## Report title: ICS Green Plan Update

### Background

ICS partners across the system have been working to embed our ambitious sustainability goals and create a governance structure and delivery plan that sees us working together to achieve our immediate and future goals. This year has seen the publication of the ICS revised Green Plan, setting out our sustainability commitments and outcomes and confirming our aim to be a leader in delivering sustainable healthcare for our region. All ICS partners have signed up to the Green Plan, aligning our efforts and amplifying our action and outcomes. The ICS has also developed a delivery plan to drive implementation and monitor progress against the Green Plan commitments.

The Green Plan sets out three clear outcomes that we are working towards;

1. Net zero carbon by 2030 across scope 1, 2 and 3 emissions sources.
2. Improve the environment by reducing waste, improving air quality and restoring biodiversity.
3. Create a BNSSG wide movement to support a culture change amongst, staff, citizens and businesses.

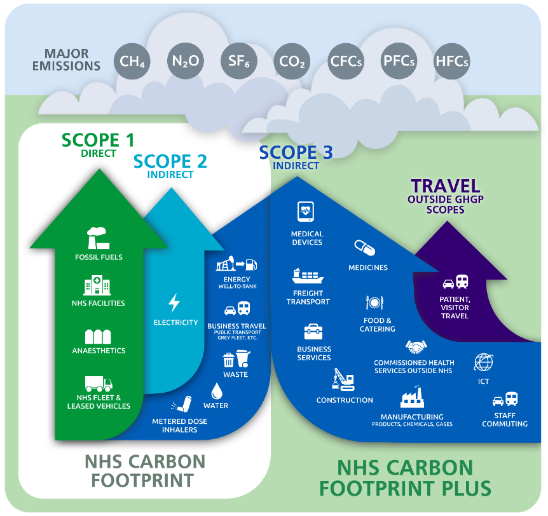
Further development in the granularity of the delivery plan sets what our actions will achieve against these outcomes and identifies the gaps we need to focus on. 

Figure 1 NHS carbon footprint scopes

This year, North Bristol and University Hospitals Bristol and Weston have worked together as one sustainability team along with colleagues from Sirona and Avon and Wiltshire Mental Health Partnership to achieve the Healthier Together Integrated Care System Green Plan objectives to mitigate the harmful impacts climate change will have on the health, wellbeing and livelihoods of the Bristol, North Somerset and South Gloucestershire population for generations to come. Achieving net zero, addressing the ecological emergency and building resilience to climate change through delivering our Green Plan will be crucial to delivering the best care for our patients now and in the future.

Throughout the year, our staff have reduced the environmental impact of their services whilst improving patient experience. Through conversations with our patients, we have learnt that reducing the carbon footprint of our services is important to them and their long-term health. We believe the way we deliver care to our patients should not harmfully impact the health of future populations and their ability to access outstanding levels of care.

This year we have refined our Green Plan Delivery Plan and prioritised projects for the future that will deliver the greatest carbon reduction and make best use of our resources. The Green Plan is delivered through six workstreams which are led by subject matter experts from each ICS organisation. The workstreams report into the Green Plan Implementation Group which reports into the Green Plan Steering Group of with ICS Executive Directors sustainability leads as members. Next year we hope to further embed net zero into organisation processes and spread the innovation at North Bristol Trust (NBT) such as carbon pricing, carbon budgets and headline objectives for divisions that can be monitored in Divisional Performance Reviews.

Figure 2 percentage of carbon emissions by workstream

An essential element for achieving net zero will be to reduce the demand on high cost and high carbon hospital services; realising the co benefits of prevention in improving the health of our population whilst reducing carbon and costs.

### Net Zero Carbon by 2030

The carbon reduction trajectory towards net zero of the main delivery plan workstreams is set out below. Our Delivery plan (appendix 1) provides the detail of the carbon reductions that would be delivered by achieving the targets we have identified in our workstreams. To achieve net zero following the Science Based Targets Initiative approach we must reduce our emissions by 90% to 39,514 tonnes CO2e. The remaining 10% is to be addressed by offset schemes - investing in projects that result in permanent carbon removal and storage to counterbalance the residual 10% of emissions that cannot be eliminated.

Current actions will deliver carbon reduction of 257k tonnes CO2e, but this assumes there is capital funding available to decarbonise our buildings and energy. The gap remaining from our current delivery plan is 98k tonnes CO2e for which we will need to identify further actions and funding. Without funding for buildings and energy decarbonisation the gap increases to 143k tonnes CO2e.

Figure 3 Carbon trajectory with current identified actions

|  |  |  |  |
| --- | --- | --- | --- |
|  | Tonnes CO2e | Variance from carbon trajectory to meet target 90% emissions reduction (unfunded) | Carbon footprint goal  10% offset for net zero carbon |
| Current carbon footprint | 395,140 |  |  |
| Carbon reduction required to meet NZC by 2030 (@90%) | Minus 355,626 | 0 | 39,514 |
| Scenario 1 - Delivery Plan actions to achieve goal (assuming energy decarbonisation funded) | Minus 257,353 | 98,273 | 39,514 |
| Scenario 2 - Delivery Plan actions to achieve goal assuming no funding available) | Minus 212,387 | 143,239 | 39,514 |

We have identified routes to net zero for our buildings and energy, and waste which are areas under our direct control but subject to achieving funding. Transport reductions are less in our control and dependent on working with partners across the ICP. Similarly, a substantial amount of our procurement is dependent on national approaches such as supplier carbon reduction plans and we are more limited in where we can influence them. Medicines requires further identification of reduction opportunities in reducing medicines waste and targeting high impact areas such as inhalers, but as with wider procurement achieving net zero will be reliant on improving population health to reduce demand for pharmaceuticals and medical equipment.

Our delivery plan (appendix1) sets out the detailed deliverables against the targets for each workstream area and by organisation. We have added RAG rated progress updates against targets and expected carbon reduction trajectories.

Our ICS carbon footprint includes the emissions of:

*Integrated Care Board:*

* NHS Bristol, North Somerset and South Gloucestershire Integrated Care Board (BNSSG ICB)

*Healthcare Providers****:***

* Avon & Wiltshire Mental Health Partnership NHS Trust (AWP)
* General Practice providers
* North Bristol NHS Trust (NBT)
* Sirona care and health (Sirona)
* Southwestern Ambulance Service NHS Foundation Trust (SWASFT)
* University Hospitals Bristol and Weston NHS Foundation Trust (UHBW)

The carbon footprint includes scopes 1, 2 and 3 as described above. Annual data for 2023/24 across all scopes is only available for the Acute hospital Trusts. However most of our carbon footprint is associated with the acute sector so we are able to use this a representative of our system.

