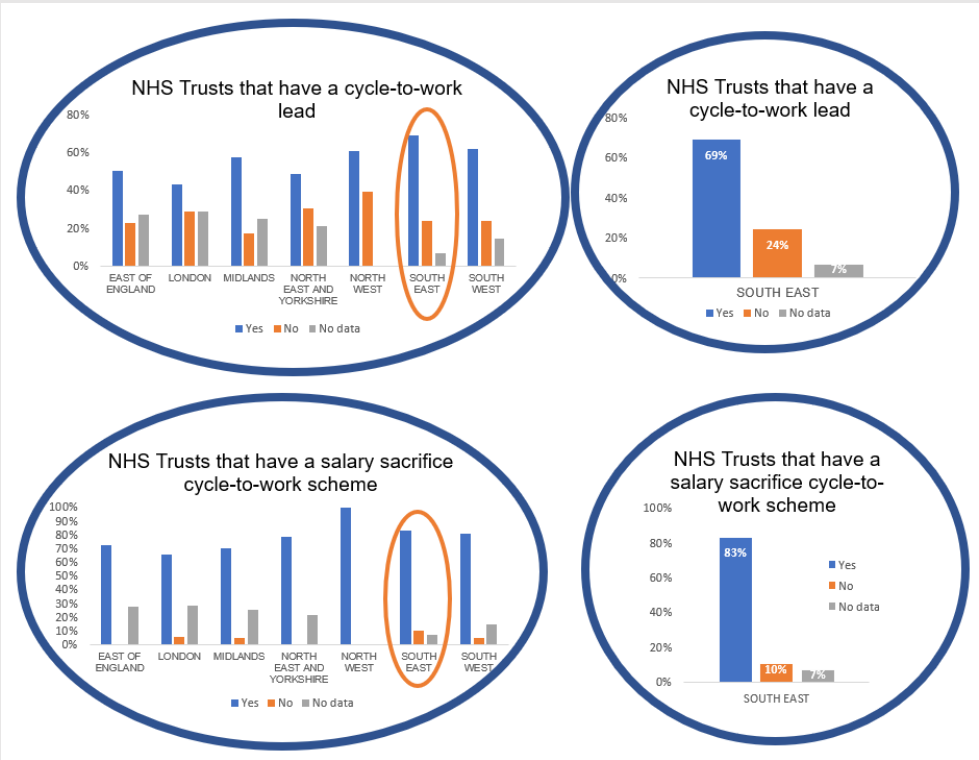
The Trust's district and community nursing teams in Oxford are taking part in a free trial of lower-emission pool cars to test ways that will help hit NHS national green targets and support the reduction of air pollution in communities.

The teams have so far clocked up over 1,200 miles with 20 members of staff using the service hosted by Co-wheels.

8.d.ii Cycle to Work Scheme

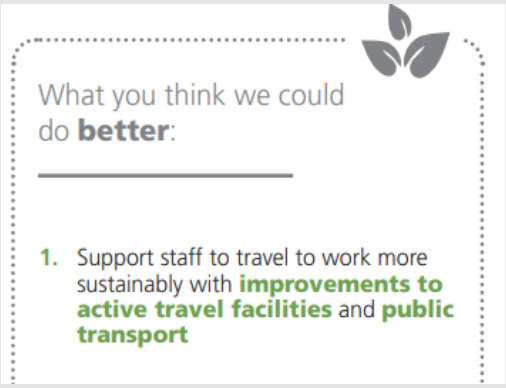
When compared to other areas, we perform well for having a cycle to work lead and having a salary sacrifice cycle-to-work scheme.

Journeys to and from work make an important contribution to the overall carbon footprint. Combined with the contribution that it makes to workforce health and wellbeing, this is a crucial part of the carbon reduction plan.



Case Study: Oxford University Hospital

When asked as a part of the Annual Staff Survey, those at Oxford Health staff said that there were still some barriers to making sustainable travel choices.



Case Study: Royal Berkshire Hospital

Covid-19 drastically changed the way the Trust conducts its day-to-day activities. Carbon dioxide emissions from transportation dropped 15% last year as people stayed at home, further highlighting the dramatic effects of unnecessary travel.

Some non-clinical staff switched to working from home, and the average number of remote meetings across the NHS increased from 13,500 to 90,250. Staff reported higher productivity, with less time spent travelling, and the additional benefits of less exposure to air pollution, better attendance in (virtual) meetings, and better work-life balance.

RBFT has developed the digital infrastructure needed to continue delivering a high-quality service on a flexible and sometimes remote basis.

The central aim is to reduce the carbon emissions of the Trust by limiting staff travel where possible.

Remote and home working progress and developments achieved during 2020 are to be developed in the Trusts long term plan for sustainable development and in line with the South-East region central green objectives.

We have produced a Hybrid Working Policy where 1,000 corporate and clinical administration staff will be able to work remotely from home. This is not just responding to the pandemic and will become the new way of working moving forward.

Similar technology will also be used in the delivery of telemedicine services which will allow patients to access health services without having to travel.

We have set out our plans to become a digital hospital. We were accepted into NHS England's Global Digital Exemplar 'Fast Follower' programme, which will provide additional funding to support us to deliver on our long-term plans.

Using digital technology to capture and record information as patients are treated, means that in the future, doctors and nurses will be able to spend more time with their patients, leading to safer and quicker care.

8.e. Estates and Facilities

The NHS' Estates and Facilities Net Zero Carbon Delivery Plan published in November 2021 sets out a clear, sequential four step investment approach to decarbonising NHS sites.