Figure 4 North Bristol and University Hospitals Bristol and Weston NHS Trusts’ total carbon emissions for financial years 2019/20 to 2023/24 compared with the carbon emissions trajectory required to achieve net zero carbon by 2030 as well as the trajectories to achieve the NHS Carbon Footprint Plus goal and the Climate Change Act 2008 target.

Our current approach to calculating our procurement carbon footprint is based on spend. This spend-based approach is flawed as it doesn’t reflect where we are reducing carbon in our supply chain. The procurement footprint is particularly distorted by the increased spend during covid and high inflation.

Despite the emissions we have most control for, energy, water and waste showing an overall 4% carbon reduction in 2023-24 compared with 2022-23 We have seen a 21% growth impact from increased spend driven by inflation and activity (including investment in buildings and diagnostic equipment).

The carbon emissions reported in the table below cover the two acute hospital trusts that we have 2023/24 annual data for.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Emissions Source** | | **Unit** | **2021/22**  **Actual** | **2022/23**  **Actual** | **2023/24**  **Target** | **2023/24 Actual** |
| Scope 1 (direct emissions) | | tCO2e | 34,341 | 31,876 | 14,202 | 30,348 |
| Scope 2 (indirect emissions from electricity) | | tCO2e | 10,162 | 8,913 | 3,971 | 8,985 |
| Scope 3 (indirect emissions) | | tCO2e | 240,542 | 220,295 | 98,147 | 267,469 |
| **Total** | | **tCO2e** | **285,044** | **261,083** | **116,320** | **306,801** |
|  | **Energy** | | | | | |
| Gas consumption | | kWh | 154,181,076 | 143,401,024 |  | 137,405,280 |
| Oil Consumption | | Litres | 2,020,495 | 743,682 |  | 623,595 |
| Electricity Consumption | | kWh | 47,861,589 | 46,091,982 |  | 43,390,423 |
|  | **Supply Chain** | | | | | |
| Purchased goods and services (including upstream transport and distribution) | | tCO2e | 186,226 | 177,616 |  | 224,120 |
|  | **Travel and Transport** | | | | | |
| Trust owned Fleet | | tCO2e | 358 | 352 |  | 411 |
| Employee Commuting | | tCO2e | 7,596 | 7,785 |  | 7,836 |
|  | **Waste** | | | | | |
| Total Waste | | Tonnes | 6,350 | 6,564 |  | 6,679 |
| tCO2e | 2,767 | 2,739 |  | 2,522 |
|  | **Water** | | | | | |
| Water volume | | m3 | 692,744 | 625,348 |  | 618,789 |
| Water volume and wastewater | | tCO2e | 282 | 251 |  | 264 |

Figure 5 Acute Trusts carbon emissions

As of July 2024, we have 5 years and 5 months left to achieve net zero carbon goal to avoid the worst impacts of climate change hitting our health system. The figure below shows the future carbon taxation cost of our carbon footprint and how that reduces with our carbon reduction trajectory. This takes our delivery plan carbon reduction trajectory on the ICS carbon footprint from NHS England data and we have applied Treasury guidance to show the abatement cost of carbon for our system.

Figure 6 Carbon abatement cost for ICS carbon trajectory

A summary of progress with the main workstreams is set out in the sections below.

2.1 Progress

System wide collaboration on sustainability has been driven by the ICB, this has been clearly exhibited in developing the system capital prioritisation process. The ICS has recognised the importance of net zero by embedding it in this process and committing 10% of system capital in 2024/25 to a decarbonisation fund which partners can bid for and is overseen by the Green Plan Steering Group.

The ICS has incorporated a Sustainability Impact Assessment and carbon cost calculator into its project management gateway process ensuring net zero economic impact and social value are considered.

The ICS has embedded sustainability into the system strategic planning process with the Joint Forward Plan development requiring all areas to include how their plans contribute to the Green Plan. Net zero is a crucial inclusion in the emerging ICS infrastructure strategy.

The following section provides a summary of the progress made in our main workstreams giving further detail of the carbon trajectory for each workstream’s key target actions from the delivery plan. The progress made against these actions and the focus for the future

2.1.1 Buildings and Energy

To sustainably achieve net zero carbon emissions by 2030, our energy consumption will need to substantially reduce and remove fossil fuels use. All new building or refurbishment projects will need be designed for zero or low carbon heating, solar PV panels, LED lighting etc). Our priority is to decarbonise our heating systems across the estate, following the direction taken by NHS England. The estimated cost to decarbonise our buildings and energy is £196m. The graph below shows the effect on the carbon trajectory if external funding is not found for estate decarbonisation. This represents a significant risk to the system as capital allocations are not sufficient to meet decarbonisation costs.

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| --- | --- | --- |
| Target | Progress | RAG |
| Decarbonised heat solutions installed by 2028 | * System capital decarbonisation funding has unlocked access to grant funding by supporting the match funding requirements. NBT has secured £7.3 million of Salix Public Sector Decarbonisation Scheme (PSDS) Phase 3c grant funding to decarbonise the heating in the Pathology and Learning and Research energy centre. This scheme has the potential to reduce carbon by up to 1,188, tCO2e. * UHBW has been awarded £234K Salix grant funding to decarbonise the heating in residences, this was also supported by system capital match funding. * NBT’s first PSDS Phase 3a project to install heat pumps to the retained estate and deliver energy efficiency measures is now complete, having successfully received £4.4m of grant funding. This scheme has the potential to reduce carbon by up to 904 ktCO2e. * Installed heat pumps in 6 NBT buildings reducing gas demand by 16% * Delivery of the detailed RIBA stage 3 designs for decarbonising heating systems across NBT, backed by another successful bid for £438k of Salix funding under the Low Carbon Skills Fund (LCSF) Phase 4, is complete. This will help shape the future requirements of the Trust and its decarbonisation journey. * AWP’s new Learning Disability and Autism Centre will be completed in June 2025. This will be the first building in the Trust to have heating and hot water supplied solely from an air source heat pump system. There will be no gas boilers installed in the building, and so will avoid creating gas related carbon emissions. |  |
| Implement energy efficiency measures for Carbon footprint reduction 80% by 2028, Net zero by 2030 | * UHBW has focused on upgrading the software and control hardware on the building management system and combined heat and power unit. The software upgrade will give greater functionality and a broader range of hardware connectivity, allowing for greater control, zoning and improved data. This data allows for the analysis of performance and opportunities for increased efficiency to be identified. * AWP invested £135k into upgrading the lighting at 8 sites to energy efficient LED lighting, saving 48 tonnes of CO2e. We have engaged with NHS property services to encourage the installation of energy efficiency improvements including LED lighting to Primary Care and community health properties they are responsible for. * In Primary Care we have completed energy surveys and green plan progress reports in 25 GP surgeries to give surgeries the information to enable action in reducing their carbon footprints and reducing energy costs. Analysis of surveys will also give us an overview of the common actions that may be suitable for collective purchasing. Further individual surveys are needed to complete audits for all practices * NBT have installed 500kW of solar panels, double glazing in Elgar building and LED lighting in the Brunel building |  |
| Off balance sheet energy decarbonisation funding model approved by 2026 | * Discussion started with stakeholders including City Leap to identify potential solutions and lobbying routes for compliant funding model for decarbonisation that enables 3rd party funding |  |
| Switch from diesel to HVO for backup heat and power by 2025 | * AWP and NBT have now replaced the diesel fuel used in standby electricity generators with HVO fuel (Hydro treated vegetable oil). HVO is synthesised from animal fats and vegetable oils, which makes it a much cleaner burning fuel. It is 30% cleaner than diesel, and produced from 100% sustainable and renewable sources including waste fats and vegetable oils. The generator engines also run more efficiently and are less noisy when they use HVO fuel. * UHBW due to convert this year. |  |

**Future focus**

Our priority will be decarbonising our heating systems. This is particularly challenging as it is a significant financial cost and often a complex process to achieve this for our buildings. The system decarbonisation capital £3m has been successful in leveraging grant funding. However, we know this will not be sufficient funding (£196m) to meet our targets so to achieve this crucial funding we must pursue a compliant funding model for decarbonisation that enables 3rd party off balance sheet funding.

A strategy for future electrical capacity is a focus as new facilities such as the Elective Centre and heat pumps come on stream and mark a shift away from gas to electricity.

The NHS Net Zero Building Standard which was published in February 2023, will further drive reductions in carbon for all new major investments in healthcare buildings. We are developing a BNSSG ICS standard specification which includes applying the net zero building principles across all construction.

The identified actions will achieve net zero without requiring us to identify further actions, however this is subject to us achieving a compliant off balance sheet 3rd party funding model which is the most important focus for future delivery of our energy and building decarbonisation to avoid increasing the gap to net zero by a further 44966 tCO2e.

2.2.1 Travel, Transport and Air Quality

Carbon emissions from transport are the fourth largest emissions source from our carbon footprint. Emissions from transport also cause significant air pollution. Air pollution is the biggest environmental threat to health in the UK, with between 28,000 and 36,000 deaths a year attributed to long-term exposure. There is strong evidence that air pollution causes the development of coronary heart disease, stroke, respiratory disease and lung cancer, and exacerbates asthma. As a health and care system we have a moral duty to significantly reduce the carbon emissions and air pollution we are causing with the large amount of vehicle journeys undertaken by our staff, patients, visitors and supply chain each year.

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| Target | Progress | RAG |
| 100% of fleet vehicles are ULEV (or Euro 6) by March 2024. All new vehicles owned and leased by NHS will be ZEV from 2027 (excluding ambulances) | * Sirona are the first organisation in the ICS to have successfully changed its fleet to all electric vehicles. UHBW now has 50% of its fleet as electric vehicles. * NBT has partnered with the West of England Combined Authority to take part in the Urban Freight Trial to swap NBT Logistics Team’s diesel van for an electric cargo bike. Estimates suggest the trial could save 1,060 kg CO2e and £5,200 per annum. * AWP In 2023, installed wiring for a new dual socket 7KW Electric Vehicle (EV) charging point at the Blackberry Hill site. The intention is to install more EV charging points across organisations to ensure we have a sufficient EV charging network by 2026. |  |
| Travel emissions measurement for staff and patients in place by March 2024. Organisation specific sustainable travel plan by June 2024 | * Despite national active travel funding being severely reduced in 2023-24, both Acute Trusts have maintained their staff bike loan scheme, introduced a new cycle to work scheme, Ultra Low Emission Vehicle Salary Sacrifice Scheme (78 at NBT this year), pool car service (25 NHS@home staff) and Doctor Bike sessions where staff can have their bike checked over for safety and any minor works carried out free of charge. AWP and UHBW have made improvements to secure cycle parking. |  |
| Air quality is improved at each site to at least ambient levels by March 2027 | * UHBW has seen an improvement in the air quality in and around the central Bristol located sites. Outside the Bristol Royal Infirmary and Children's Hospital, nitrogen dioxide is down by around 20%. This improvement is a result of the implementation of the Bristol Clean Air Zone. This reduction can be seen in the ambient air quality levels of the roads directly outside the Bristol Royal Infirmary but also in the monitoring equipment across the hospital site. However, the ambulance bay and Alfred Parade, the main delivery road on the central Bristol site, are still areas of poor air quality, exceeding World Health Organisation nitrogen dioxide limits during the day. * Action has been taken to improve the air quality impact of the supply chain through the contracts let that result in many deliveries and vehicle movements on sites. Mean air quality levels around Bristol Royal Infirmary can be over 30% higher for nitrogen dioxide during busy delivery periods over quiet periods. This is being addressed through the social value criteria that apply to all tenders. Including ‘improving air quality’ as an outcome in relevant tenders has resulted in commitments being made from suppliers to reduce delivery frequency, optimise route planning and plans to introduce low and zero emission vehicles. * Both Hospital Trusts have added air quality monitoring on their sites to improve the data and identify improvement opportunities * AWP sharing public air quality monitoring on their website |  |

**Future focus**

A key focus for the ICS-wide Travel, Transport and Air Quality workstream, to decarbonise travel and transport across the ICS will be undertaking a major fleet optimisation study designed to identify and remove unnecessary, replicated journeys by vehicles from NBT, UHBW, Sirona and AWP.