1. Making every kWh count: investing in no-regrets energy saving measures
2. Preparing buildings for electricity-led heating: upgrading building fabric
3. Switching to non-fossil fuel heating: investing in innovative new energy sources
4. Increasing on-site renewables: investing in on-site generation

Emissions relating to the estates and facilities services span both the NHS Carbon Footprint and the NHS Carbon Footprint Plus, accounting for over 60% of the NHS Carbon Footprint (mostly due to emissions from energy use) and also a significant proportion of the Carbon Footprint Plus, through staff travel, construction, catering plastics and capital spend, food and the wider £9 billion estates and facilities annual supply chain spend.

There is a BOB Wide Strategic Estates Forum, which will be carrying out a review of the capital projects required as a part of the refreshed Estates Strategy. Sustainability of the estate will be considered as a part of this process.

At an ICS level, we should:

- Ensure that the environmental impact of works is factored in during refurbishment, commissioning, design, and construction of projects.
- Purchase or generate 100% electricity from renewable energy sources e.g. solar panels.
- Replace lights with LED'S.
- Commit to the complete removal of coal, gas and oil boilers.
- Ensure that all new capital projects will be assessed against sustainability scores for example EPC / DEC / BREEAM.
- Retrofit existing buildings where possible to provide better insulation.
- Double glaze all windows.
- Ensure that heating and hot water to be provided by heat pumps.

Case Study: Berkshire Healthcare

Provision of the necessary encouragement and facilities to decarbonise travel is important to Berkshire Healthcare.

What we will do

- Increase and improve utility management, measuring and monitoring across for the whole Trust.
- All leased property owners / management to be aligned and committed to net zero (PFI's, NHSPS and private landlords).
- Ensure **All** electricity consumed by the Trust is from renewable generation (REGO certification).
- Decarbonise heating across all sites.
- Install renewable energy technology.

NHS Berkshire Healthcare NHS Foundation Trust

Net Zero'n'Green

8.e.i Agile Working and co-location

We are committed to providing a flexible and supportive working environment for colleagues through 'Agile Working.' Agile working is a way of working in which the organisation empowers its employees to work where, when, and how they choose; with maximum flexibility and minimum constraints to deliver "best in class" value and customer service. Agile working is reliant on digital communications to enable individuals to work in ways which best suit their needs, without the traditional limitations of where and when tasks must be performed and co-location provides opportunities for innovation and space utilisation.

Going forward, this will allow us to work smarter and eliminate all barriers, implement a range of measures to working efficiently, meet customer needs, reduce costs, maximise productivity, and improve personal carbon footprint. It also means that building occupancy levels will be easy to measure with introduction of a workstation/desk booking system, enabling control of spaces and occupancy by estates, especially whilst the COVID-19 infection is present.

Since the Covid-19 pandemic and the Government's advice to work from home where possible, the mileage for employees has reduced, both in going to and from work and also travel to meetings. Meetings are now routinely held remotely using such technology as Microsoft Teams, Zoom and other video applications. Whilst travel is a core part of business and face to face meetings are often the best way to build relationships with customers and colleagues, ever increasing travel brings with it significant costs to the business and amounts to a high proportion of what can often be quite unproductive time.

We also recognise that significant amounts of travel have a negative impact on staff wellbeing and actively encourages employees to look at ways to minimise travel and adopt a balanced approach to working from home on a regular basis.

8.e.ii Building Energy Use

A key priority for estates going forward is energy efficiency. £1 in every £187 spent in the NHS is on building energy, which is the single biggest area estates and facilities can influence as it makes up 41% of the NHS' carbon footprint. It is an ambition of the ICS is to ensure that the power of nature is harnessed, with only green energy and renewable energy sources being used at NHS buildings across the footprint.

Renewable technologies including solar panels, wind turbines, ground-source pumps, biomass installations, air source pumps, and solar water heating have already been installed in several provider trusts and in general practice.

The ICS needs to identify alternatives to reduce both energy consumption and bills through carrying out a review of all buildings in terms of lifecycle and heat pump opportunities etc. An example of this is through applying for funding from the Salix Energy Efficiency Fund (SEEF), who offer loans and support to the public sector to support with energy costs. Through addressing this as a system, opportunities for savings through bulk purchasing and sharing of ideas and lessons learnt, will be possible.

Case Study: Oxford Health

Going green is seen as being important for Oxford Health. Their new mental health hub has been refurbished to the highest possible green standards. Full story here.

NHS Oxford Health NHS Foundation Trust

healthwatch Bucks

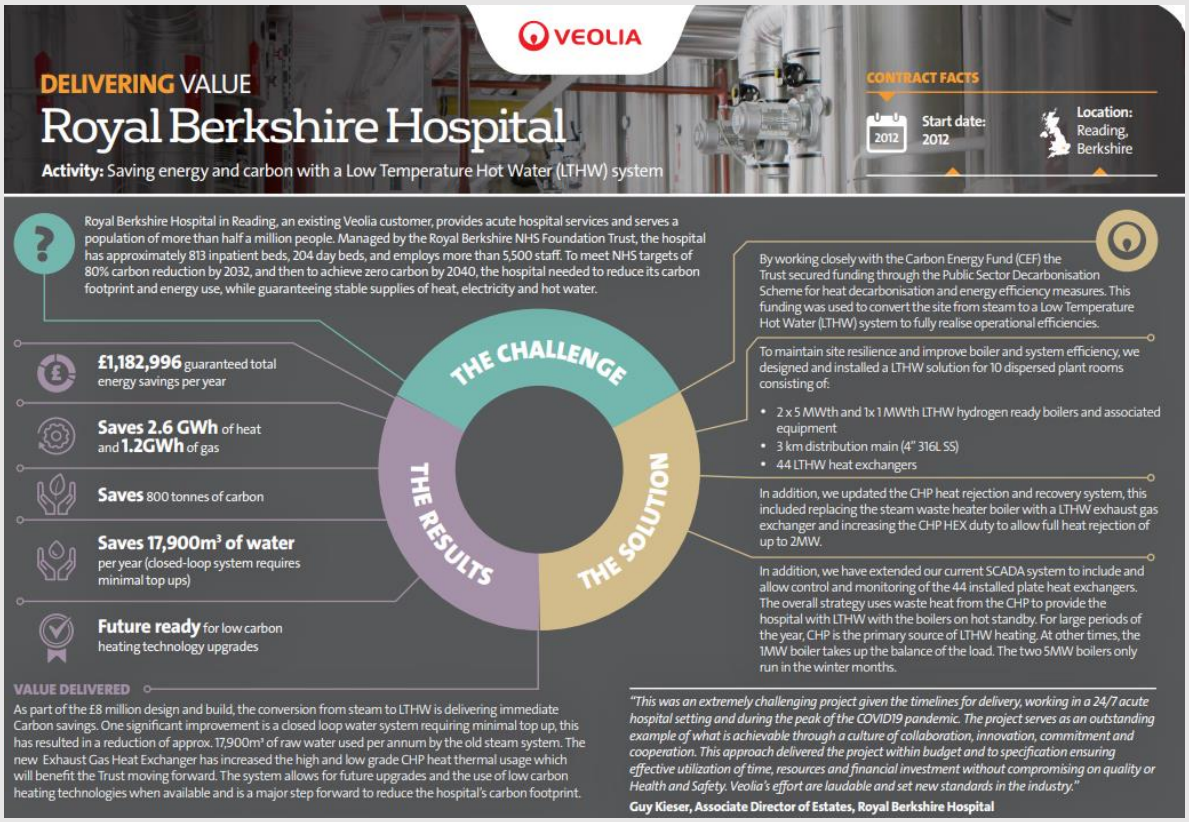
Going green at our South Bucks MH community hub

A new state-of-the-art mental health hub is being created in High Wycombe to provide a centre of excellence for people in South Buckinghamshire.

The site also benefits from increased public parking, nearby public transport links, onsite refreshments, and great accessible facilities.

Also, the building will also have strong 'green' credentials. It has low energy lighting, cycling bays and e-vehicle charging points.

Case Study: Royal Berkshire Hospital



Case Study: Royal Berkshire Hospital

Recycling PVC masks

The first new project has been to encourage theatre staff to segregate valuable single-use medical PVC items, including plastic tubing and oxygen masks, at the point of disposal.

The PVC take-back scheme, known as RecoMed, has been so successful that since May 2017, staff at the Royal Berkshire Hospital have recycled 1.831 tonnes of PVC masks and tubing, saving the Trust over £1,000 in disposal costs and reducing carbon emissions by approximately 2.825 tonnes of CO_2.

Leading the clinical team in its recycling drive has been consultant anaesthetist Dr Lauren Williams, who explains: "Patients go to sleep with an anaesthetic mask on and afterwards, when they go into recovery, they have an oxygen mask and tubing. They may only use the items for a short period of time and when they leave the recovery room, the masks and tubing would previously have been thrown into the clinical waste bins for incineration.

"We now have specialist bins with clear sacks for the PVC waste in our four recovery areas. It allows everyone to see what has gone into the bin and it is a credit to the theatre recovery nurses that they are taking the time to stop and do this. It has been a question of changing peoples' habits, and now I think anyone would think twice about putting PVC waste into a yellow clinical waste bin."

8.e.iii Asset Management and Utilities

We have numerous opportunities to increase sustainability across the estate. This includes making improvements to existing operational assets, buildings, critical infrastructure and the equipment which is essential to the smooth running of the hospital, and also by carefully considering the sustainability credentials of assets and utilities yet to be procured.

Improvements and opportunities can stem from relatively large capital investment, or from individuals identifying simple changes which can be implemented across similar departments, or indeed the estate as a whole. The development and implementation of relevant plans and strategies will see sustainable development integrated into all areas and activities within the geography.

8.e.iv Recycling Waste

Of the 590,000 tonnes of waste produced by the NHS in 2016/17, 15% went directly to landfill, whilst only 23% of waste is recycled. A strong waste strategy will be a crucial in reaching net carbon targets.

We will reduce consumption, utilise data better, buy longer lasting electronic equipment and improve recycling capabilities at all sites.

Case Study: Oxford Health

Oxford Health have made a pledge in their Green Plan that no waste from the trust will go to landfill.

Oxford Health NHS
NHS Foundation Trust

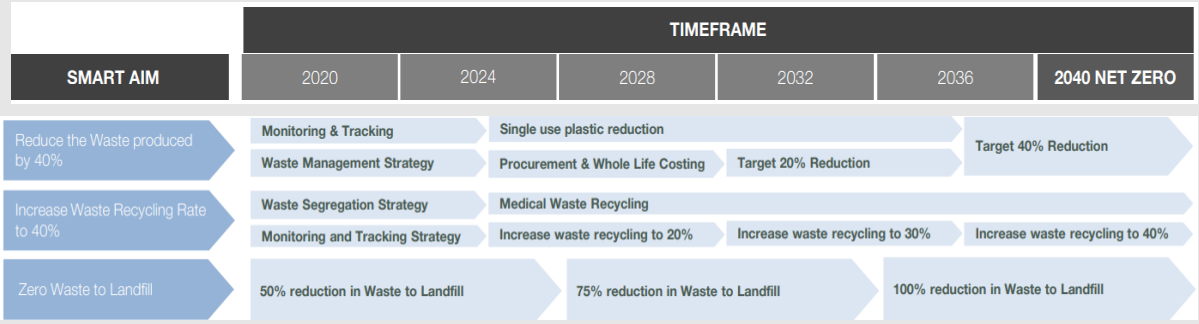
Sustainable use of Resources (Supply Chain /Waste)

We generate large volumes of waste and have legal responsibilities to make sure that it is properly segregated and disposed of.