* Barriers to overcome in implementing ZEV are range anxiety, vehicle charging on site and at home, availability of suitable vehicle types and the capital funding required.
* Staff and patient travel emissions are currently not recorded or only estimated from surveys. We will look to widen UHBW’s calculated approach.
* Adding the use of local authority air quality monitoring will enable all ICS sites to be tracked.
* The remaining gap to net zero of 28760 tCO2e reflects the challenges of transport which are a much wider problem that no single organisation can solve on its own therefore an essential focus will be building on the partnerships that have already been established to ensure the health benefits are realised as part of future transport strategies. The health system as trusted voice must play a leadership role in amplifying the health benefits of partner organisations messages around active travel and air pollution.

2.2.2 Waste

The impacts of healthcare waste on our environment are particularly high given the large volumes of single use and contaminated waste produced and high carbon methods of disposal. High carbon and high-cost waste disposal solutions go hand in hand. Seeking more sustainable solutions therefore has the joint benefit of reducing carbon and cost. Reducing waste is not just about disposal but tackling unnecessary consumption and working with suppliers to develop circular economy approaches to minimise waste generated.

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| Target | Progress | RAG |
| Waste Contract in place by April 2024  Zero waste to landfill by March 2025 | * New waste contracts have been delayed. The Trusts launched a joint tender for Sustainable Waste Management services, with a focus on and commitment to environmental protection, carbon reduction and the circular economy. The tender dedicated 20% of its quality award criteria to these requirements in addition to a further 10% for social value. The immediate impacts will be to eliminate waste to landfill and to carbon footprint the service. * The project adopted the EcoQUIP Plus innovation procurement methodology, taking the project team through the process of needs identification, through market engagement and the adoption of pro-innovation tendering and contracting approaches. We will be applying the learning to the sustainability challenges of procurement more widely. Further information on the EcoQuip Plus innovation procurement methodology and the project, can be found in the [case study report](https://www.ecoquip.eu/slug/ecoquip-plus-case-study-report-final/). * 30,000 masks were donated for reuse, avoiding 5 tonnes of CO2e * 356 mattresses were donated for reuse, avoiding 3 tonnes of CO2e and saving £13.6k |  |
| Recycling weight: 60% of all waste reused or recycled by March 2026, 80% by 2028, 100% by 2030 | * With a focus on the waste hierarchy at AWP and UHBW recycling rates have increased from 36% to 41%. * Warpit system for reuse of equipment across NBT an UHBW has enabled cost saving of £342k and tCO2e |  |
| Deliver plan to achieve a 20:20:60 split across clinical waste sent for incineration, alternative treatment and offensive waste treatment by 2025 | * The Trusts have been working jointly on waste to make progress towards the NHS Clinical Waste Strategy target * Reduced clinical waste sent for high temperature incineration by 396 tonnes being segregated as non-infectious saving 426 tonnes CO2e * Progress is dependent on waste contracts being in place |  |

NBT have one particularly successful waste and consumption project shown below which was made possible by a very determined Neurosurgery team who challenged themselves to do things differently.

Green Operating Day in Neurosurgery

• Adopting sustainable and net zero principles to ten Neurospinal procedures across three theatres for a whole day.  
• Calculations so far have shown carbon was reduced by 23.49 tonnes CO2e, which was a 58% reduction compared to a normal operating day. 
• Rationalisation of instrument sets, in one green surgery run instruments were reduced from 45 to 4 in an incredible effort by the Neurosurgery team. 
• There was a 50% reduction in the opening of consumables. 
• Waste reduced by 14kg and segregated correctly, saving 1,666 kg CO2e.
• Staff reported an increase in productivity, more efficient workflow, improved communication and work environment.  
• Patients reported noticeable improvements in their overall experience. 

**Future focus**

The key barrier is getting the new waste contracts in place so we will be able to work with contractors on reducing waste, increasing recycling, achieving clinical waste ration. We will focus on reducing single use plastics through audits to identify items to work with our supply chain reducing usage.

The next step is extending and standardising waste monitoring and practices across all organisations.

An important focus will be to engage and support staff to identify and implement further projects like the green operating day to reduce consumption and waste.

Delivering the actions identified will be sufficient to achieve our net zero target but delivery is dependent on waste contracts being in place to enable us to work with suppliers to achieve the targets.

2.2.3 Procurement

Scope 3 procurement emissions are the largest source of carbon emissions, with purchased goods and services making up over 60% of the total footprint. This is also our greatest opportunity to use our spend as a positive influence to realise economic, social and environmental benefits.

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| --- | --- | --- |
| Target | Progress | RAG |
| Plan for robust carbon measurement - carbon measurement in new procurement system Sept 2024, targeted approach to non-spend based measurement of suppliers | * The procurement emissions data is presented in this report, but it is important to recognise that the current spend-based methodology does not reflect our carbon performance, nor is it in line with best practice calculation methods. We continue to review alternatives calculation methodologies but have yet to identify a suitable solution to cover the scale and variety that exists within our supply chain. Bristol and Weston Purchasing Consortium (BWPC) is seeking to improve our data as internal systems are upgraded. * AWP and Sirona have engaged a contractor CO2Analysis to provide a carbon footprint of their supply chains. |  |
| Process implemented ensuring suppliers have carbon reductions plans for all tenders from April 2024 | * BWPC have been focused on the design of a new procurement system which is going live in summer 2024. The new system will allow suppliers to upload their Carbon Reduction Plans in line with Procurement Policy Notice (PPN) 06/21 which the NHS adopted in 2024. BWPC has also been busy complying with the Modern Slavery Act, delivering modern slavery training to all procurement staff and gaining Trust Board approval for their Modern Slavery Statement which will be published in 2024 |  |
| All tenders include minimum 10% social value weighting by March 2022 and embedded in contract management March 2024 | * Social value weighting included in all tenders but not embedded in contract management * We have created a social value question bank tool that can be used to select the most relevant and proportionate question to ask on net zero amongst other social value outcomes. The sustainability team have also provided advice and been directly involved in the procurement process for some high-risk tenders, creating the sustainability requirements, evaluation criteria and contract management mechanisms for these. * The Sustainability Team has played an advisory role in the implementation of PPN 06/20 with social value being incorporated into seven tenders during the year. In September 2023, the Sustainability Team launched the new Sustainability Impact Assessment (SIA) with an embedded carbon cost calculator which has been embedded in the NBT’s business case process and the ICB’s Gateway Process. The SIA has been shared with the rest of the system along with other NHS organisations, ICSs and NHS England as a pioneering approach to integrate sustainability into business cases and decision making. |  |