None of the Trusts domestic waste goes to landfill, waste is sent for incineration with energy from the process fed back into the electricity supply network.

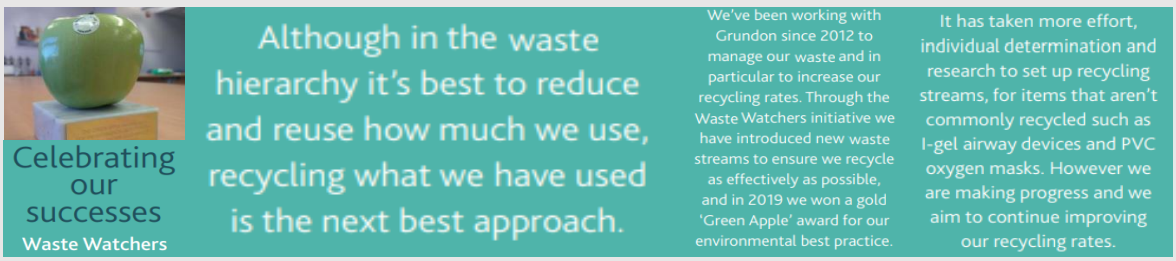
Case Study: Buckinghamshire Healthcare Trust

This Trust has in its Action Plan a timeline for achieving waste targets.



Case Study: Royal Berkshire

Well publicised, new initiatives have seen success for Royal Berkshire NHS Trust.



8.e.v Recycling equipment

Many medical devices (e.g. walking aids) are durable products whose useful life greatly exceeds use by a single patient, and can be refurbished and reused repeatedly, reducing waste to landfill and avoiding carbon associated with new products. Reuse schemes have tended to be limited due to concerns around liabilities, limited resource available to set up a scheme, and the perceived low-cost benefit.

In 2019, 66 NHS Trusts in England spent over £14m on 560k walking aids. With some 5.7 kt CO_2e generated to purchase new aids, there is substantial opportunity to increase return rates further.

Device reuse and refurbishment could save the NHS 202 kt CO_2e or 1.4% of supply chain emissions. Crutches, frames and walking sticks are in the top 20 of medical device / equipment categories for carbon footprint due to the high Green House Gas intensity of aluminium manufacture.

The Orthotics department, based at the Nuffield Orthopaedic Centre in Oxford, is reducing, reusing, and recycling many of its materials, decreasing our carbon footprint, lessening the impact on the environment, and lowering costs.

Traditional materials used for devices, such as leg braces, include metal, Plaster of Paris (PoP), and thermoplastics - all of which are now used differently to be more sustainable and improve patient experience.

Now, the team breaks up used casts to remove and reuse the steel, a resource that has a very high environmental impact to produce. As a result, there has been an 80 percent reduction in usage of steel and 78 percent in spend.

Similarly, PoP, used primarily for the manufacture of spinal braces and foot impressions, is environmentally damaging and difficult to dispose of. However, at OUH, PoP has been replaced by computer assisted design, meaning patients are scanned and their bodies are carved from a type of foam instead of being wrapped in plaster bandage. This has resulted in a 69 percent reduction in usage and 78 percent in spend.

The 18-strong Orthotics team, which helped manufacture more than 100 protective screens earlier in the pandemic to keep patients and staff as safe as possible on our sites, has also recycled more than 3.5 tonnes of thermoplastic, used for moulding the final products, since 2018.

8.e.vi Social Prescribing

Social prescribing is a key component of Universal Personalised Care but also has close links to sustainability. GP practices are often the first port of call for people seeking help. However, it is estimated that 20% of people visit their GPs for what is primarily a social rather than a health

problem. Having social prescribing link workers in primary care settings can therefore make a huge difference to practices and patients alike.

Social prescribing is a key component of Universal Personalised Care but also has close links to sustainability. It allows local agencies to refer people to a link worker, who take a holistic approach to people's health and wellbeing through connecting people to community groups and statutory services for practical and emotional support. Link workers also support existing community groups to be accessible and sustainable, and help people to start new groups, working collaboratively with all local partners.

Social prescribing can benefit a wide range of people, including those who:

- Live with one or more long-term conditions
- need support with their mental health
- are lonely or isolated
- have complex social needs which affect their wellbeing.

When social prescribing works well, people can be easily referred to link workers from a wide range of local agencies, including general practice, pharmacies, multi-disciplinary teams, hospital discharge teams, allied health professionals, fire service, police, job centres, social care services, housing associations and voluntary, community and social enterprise (VCSE) organisations. Self-referral is also encouraged[4].

A standard model of social prescribing has been developed in partnership with stakeholders, which shows the key elements that need to be in place for effective social prescribing. Anyone can access a social prescribing link worker if registered with a GP practice. They can be referred by a clinician, GP, Nurse, HCA, pharmacist or anyone who works in their medical practice. Once a referral has been received, this person will be contacted by a social prescribing link worker and offered an appointment[5].

8.e.vii Green Space and Biodiversity

Case Study: Royal Berkshire

Research has shown how interventions to increase or improve urban green space can deliver positive health, social and environmental outcomes as well as the additional benefit of purifying the air in an urban environment. Royal Berkshire Hospital is the largest of the Trusts hospitals situated in central Reading and cares for half a million patients each year. There is limited access to green space on site due to location restrictions of residential housing and surrounding A roads.

Projects to improve our green spaces and biodiversity

Royal Berkshire Hospital houses Englefield Garden, built in 2015. This miniature tranquil space is already utilised in order to increase biodiversity on site, and was achieved by following BREEAM compliance guidelines to increase biodiversity which will:

a. Provide better quality, cleaner air.
b. Provide additional biodiversity on site.
c. Have stress-relieving qualities to improve both patient and staff wellbeing.

4 al-health-benefits-of-visiting-uk-woodlands-estimated-at-185-million

5 www.england.nhs.uk/personalisedcare/social-prescribing/#:~:text=Social%20prescribing%20is%20a%20way,for%20practical%20and%20emotional%20support

8.e.viii Capital Projects

We will reduce the environmental impact of building works during the design, refurbishment, construction, operation, and decommissioning stages. Sustainability and efficiency will be embedded through policies and procedures, including whole life costing, smart design and technology across our new build and refurbishment works. Energy and water efficient technologies and practices will be incorporated throughout our Estate and services, year-on-year reductions in consumption will be delivered while protecting and enhancing biodiversity across the estate.

Sustainability Impact Assessments will need to be a decision factor in all capital business cases. Sustainability guidelines will need to be developed for all capital projects, including major refurbishments, driving resource efficiency through the estate's strategy, standard specification, and whole life costing.

Capital Staff will be appropriately trained in terms of sustainable building design and utilities monitoring systems will be introduced alongside an ongoing programme of energy and water efficiency schemes. New developments and major refurbishments will need to be net zero carbon and a Biodiversity Action Plan will need to be developed and implemented. A decarbonisation investment programme and funding plan will be necessary to support these development.

We will require the a rating of "BREEAM Excellent" for new capital projects and "BREEAM Very Good" for refurbishment projects. The target is for all capital projects completed to Net-Zero/sustainability standards. Monitor annual ERIC return and model hospital metrics. The number of capital projects with sustainability assessments/RIBA etc. is to be measured. Progress will be reported through the Greener NHS Data Collection.

8.e.ix Lighting

As many of our partners across the geography have already discovered, LED lighting is one of the sustainable 'quick wins'. LED lights use less energy than traditional light bulbs and have a longer lifespan, having a positive impact on greenhouse gas (GHG) emissions and our environment and reducing overall running costs.

8.f. Medicines

Medicines account for about 25% of emissions within the NHS in England. A small number of medicines account for a substantial proportion of these emissions, particularly anaesthetic gases, and nitrous oxide which account for around 2% of NHS emissions, and inhalers which account for around 3%.

The long-term NHS plan pledges to reduce the negative effect the NHS has on the environment to help to build a more sustainable NHS. Part of this negative effect can be managed through the identification and encouragement to prescribe medicines which limit damage to the environment.

We will need to reduce CO2 emissions associated with areas of high impact such as pharmaceuticals and anaesthetic gases.

8.f.i Anaesthetic gases

Anaesthetic gases have extremely high global warming potential, for example one litre of Desflurarane has the equivalent CO2 emissions of driving a diesel car from Lands' End to John O'Groats and back seven times. In addition to this issue: less than 5% of inhalational anaesthetic gases are metabolised by the body. This means that 95% of the administered gas goes into the atmosphere and therefore has environmental consequences.

8.f.ii Inhaler Prescriptions

The NHS Long Term Plan has set an ambitious target to reduce absolute inhaler emissions by at least 50% by 2028. Certain inhalers contain a potent greenhouse gas as a propellant, to administer the medicine into the patient's lungs. These types of inhalers are known as MDIs, or metered dose inhalers. While the gas itself is not harmful to inhaler users, the emissions from exhalation and in disposal of the devices, has a powerful carbon footprint effect.

There are, however, alternatives to MDIs, such as DPIs, which are dry powder inhalers. These alternative devices can reduce the carbon footprint of inhalers by up to 95%, the equivalent of a journey of 175 miles for an MDI, to a journey of 4 miles for a DPI[6].

Greener inhaler prescribing

- Use dry powder inhalers wherever clinically appropriate as they have a much lower carbon impact.
- Optimising patient care and ensuring they are using the inhalers properly.

We will need to:

- Identify carbon hotspots such as medical equipment and pharmaceuticals and ensure that action plans identify and mitigate environmental impacts.
- Reduce and recycle medical devices (inhalers).
- Educate staff and encourage lower impact alternatives.
- Stop the use of Desflurane in Surgery. Reduce the Trust's use of Nitrous Oxide to use in Maternity only and minimise Nitrous Oxide waste from leaks in the supply infrastructure.
- Consider lower carbon alternative medicines in particular Metered Dose Inhalers (MDI) and anaesthetic gases. Reduce medicine wastage and ensure best available technology is used for disposal, including recycling anaesthetic gases when this technology becomes available.
- Introduce point of use recycling technology for anaesthetic gases.