**Future focus**

We will continue updating the procurement process and creating new tools to help stakeholders manage the sustainability impact of the procurement process. Our focus will also continue on embedding the NHS England net zero commitment requirement for suppliers’ carbon reduction plans into the procurement documents, templates and sign-off process. These national approaches are expected to deliver a 45% reduction by 2030. There is still a significant gap of 26106 tonnes CO2e of unfunded further actions which will be required to reduce emissions by 90% to achieve net zero. Our approach to reducing this gap includes:

* In 2024-25, Category Managers will undertake a risk assessment of their categories to identify supply chain risks and opportunities to integrate into tenders and will work with NHS Supply Chain and the Sustainability Team to implement carbon and waste reduction projects.
* Developing a non-spend based approach to measuring our supply chain emissions to drive progress with reducing procurement related emissions
* Engage with suppliers to seek reductions in emissions in the supply chain
* Support for the transition to a circular economy (this is an economic system aimed at eliminating waste and the continual use of resources) while identifying opportunities for enhancing social value (e.g. skills and training, employment opportunities for disadvantaged groups and others). This particularly key to reducing single use plastics.
* Procurement processes including a weighting for local suppliers to support a low carbon procurement system. This also helps to ensure resilience of supply which is an important consideration especially when dealing with pressures similar to the recent Covid-19 pandemic.

2.2.4 Medicines

Medicines make up 20% of our carbon footprint and 40% of our total procurement emissions. Many inhalers for asthma use propellants that have a high impact. Anaesthetics also have a significant greenhouse gas impact many times higher than carbon dioxide.

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| Target | Progress | RAG |
| Inhaler switching - Achieve SABA MDI use to be 75% low carbon, Preventer use to be 70% lower carbon and 30% v high carbon as per NHSBSA respiratory carbon dashboard by 2025. | * 60% of Primary Care carbon footprint consists of the medicines they prescribe including meter dose inhalers. Initiatives in some GP surgeries to improve asthma control and optimise inhaler prescribing are helping reduce the climate impact of their medicines’ footprint. * No central funded respiratory project for coordination in 24/25. Awaiting NICE guidance that will support switching |  |
| Suppliers carbon reductions plans 100% of new medicines contracts have supplier carbon reduction plan as tendered and awarded from April 2024 | * Pharmaceuticals excluded from social value requirements by NHSE. However, they are required to provide a carbon reduction plan and complete an Evergreen assessment every year * Medicines optimisation - some initiatives in reducing wastage of medicines and avoiding patients taking unnecessary medicines reducing the impact of medicines on the environment. |  |
| Reduce carbon footprint from anaesthetic gases as far as possible in order to reduce abatement cost to get to net zero by 2030. Decommission Desflurane by 2024 in line with NHSE mandate | * Staff led approaches by Anaesthetists have been very successful in driving reductions and eliminating the use of the highest impact anaesthetic gases. * Nitrous oxide destruction unit requirements have been identified. However, very high costs exceed benefits so need to consider alternative approaches * Ceased use of Desflurane * Manifolds being decommissioned where possible |  |

**Future focus**

Reduce the environmental impact of medicines and medical devices on towards net zero by:

* Ensuring delivery of decarbonising anaesthetic gases
* Promoting use of lower carbon inhalers where clinically appropriate
* Reduce carbon impact of overprescribing by reducing inappropriate prescribing through greater use of Structured Medication Reviews
* Driving more effective medicines waste management
* Closing the unfunded remaining gap in achieving net zero requires Identifying a pipeline of future opportunities for greener alternatives and reviewing highest carbon impact medicines where possible

### Sustainable Healthcare

3.1 Sustainable healthcare – Anchor in the community

Realising the economic, social and environmental benefits of being an anchor in the community and achieving sustainable healthcare is dependent on us building on being anchor organisations to becoming an anchor system.

A key strategic approach to our system achieving sustainable healthcare and our net zero target is to keep people well and out of hospital. We need to bend the curve on the predicted rise in demand for high-cost and high carbon, reactive and hospital-based care and focus on prevention. That means supporting people to take care of their health and wellbeing, intervening early and keeping people healthy at home for as long as possible, focussing investment on primary and community services. Avoiding carbon intensive hospitals for issues that could have been prevented in primary care or managed better in the community.

We can't afford to build more carbon intensive hospitals as way to deal with increasing system demands, we need to do things differently – this includes:

* Supporting our staff and working with partners
* Using our buildings and spaces
* Engaging our staff to lead change in our organisations and communities
* Building resilience to climate change

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| --- | --- |
| Target | Progress |
| Sustainability Impact Assessment (SIA) with carbon costing included in all business cases  SIA in use across the system by September 2024 | * Implemented for NBT business cases and ICB gateway process. * Shared with ICS organisations, needs organisations' Exec sponsor to support. |
| Schedule of carbon inset schemes by July 2024 | * Decarbonisation capital prioritisation has identified carbon saving inset schemes. Insetting for other business cases not agreed. |
| Biodiversity value included in sustainability impact assessment by May 2024 and in business cases July 2024 | * Included in NBT business case SIA. Dependent on roll out of SIA to other organisations |
| 10,000 new trees planted across our footprint by 2025 | * Tree planting priority mapping for NHS sites. Coordinated delivery requires resource |
| Reduce anti-depressant prescriptions where appropriate by increasing Green Social Prescribing offer | * Green social prescribing project has received £328,000 from Treasury and NHSE to extend work during 2024/25. Commitment to recurrent funding required. |
| Climate adaptation - Risk assessments show organisations are resilient to effects of climate change by March 2027 | * Adaptation action plan and risk assessments not started |

* 1. Supporting our Staff and Partnership working

Supporting staff to move to sustainable models of care within our services has improved patient experience and staff productivity by creating more efficient ways of working and using fewer resources to deliver outstanding care. We need to embed sustainability in our ways of working by expanding use of tools such as our Sustainability Impact Assessment to support decision making to ensure we realise economic, social and environmental benefits as we improve how and where we deliver our services.

Supporting our staff through NBT’s Quality Improvement programme, 10 sustainable models of care have been identified throughout 2023-24, Through the nurse’s preceptorship programme and the Patient First approach we will identify and support more sustainable models of care than ever in 2024-25. NBT’s Infection Control Team have been pivotal in driving sustainable models of care this year through their membership of the Infection Prevention Society’s Sustainability Special Interest Group.