[6] More information can be found here: https://www.breathegreenproject.com/

It will be measured by:

- Number or % of medical devices (e.g. inhalers) reduced or recycled.
- Monitor number of low carbon inhalers prescribed.
- Monitor medicine wastage.
- Monitor use of anaesthetic and other gases by volume and CO2 impact

Case Study: Royal Berkshire Hospital

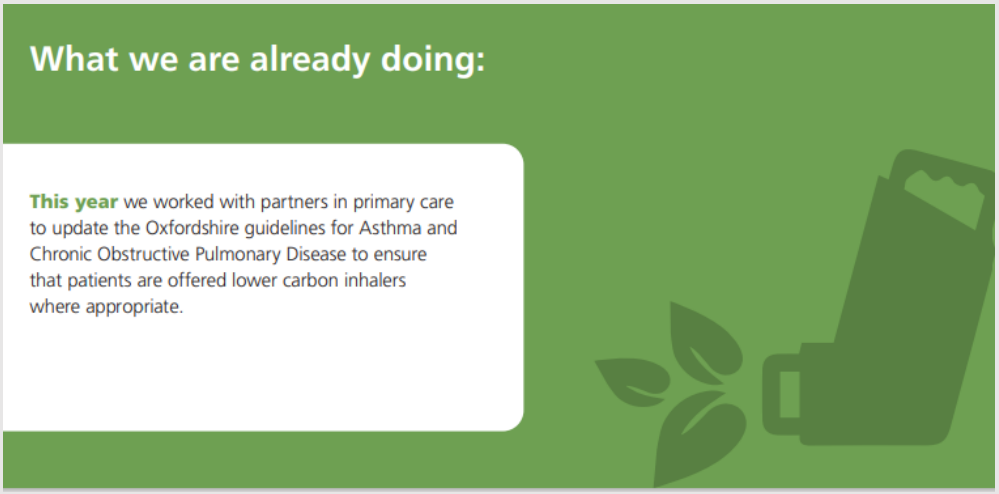
Medical gases play an essential role in making surgeries safe and have undisputed benefits in the medical field. Anaesthetic gases, however, contribute approximately 5% of the NHS emissions and reducing the use of carbon intensive anaesthetics is essential to achieve Net Zero carbon. The Royal Berkshire have addressed this by setting targets.

Our aims

1. Where possible, reduce the use of Desflurane in favour of low carbon alternative Sevoflurane
2. Reduce use of desflurane in surgery to less than 10% of its total volatile anaesthetic gas use, by volume
3. Review the business case for introducing a piped Nitrous Oxide Waste Reduction Strategy; including a regular auditing system

Case Study: Combined approach across Oxfordshire, including primary care

Patients are now offered lower carbon inhalers, where clinically appropriate.



8.f.iii Wasted Medicines

It is estimated that medicines waste or unused medicine costs the NHS around £300 million every single year, with an estimated £110 million worth of medicine returned to pharmacies, £90 million worth of unused prescriptions being stored in homes, and £50 million worth of medicines disposed of by Care Homes according to a Department of Health report.

Causes of medicine waste:

- Over-ordering of medicines.
- Continuing requests for repeat medication that is no longer required.
- Patients not taking medicines as prescribed.
- Poor repeat prescribing systems.
- The increased workload associated with issuing 7-day prescriptions and use of compliance aids when medicines are dispensed, leading to an increased number of journeys either by the patient to collect the medicines or the pharmacy delivery driver delivering medicines.
- Many compliance aids are made from single use plastics or cardboard, meaning that often they cannot be recycled.

Ways to minimise waste:

- Encourage patients to confide in clinicians if they are not taking their medicines and ask clinicians to prompt patients on this matter.
- Regularly review all medications patients are prescribed and check for the continued need for these medications.
- Run a patient campaign to promote to minimising medicines waste.
- Enable appropriate disposal; encourage patients to take any un-used medications to their local pharmacy so that they can dispose of it safely.
- Review all 7-day prescriptions and compliance aid requests.

8.g. Supply Chain and Procurement

The NHS uses products such as medical equipment, food and other business goods from more than 80,000 suppliers. Over 60% of the current carbon footprint can be found in the NHS supply chain, making it important that the NHS support their suppliers in creating a positive change.

In 2021 the NHS public board approved the 'Net Zero supplier roadmap' which sets out environmental guidelines and expectations working with suppliers moving forward. A further framework to support reporting on this map will be published in 2022. The roadmap can be seen below:

Net Zero Supplier Roadmap

- **From April 2023:** the NHS will adopt the Government's 'Taking Account of Carbon Reduction Plans' (PPN 06/21), requiring all suppliers with new contracts for goods, services, and/or works with an anticipated contract value above £5 million per annum, to publish a carbon reduction plan for their direct emissions. From April 2024, the NHS will expand this requirement for all new contracts, irrespective of value.
- **From April 2027**: all suppliers with contracts for goods, services, and/or works for any value, will be expected to publish a carbon reduction plan that takes into account the suppliers' direct and indirect emissions.
- **From April 2028:** new requirements will be introduced overseeing the provision of carbon foot-printing for individual products supplied to the NHS. The NHS will work with suppliers and regulators to determine the scope and methodology.
- **From 2030**: suppliers will only be able to qualify for NHS contracts if they can demonstrate their progress through published progress reports and continued carbon emissions reporting through the supplier framework.

Figure 5: The NHS Net Zero Supplier Roadmap (www.england.nhs.uk/greenernhs/get-involved/suppliers/)

We will need to implement a step change in education and awareness of sustainability best practices across ICS service delivery staff involved in procuring good and services. There will be a move to sustainable procurement approaches, such as taking an active role in developing the circular economy.

There will be a direct sustainable use of resources, minimising unnecessary procurement and resource use and maximising re-use of materials and equipment where appropriate.

Indirect sustainable use of resources: A sustainable procurement culture and processes that shift consumption to sustainable products and services and considers broad criteria including:

- Materials
- Workforce
- Buy locally where possible
- Manufacturing and transport.

Ways in which it can be achieved:

- Fulfil obligations under the NHS plastics pledge.
- Promote a culture of reuse and refurbishment of items.
- Regularly audit waste and follow up on issues identified.
- Develop and implement e-learning modules for waste and sustainability.
- Include sustainability criteria in procurement, tender evaluations, framework design and selection, product selection.
- Use accreditation programs to support our procurement strategy e.g. Soil Association Food Standards. Work innovatively with NHS partners and suppliers on sustainable approaches.
- Meet NHSE/I Greener NHS immediate interventions targets.
- Develop robust internal procurement policy and procedures that support the sustainability agenda.

It will be measured by:

- Tracking the CO2 impact from waste and supply chain initiatives.
- Tracking procurement CO2 footprint.
- Measuring quantity of packaging and single use plastics reduced or removed from services.
- Monitoring number of suppliers engaged in sustainability improvement plans, including achieving net zero.
- Owning greener NHS Data Collections.

Case Study: Oxford University Hospitals

To reduce site traffic and deliver supplies in a more sustainable way, in Oxford an increasing number of medicine deliveries are carried out using bicycle couriers.

Case Study: Royal Berkshire Hospital

The reduction in use of single use items goes across all healthcare activities.

8.h. Food and Nutrition

It is estimated that food and catering services in the NHS accounts for approximately 6% the NHS' Carbon Footprint Plus. A healthy balanced diet, with reduced processed foods high in sugar, salt and fats is also a low-carbon diet.

The Greener NHS programme is working closely with the Hospital Food Review and the new National Review of NHS Food Standards. Collaboration with NHS catering leads, dieticians and suppliers will help provide healthier, locally sourced food to patients, staff and visitors, while cutting emissions related to agriculture, transport, storage and food waste across the supply chain and on our NHS estate.

We will need to reduce the CO2 emissions from food made, processed or served within the organisation by ensuring food is from sustainable sources, providing healthy food choices and reducing unhealthy foods on offer.

Ways in which it will be achieved:

- Use local suppliers.
- Provide and promote interesting and attractive plant-based meals.
- Deliver on Plastic Pledge obligations.
- Effective waste management: appropriate waste disposal routes available and a focus on moving waste up the waste hierarchy.
- Procure food in line with our sustainable procurement objectives.
- Deliver on the Food and Nutrition Policy and Food and Drink Programme.

It will be measured by:

- Food waste auditing.
- Appropriate waste receptacles in all areas.
- Performance against Food and Nutrition Policy and Food and Drink Programme.
- Introduction of advanced catering software for more transparent data
- Work with on-site food retail partners to adopt sustainable catering practices e.g. reduce the amount of packaging around the food and beverage offering.
- Install appropriate waste recycling receptacles in all areas.
- Reduce single use plastic cups, dishes and cutlery and all disposable containers to be compostable.

Case Study: Royal Berkshire Hospital

Some Trusts find working with partners with the appropriate skills and expertise can be successful.

KISS helps Royal Berkshire Hospital shave thousands of pounds off waste costs

A drive to increase segregation of waste and identify new recycling opportunities is helping one NHS Trust save around £5,300 a month on its waste management costs.

Under the banner Waste Watchers KISS It Better – KISS stands for Keep It Simple, Segregate – staff volunteers spread the word about recycling in their respective workplace areas and encourage their colleagues to embrace new waste streams.

Royal Berkshire NHS Foundation Trust is one of the largest general hospital foundation trusts in the country, providing acute medical and surgical services to Reading, Wokingham and West Berkshire, as well as specialist services, to patients across Berkshire and beyond.

Its centrepiece is the Royal Berkshire Hospital in Reading, where Steve Sellwood, Facilities Manager, works with waste and recycling expert Grundon Waste Management.

Since 2012, Grundon has provided a total waste management service for the Trust and, among its successes, has achieved zero waste to landfill and an impressive overall increase in recycling.

8.i. Adaptation

We will ensure our infrastructure, services, procurement, local communities and colleagues are prepared for the impacts of climate change, such as heat waves and flooding. The impacts of climate change will be assessed and adapted to mitigate the negative effects of past and future climate-altering actions. The impact on public health from climate change will be reduced as much as possible.

Ways in which it will be achieved:

- Nomination of an adaptation lead and incorporate adaptation into our sustainability governance structure, corporate risk register and reporting processes.
- Creation of a climate change adaptation risk assessment.
- Work with key internal and external stakeholders to develop a Climate Change Action Plan for both Trusts.
- Ensuring that our emergency plans for extreme weather, consider support for vulnerable communities during any extreme weather events.

It will be measured by:

- BREEAM Building Standard or other sustainable buildings methodology scores.
- Monitoring and reporting the progress of our Climate Change Adaptation Plan.
- The overall risk rating in our climate change risk assessment.
- Testing of emergency planning policies

Case Study: Berkshire Healthcare

To ensure that the Trust is prepared and ready for a changing climate Berkshire Healthcare NHS Trust have these rules in place.

What we will do

- Implement Climate Change Adaptation Strategy.
- Require all third-party organisations to include extreme weather impacts in their business continuity plans.
- Increase the ability to maintain appropriate temperatures across patient areas.
- Focus on Investing and installing non mechanical cooling infrastructure - shading, insulation, natural ventilation.
- Increase tree coverage to provide shading and flood prevention.
- Review direct (local) and indirect (region) flood risks and mitigate.