To become a sustainable health system we must ensure prevention and healthy lifestyles promotion is the first line in all clinical guidance and by promote community based approaches including resources such as the 'Healthier with Nature' directory of projects to ensure we have suitable places to refer patients including, exercise programmes and community groups. The advantage of many of these VCSE resources is that they often have multiple benefits (helping mental and physical health and adding social value) This 5 min [video](https://www.youtube.com/watch?v=bsZnuMlY7QU) from Bristol Health Partners of a VCSE group demonstrates the benefits.

Our primary care CATCH programme is seeking to drive outcomes and benefits of working with and supporting the VCSE sector.

Primary care and VCSE Alliance CATCH programme

(communities acting together for climate and health)

We have launched the CATCH programme who’s focus is to help communities become healthier, happier, and more connected with greater access to physical activity, green space, and nutritious food, fostering lifestyles which prevent disease, rather than causing it. Healthier communities need less healthcare which has a high carbon footprint so the programme will also reduce the carbon footprint of communities, helping them move towards net zero.

The strength of this programme is the collaboration between the VCSE sector and Primary care. General Practices are anchor institutions in their local community, with 90% of healthcare being delivered in primary care. Most of the population will have contact with Primary care every year which makes it well placed to help develop healthier communities. The VCSE sector is embedded in the local community and has knowledge of what is needed and wanted. Joint working using the VCSE sector’s local knowledge and expertise and Primary Care’s health skills will help drive forward positive change exponentially.

The climate crisis is a health crisis, and it will impact those with the least, the most. The climate disparity in experiencing the impacts and disparity in available resources for mitigation and adaptation will only widen existing health inequalities. The CATCH programme will tackle this by helping more individuals and groups who face inequalities and poverty take action to shape healthier, lower carbon communities with higher quality but lower carbon healthcare.

We know we can’t solve the complex systemic challenges we face on our own and that it is essential we work with others to overcome them. In 2023-24, we have strengthened our existing partnerships with local organisations through our membership of the West of England Nature Partnership, North Bristol Sus Com, the SDG Alliance, Bristol Green Capital Partnership, SHINE HIT, No Cold Homes Steering Group, the One City Environment Board, One City Transport Board and Bristol Advisory Committee on Climate Change. We have continued our involvement with our Local Authorities including public health, WECA’s Climate action panel and Future Transport Zone programme.

We have also continued to work with local organisations such as Leigh Court Farm, the Sustainable Development Trust, Forestry England and Natural England to improve staff and patient access to green space on our estates.

3.3 Using buildings and Spaces to Support Communities

The large footprint of the health estate grants us responsibility to support local biodiversity and pioneer nature recovery programmes within our local areas. Through our estate we can also increase access to nature for our staff, patients and local residents.

Supporting biodiversity is essential to achieving sustainable healthcare. We have recognised this by adding biodiversity to our sustainability impact assessment to embed the value of biodiversity in our decision making. This is currently in use in NBT business cases and the ICB gateway process but needs to be adopted across the system.

**Mental Health sites**

AWP as a mental health Trust, have recognised the importance of using green spaces to improve physical and mental health for their patients and service users. They have established green spaces at several sites including Fromeside and Callington Road.

Fromeside’s Malago Centre (occupational therapy) have an occupational therapy led therapeutic garden running sessions which range from sensory to fitness and strength promotion. The garden contains beds of various heights to accommodate physical health challenges and is used to grow food for the Rivers café (onsite vocational training café); flowers for cutting; and an ornamental garden for beauty and sensory work. The herb garden, as well as other food grown in the garden, is used for cooking sessions with service users which help promote healthy eating, nature connection and build additional movement into the day.

At the Callington Road inpatient site, the occupational therapists based at the Coppice and Woodside buildings run groups which utilise the garden areas of wards as well as running an allotment.

Many teams also run walking groups and help service users connect with nature and horticulture activities as part of their recovery plans across the AWP map including Green Gym, volunteering with wildlife trusts, attending walking groups

**Acute sites**

In 2023-24 NBT patients continued to use green spaces to support their recovery through social prescribing sessions held in our HITU eco therapy garden, Elgar House and our Southmead Allotment. Last summer we hosted Natural England’s Nature Conference and invited local organisations and regional NHS Trusts to view our green estate and discuss the NHS’ role in nature recovery.

The acute hospital Trusts have recently been successful in securing a £193k joint bid to fund a Green Spaces Co-Ordinator which will identify and address barriers to accessing green space and social prescribing. The funding will also embed green social prescribing into the existing Arts on Referral programme and support a pilot of a new green social prescribing programme for patients with chronic pain, cancer or respiratory conditions. The funding will also cover improvements to the HITU eco therapy garden.

**System wide sites - Healthier with Nature**

BNSSG hosts one of just seven national test and learn sites across England for Green Social prescribing. Our local programme branded as Healthier with Nature was originally funded in 2021 and has just received £328,000 from Treasury and NHSE to extend work during 2024/25. Sirona host the programme which is considered a national leader in this field with BNSSG hosting ministerial visits and national board meetings in recognition of our work.

To date over 4,000 patients, mainly from primary care have accessed nature-based interventions to improve their health outcomes. However, during 2024 a number of different patient cohorts have been included in pilot work including support around hospital discharge, frequent callers to the ambulance service and work with our mental health trust AWP. Work is also developing with our ambulance service SWASFT to better support frequent callers. The aim is to both provide better personalised care for patients but also show a measurable reduction in service usage with the related financial and environmental benefits.

In addition to work to improve patient outcomes the programme looks to support nature recovery on NHS Estates by boosting biodiversity both in hospital settings and primary care estates. This improves spaces for nature but also patient care and staff wellbeing.

Healthier with Nature has been a real success story for BNSSG but still has no long-term recurrent funding and as such is likely to have significantly reduced capacity after April 2025 unless some revenue funding can be found to support in the longer term. There is a risk that a work stream for which BNSSG is considered a regional and national leader will be diluted.

3.4 Staff Engagement

Our staff are our greatest asset in delivering sustainable healthcare. From keeping the population healthy to making procurement decisions of what products to buy our staff are fundamental to achieving our Green Plan objectives. As shown in the green operating day case study staff led change is crucial to us moving to sustainable models of care and realising the environmental, social and financial benefits. Staff awareness and engagement in sustainability is essential to meet our responsibility to show leadership in all our interactions with our communities. Staff are also crucial in modelling the behaviours and providing the health perspective on climate change to support the culture change required in our society.

In 2023-24, the ICS Communications and Engagement workstream launched several Net Zero for Health campaigns to acknowledge the importance of achieving net zero to create a safe and healthy future for our patients.