NHS Berkshire Healthcare NHS Foundation Trust

Net Zero'n'Green

9. ACTION PLAN

Area of Focus	Target	Ownership	Timeline
Workforce & System Leadership	Establish 'where we are now' baseline.		
	Establish Governance. Form a 'Green Board' with a visible figurehead, taken from key stakeholders across the partner group.		
	Define the role of then roll out Green/Eco Champions programme. Our ICS Board must drive this initiative.		
	Develop a sustainability training programme for all our staff. This should begin with an induction including how we are meeting the green agenda and an overview of our green plan.		
Sustainable Models of Care	Establish a 'where we are now' baseline.		
	Measure virtual outpatient appointments. Convert this to actual number of journeys avoided and calculate carbon saved.		
	Embed carbon reduction principles in the way that all care is delivered, including digitally enabled care, default preference for lower-carbon interventions where clinically equivalent, and reducing unwarranted variation in care delivery & outcomes resulting in unnecessary carbon emission.		
	Drive to remove paper from processes: Go 'digital by default' - digitise medical records under one system and as much patient communication as possible.		
	Care for patients at or closer to home: Work across all services to		

	reduce unnecessary patient journeys, always keeping in mind how appropriate it is clinically.		
	Ensure we work closely with system initiatives to reduce health inequalities		
	Work with primary care colleagues to achieve the Green Impact Award for Health		
Digital Transformation	Establish a 'where we are now' baseline.		
	Enable technology and new models of care that facilitate earlier diagnosis.		
	Training program to upskill all clinical staff in the use of technology.		
	Obtain patients buy-in for approval for text message and email communication.		
	Set targets for corporate and administration staff to have home as the default place of work.		
	Research other digital tools being used across the NHS and identify where they may benefit our patients and workforce.		
	Explore ways of increasing: Virtual consultations Virtual wards Remote patient monitoring		
	Complete annual travel survey (a where we are now' baseline) for all our organisations – set targets and monitor progress.		
	Promote the benefits of the 'cycle to work scheme' to increase the uptake and usage of it.		
	All lease and fleet cars and vans to be Low or Ultra Low Emission Vehicles.		

Travel and Transport	Introduce ‘car pooling’ scheme.		
	Invest in active travel: Devise and communicate sustainable travel options.		
	Reduce unnecessary journeys: Across workforce and patients, adopt a more persuasive approach towards embracing virtual technologies. For staff this means agile working. For patients this means more in-home care. All will lead to less journeys to and from the sites.		
	Invest further in ultra-low and zero emission vehicles for owned and leased fleet. Salary sacrifice scheme to allow ULEVs or ZEVs only.		
Estates and Facilities	Establish a ‘where are we now’ baseline.		
	Review recycling facilities across estates and work with clients to increase options and make it easy to recycle.		
	Collaborate with NHS property services to understand viability of switching to renewable energy sources across all estates. Make a plan to move this forward.		
	Inspect current estate to identify areas where retrofitting can help e.g. insulation and double glazing.		
	Make funding made available for GPs to become sustainability leads and have some focused time to develop a joined-up approach to sustainability, from a primary care perspective.		
	Install and inform to engage workforce - green infrastructure can influence pro-environmental behaviour change e.g. presence		

	detection and daylight sensors for lighting.		
	Optimise building usage so that empty estate is not consuming carbon		
	Continue to identity and run behaviour change campaigns around energy e.g., 'switch off the lights' signage and 'reduce-reuse-recycle'.		
Medicines	Establish a 'where we are now' baseline.		
	Reduce the proportion of desflurane to sevoflurane used in surgery.		
	Promote clinically appropriate prescription of low-carbon inhalers		
	Work with suppliers to 1. Make packaging more sustainable 2. Make deliveries more carbon-friendly		
	Increase clinically appropriate prescribing of lower carbon inhalers, in line with the commitment of a 50% reduction by 2028 and a 6% reduction in 2021/22 on a 2019/20 baseline. (IIF)		
	Identify high carbon medicines and reduce usage or prescribe alternatives. Taking tablets: Explore areas where liquid medicines, which have shorter expiration dates, are less palatable and need refrigeration can be replaced by tablets. There are other sustainability benefits in taking tablets, including transportation and waste.		

	Investigate ‘scavenging’ technology, enabling gas re-use.		
	Taking tablets: Explore areas where liquid medicines, which have shorter expiration dates, are less palatable and need refrigeration can be replaced by tablets. There are other sustainability benefits in taking tablets, including transportation and waste.		
Supply Chain & Procurement	Establish a ‘where we are now’ baseline.		
	Identify and report all single use plastics across our sites and replace with recyclable, low carbon alternatives.		
	Buy green wherever possible. Build sustainability into the supply chain. Make amends to process if necessary.		
	Implement training for all procurement teams across the footprint to ensure they are aware of the sustainable procurement policy and green priorities.		
	Consolidate deliveries – work towards a reduction in site traffic.		
	Actively encourage consolidation of deliveries across all sectors.		
	Use more environmentally friendly cleaning products.		
	Devise and implement a sustainability scoring mechanism for proposals and tenders.		
	Buying green: Build sustainability into the scoring process for award contracts. Engage with current suppliers on their green credentials. E.g. they should minimise packaging and increase reusability.		

	Preference should be given to suppliers with ISO 14001 accreditation.		
	Review all single use products.		
	Give preference to suppliers that have reusable packaging over single use.		
	Closely manage inventory and supply chain: Working with suppliers to consolidate deliveries and reduce site traffic.		
Food and Nutrition	Implement approaches to measure and reduce food waste		
	Review and adapt menus to offer healthier lower carbon options for patients, staff and visitors.		
	All meals meet current Association of UK Dietitians (BDA) legislation which is reviewed by the dietitians in menu planning.		
	Discount for hot beverages when the customer uses their own 'keep cup'.		
	Procure food in line with our sustainable purchasing objectives.		
	Provide and promote interesting and attractive plant-based meals.		
	Give a preference to low 'food miles' when sourcing fresh produce.		

Adaptation	Update risk register to include climate related risks including floods and heatwaves.		
	Complete an estates review, identifying whether changes are required to deal with extreme weather conditions such as floods and & Heatwaves.		