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| Target | Progress |
| 10% of staff by 2025 actively engaged  Increase number of Green Champions by 5% per year | * This year NBT and UHBW celebrate the two-year anniversary of their joint sustainability staff engagement scheme, Greener Together, which has so far seen 568 staff members sign up and 18,575 actions being taken * NBT also introduced its first ever Sustainability Staff Award which was awarded to Dr Emma Carver for her unwavering dedication to embedding sustainability within the Emergency Department. * 11246 engagements with staff * Current engagement scheme reviewed * Completed system Communications programme of engagement activities |
| Increase in number of staff reporting increased awareness of Climate & Ecological emergency and report having made practical changes (in workplace and outside) | * 13 lunch and learn sustainability webinars * Visited 12 teams * 35 face to face events * AWP the CEAG Group is the main forum for raising awareness of sustainability and taking forward ideas from staff members, which will help to reduce carbon emissions and reduce costs |
| 10 GP surgeries active on green impact for health toolkit by October 2024 | * The Bristol & Bath Greener Practice group meets monthly to share learning and develop projects with the aim of making our local primary care systems as environmentally friendly as possible. improve uptake of the Green Impact for Health toolkit, which is hosted by the RCGP and is open to all GPs to reduce their carbon footprint. The toolkit is a series of actions which can be ticked off to achieve points. These accumulate towards bronze, silver, gold and carbon awards. Actions are in the clinical, managerial and admin arenas. The group provides peer support by discussing different areas of the toolkit in meetings and sharing ideas and solutions between practices. * £20k CATCH programme launched |
| Training - Sustainability e-learning promoted and completed by 20% of staff by 2025 | * E-learning mandatory at ICB other organisations to consider * The development of a sustainability impact assessment with carbon calculator at NBT is a key tool being provided to enable better decision making by staff. The tool has been integrated by the ICB into its gateway process. Further embedding use across the system will support staff integrating sustainability into their ways of working |

Engagement is important for recruitment and retention of staff. With demand for staff exceeding supply, one of the ways in which healthcare can stand out is through its sustainability efforts. The simple act of prioritising environmental issues can be an effective way to increase employee engagement and attract staff.

This is particularly the case in providing what the new generation of employees are looking for in employers. By 2025, it is projected that Generation Z will make up [27% of the workforce](https://www.weforum.org/agenda/2021/03/gen-z-unemployment-chart-global-comparisons/#:~:text=There%20are%20more%20than%202,about%2027%25%20of%20the%20workforce.), with Millennials making up the vast majority of the remainder. When it comes to recruitment, aligning with Gen Z and Millennial values is going to be key.

* A study by global analytics firm [Gallup](https://www.gallup.com/workplace/352118/environment-social-governance-reporting-perspective.aspx)found that 71% of workers consider a company’s environmental record when deciding on an employer.
* A Deloitte report found nearly [two in five](https://www2.deloitte.com/content/dam/Deloitte/global/Documents/deloitte-2022-genz-millennial-survey.pdf) (37% of Gen Zs and 36% of Millennials) say they have rejected a job based on their personal ethics. Nearly [40% ofMillennials](https://cleartrace.io/) have accepted one job offer over another because that company was sustainable.
* According to the [Deloitte report](https://www2.deloitte.com/content/dam/Deloitte/global/Documents/deloitte-2022-genz-millennial-survey.pdf), those who are satisfied with their employers’ societal and environmental impact are more likely to want to stay with their employer for more than five years.

3.4 Resilience to climate impacts

We are already seeing impacts of climate breakdown including increased extreme weather events such as heat waves and flooding. These impacts adversely affect most those least able to cope exacerbating health inequalities. Whilst our focus has been on mitigating climate change it is essential that we build resilience in our organisations and our communities to ensure we are able to continue to deliver our services and minimise the impacts on our communities.

We have a system-wide climate adaptation strategy and have engaged with some groups such as emergency planning but will need to work with partners across the ICP to develop the actions to deliver our target that risk assessments show our organisations are resilient to effects of climate change by March 2027

# 4. Recommendations

* Note that delivery is dependent on being fully funded, this is principally related to energy and buildings
* Pursue a compliant 3rd party off balance funding solution to deliver £196m of energy decarbonisation projects
* All organisations introduce use of Sustainability Impact Assessment into business cases and decision making
* Expedite new waste contracts for hospitals to enable waste reduction
* Develop partnerships to optimise transport across our system and improve travel options in our region
* Expand existing medicines optimisation and identify a pipeline of future net zero opportunities
* Develop a non-spend based measure of supply chain carbon footprint. Embed national requirements for carbon reduction plans and social value in procurement processes
* Sustainable healthcare – Focus investment on primary and community services to support people to take care of their health, intervening early and keeping people healthy at home and out of high carbon healthcare for as long as possible

To approve: This report meets requirement for organisations to report annually on progress with the Green Plan and it is taken to organisation boards

### 5. Financial resource implications

The high-level financial implication is shown in Figure1 as the carbon abatement cost of carbon emissions £150m per annum. Decarbonisation costs identified for NBT, UHBW and NBT in the ICS capital prioritisation process total £196m. Detail of costs for delivering against targets where these have been identified are shown in the delivery plan Appendix 1.

A key target is to enable sufficient finance is to lobby for a compliant off balance sheet funding model for energy decarbonisation that enables 3rd party funding that is approved by CFOs, Auditors, Treasury and ONS.

### Legal implications

On 1 July 2022, the NHS became the first health system to embed net zero into legislation, through the [Health and Care Act 2022](https://www.legislation.gov.uk/ukpga/2022/31/contents/enacted). This places duties on NHS England, and all trusts, foundation trusts, and integrated care boards to contribute towards statutory emissions and environmental targets.

The Act requires commissioners and providers of NHS services specifically to address the net zero emissions targets. It also covers measures to adapt to any current or predicted impacts of climate change identified within the 2008 Climate Change Act.

Trusts and integrated care boards (ICBs) will meet this new duty through the delivery of their localised Green Plans, and every Trust and ICB in the country now having a board-level lead.

### Risk implications

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| **Risk** | **Mitigations** |
| **Engagement** – risk that the Green plan will fail to become fully embedded across the breadth of our activities. | * Delivery of communications & engagement strategy * Approval by ICS organisation Boards * Role of ICS Steering Group to oversee alignment |
| **Financial –** Risk that we are unable to meet the outcomes of the plan due to financial constraints in terms of capital investment and revenue implications and being able to access off balance sheet 3rd party funding | * Access to national funding such as Public Sector Decarbonisation Funds * Early strategic planning at a system level to understand total financial need & prioritisation of resources to highest impact areas * Lobbying for off balance sheet 3rd party funding solution * Recognise the financial savings that are possible through operating more sustainably * Accounting for the contribution to non-financial outcomes (e.g. population health) that can be achieved by operating sustainably |
| **Reputational –** Risk that our reputation is impacted if we are unable to meet the outcomes set out in this plan | * Green Plan Steering Group to maintain close focus on key deliverables * Maintain an honest dialogue with staff & citizens about what is achievable and any barriers to delivery that are outside of our control (e.g. supply chain, decarbonisation of national grid) |
| **Elements of delivery beyond our control –** Risk that we are unable to deliver against significant elements of the plan due to elements of the plan that are outside of our direct control (e.g. supply chain, national grid decarbonisation) | * Early and robust engagement with supply chains * Use collective pressure through regional and national bodies |
| **Competing priorities –** risk that the pressures such as elective recovery, and establishment of new models of care impact on delivery and relative priority of this plan | * Ensure that the sustainability outcomes are central to our ICS strategic aims * Continue to recognise that operating sustainably is a key part of the solutions to our biggest challenges, not an afterthought * Role of executive leaders to maintain the priority of this programme. |
| **Adapting to climate change –** Risk to health of our population and delivery of services if we fail to adapt to climate change | * Ensure adaptation plans and risk assessments are completed * Ensuring adaptation is considered alongside mitigation of climate change |

### How does this reduce health inequalities

Health inequalities and climate change are both systemic issues the determinants and impacts of health and climate change are interconnected. Climate change impacts exacerbate health inequalities. But there are health co-benefits of mitigating climate change including through cleaner air, healthier diets and physical activity.

|  |  |
| --- | --- |
| **The main contributing factors to disability/poor health** | **Alignment to green plan ambitions** |
| Musculoskeletal disease | Active travel & green social prescribing |
| Cardiovascular disease and stroke | Active travel, nutrition, preventative models of care |
| Respiratory diseases including COPD | Targeting air pollution |
| Depression and mental health problems | Green social prescribing |
| Cancers and particularly lung cancer | Targeting air pollution, healthy lifestyle choices |
| Alcohol and drug misuse | Green social prescribing |

Making a significant improvement in the health and wellbeing of our population will mean:

* Addressing the major health threats of cardiovascular/cerebrovascular, respiratory, mental health, musculoskeletal diseases and cancer.
* Addressing the gross inequalities in our system by deprivation and between groups, such as those with learning disabilities and serious mental health issues.

As one of our key system objectives, a sustainable approach to health and care delivery, will be part of addressing the wider determinants of health outcomes

### How does this impact on Equality and Diversity?

The EIA produced for the Green Plan has identified there are potential positive and negative impacts on protected characteristics Age, Disability and Race groups

Age and Disability

Positive - upskilling workforce

Negative –some key actions, particularly related to active travel, may not be suitable for elderly people or those with certain disabilities. Risk of staff feeling excluded from action plans.

Race

Positive – the themes outlined in the ICS Green Plan are inclusive of all races and the Plan will harness the cultural diversity of our staff and patients to deliver innovative solutions to reduce our impact.

Negative – Sustainability is practiced in unique ways across various cultures and therefore the ICS Green Plan could risk alienating staff and patients.

### Consultation and Communication including Public Involvement

An ICS Green Plan communications and engagement group has been established that is developing a comprehensive communications strategy and plan.

There has been no public involvement in the writing of this paper. However existing evidence from the public and feedback on the Green Plan has been used.

Appendices

Appendix 1 North Bristol NHS Trust Green Plan Annual Report

### Glossary of terms and abbreviations

|  |  |
| --- | --- |
| Net zero | Achieving a zero level of carbon emissions based on reduction and offsetting. This follows the Science based targets initiative definition of reducing carbon emissions from our baseline of 2019/20 by at least 90% and offsetting the remaining emissions. |
| Adaptation | Adaptation is actions to adjust to climate change, and the extreme weather that it makes increasingly likely. This includes making homes more resilient to extreme heat and cold weather, and adapting our landscapes to better cope with flooding or drought events, for example. |
| Anchor institution | Refers to large, typically non-profit, public-sector organisations whose long-term sustainability is tied to the wellbeing of the populations they serve. Anchors get their name because they are unlikely to relocate, given their connection to the local population, and have a significant influence on the health and wellbeing of communities. |
| Carbon footprint | Carbon footprint refers to emissions that are associated with the consumption spending of UK or England’s residents on goods and services, wherever in the world these emissions arise along the supply chain, and those that are directly generated by UK or England’s households through private motoring and burning fuel to heat homes. |
| Circular economy | Circular economy is an economic system aimed at eliminating waste and the continual use of resources while identifying opportunities for enhancing social value (e.g. skills and training, employment opportunities for disadvantaged groups and others). |
| Climate Emergency | A situation in which urgent action is required to reduce or halt climate change and avoid potentially irreversible environmental damage resulting from it |
| Ecological Emergency | A recognition that nature is declining globally at rates unprecedented in human history - and the rate of species extinctions is accelerating, with grave impacts on people around the world now likely. |
| Healthier Together Integrated Care System: | A statutory partnership of health & care organisations formed to realise our shared ambitions to improve the health and wellbeing of the people of Bristol, North Somerset, and South Gloucestershire. |
| Net-zero carbon | A person, company or country is net-zero carbon if they balance the carbon dioxide they release into the atmosphere through their everyday activities with the amount they absorb or remove from the atmosphere. Overall no carbon dioxide is added to the atmosphere. There are two main ways to achieve net zero: reducing emissions and removing carbon dioxide from the atmosphere, through technologies that actively take in carbon dioxide or by enhancing natural removal methods - by planting trees, for example. These methods can be used in combination. Net zero is the UK government’s target for at least a 100% reduction of net greenhouse gas emissions (compared with 1990 levels) in the UK by 2050. |
| Sustainable Development: | Sustainable developmentaims to ensure the basic needs and quality of life for everyone are met, now and for future generations. Sustainable Development promotes the reduction of carbon emissions, the efficient use of finite resources, recognises the importance of protecting our natural environment, and preparing our communities for climate change (extreme weather events and increased risk of disease) by promoting health and wellbeing through healthy lifestyle choices to ensure a strong, healthy and resilient community now and for future generations |